

2020 Index

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This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2020, and items from previous years that were commented upon or corrected in 2020. Departments and other items may also be covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and inclusive pages. Note that the item title is found only under the primary entry in the Author Index.

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- Celona, L.**, see Mauro, G.S., *TMTT May 2020* 1621-1626
- Cetinkaya, H.**, see Kueppers, S., *TMTT June 2020* 2124-2133
- Chae, U.**, Yu, H., Lee, C., and Cho, I., A Hybrid RF MEMS Switch Actuated by the Combination of Bidirectional Thermal Actuators and Electrostatic Holding; *TMTT Aug. 2020* 3461-3470
- Chahal, P.**, see Craton, M.T., *TMTT May 2020* 1646-1659
- Chahal, P.**, see Craton, M.T., *TMTT Aug. 2020* 3418-3427
- Chakrabarti, A.**, see Daneshgar, S., *TMTT June 2020* 2041-2056
- Chaloun, T.**, see Geiger, M., *TMTT Nov. 2020* 4825-4834
- Chamberlin, R.A.**, see Drisko, J.A., *TMTT Jan. 2020* 196-210
- Chan, K.Y.**, Ramer, R., and Mansour, R.R., Ku -Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning; *TMTT Feb. 2020* 750-761
- Chan, W.S.**, see Pan, Y.F., *TMTT Feb. 2020* 701-710
- Chan, W.S.**, see Wang, W., *TMTT July 2020* 3079-3089
- Chan, W.S.**, see Zhou, X.Y., *TMTT Nov. 2020* 4599-4610
- Chang, C.**, see Guo, J., *TMTT June 2020* 2259-2267
- Chang, H.**, Roblin, P., Hahn, Y., Martinez-Lopez, J.I., Liang, C., and Rawat, K., Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads; *TMTT July 2020* 3184-3196
- Chang, L.**, see Chu, C., *TMTT Jan. 2020* 288-300
- Chang, S.**, and Shin, H., 2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance; *TMTT Nov. 2020* 4589-4598
- Chang, T.**, see Guo, Q., *TMTT March 2020* 1164-1174
- Chang, T.**, see Wang, Z., *TMTT March 2020* 1185-1194
- Chang, T.**, see Zhang, X., *TMTT March 2020* 1074-1085
- Chappidi, C.R.**, Sharma, T., and Sengupta, K., Multi-port Active Load Pulling for mm-Wave 5G Power Amplifiers: Bandwidth, Back-Off Efficiency, and VSWR Tolerance; *TMTT July 2020* 2998-3016
- Che, W.**, see Cai, Q., *TMTT July 2020* 3068-3078
- Che, W.**, see Chiao, J.-., *TMTT March 2020* 833-834
- Che, W.**, see Wang, X., *TMTT April 2020* 1347-1354
- Che, W.**, see Shi, Y., *TMTT Dec. 2020* 5145-5153
- Chen, C.**, Chen, Y., Wang, Y., Kuo, T., and Wang, H., 38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{dB}}/IP3/RR3$ Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems; *TMTT July 2020* 2779-2795
- Chen, F.**, see Chen, K., *TMTT Jan. 2020* 398-404
- Chen, F.**, see Xie, Y., *TMTT July 2020* 2691-2700
- Chen, H.**, see Liu, Y., *TMTT Feb. 2020* 564-572
- Chen, H.**, see Zhang, A., *TMTT March 2020* 939-950
- Chen, H.**, Wang, X., Gao, Y., Shi, X., Wang, Z., Sun, N., Zaeimbashi, M., Liang, X., He, Y., Dong, C., Wei, Y., Jones, J.G., McConney, M.E., Page, M.R., Howe, B.M., Brown, G.J., and Sun, N., Integrated Tunable Magnetolectric RF Inductors; *TMTT March 2020* 951-963
- Chen, H.**, see Wang, X., *TMTT April 2020* 1347-1354
- Chen, H.**, see Zhang, Y., *TMTT Dec. 2020* 5307-5316
- Chen, J.**, see Liu, J., *TMTT June 2020* 2468
- Chen, J.**, see Wang, Z., *TMTT June 2020* 2469
- Chen, J.**, see Wang, Z., *TMTT June 2020* 2234-2242
- Chen, J.**, see Yu, C., *TMTT July 2020* 2833-2844

- Chen, J.**, see Zhou, P., *TMTT July 2020 3056-3067*
- Chen, J.**, see Song, S., *TMTT Dec. 2020 5423-5431*
- Chen, K.**, Wang, X., Cheng, X., Han, J., Chen, F., and Deng, X., An S-Band GaAs Multifunction Chip for Transmit/Receive Modules; *TMTT Jan. 2020 398-404*
- Chen, K.**, see Lyu, H., *TMTT May 2020 1717-1728*
- Chen, K.**, see Cao, Y., *TMTT July 2020 3172-3183*
- Chen, K.**, Liu, J., Zhuang, M., Sun, Q., and Liu, Q.H., New Mixed SETD and FETD Methods to Overcome the Low-Frequency Breakdown Problems by Tree-Cotree Splitting; *TMTT Aug. 2020 3219-3228*
- Chen, L.**, Chen, W., Liu, Y., Chen, X., Ghannouchi, F.M., and Feng, Z., A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters; *TMTT July 2020 2796-2807*
- Chen, L.**, see Wu, S., *TMTT Nov. 2020 4672-4683*
- Chen, L.**, Zhang, L., Wang, Y., and Yu, Z., A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement; *TMTT Nov. 2020 4620-4630*
- Chen, M.**, see Yang, Y., *TMTT Nov. 2020 4896-4904*
- Chen, P.**, see Zhu, L., *TMTT Nov. 2020 4846-4854*
- Chen, Q.**, see Ma, X., *TMTT July 2020 2876-2890*
- Chen, Q.**, see Lai, C., *TMTT Oct. 2020 4424-4432*
- Chen, Q.**, Mesa, F., Yin, X., and Quevedo-Teruel, O., Accurate Characterization and Design Guidelines of Glide-Symmetric Holeey EBG; *TMTT Dec. 2020 4984-4994*
- Chen, R.**, see Chen, S., *TMTT July 2020 2579-2589*
- Chen, S.**, Ding, D., Yu, M., Wang, Y., and Chen, R., Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver; *TMTT July 2020 2579-2589*
- Chen, S.**, see Wang, W., *TMTT July 2020 3079-3089*
- Chen, S.**, see Lin, Q., *TMTT July 2020 3148-3158*
- Chen, S.**, see Cai, J., *TMTT April 2020 1409-1422*
- Chen, S.**, see Cai, J., *TMTT Dec. 2020 5042-5054*
- Chen, W.**, see Chen, L., *TMTT July 2020 2796-2807*
- Chen, X.**, see Chen, L., *TMTT July 2020 2796-2807*
- Chen, X.**, see Tan, K., *TMTT Sept. 2020 3885-3897*
- Chen, X.**, and Gao, R.X., Guest Editorial; *TMTT Oct. 2020 4081*
- Chen, X.**, see Yang, B., *TMTT Nov. 2020 4951-4959*
- Chen, X.**, see Yang, Y., *TMTT Nov. 2020 4896-4904*
- Chen, X.**, see Fang, X., *TMTT Dec. 2020 4995-5003*
- Chen, Y.**, see Chu, C., *TMTT Jan. 2020 288-300*
- Chen, Y.**, see Chu, C., *TMTT Jan. 2020 288-300*
- Chen, Y.**, see Yu, H., *TMTT Jan. 2020 144-159*
- Chen, Y.**, see Zhu, C., *TMTT Feb. 2020 816-823*
- Chen, Y.**, see Li, J., *TMTT May 2020 1896-1907*
- Chen, Y.**, see Ren, Y., *TMTT July 2020 2475-2484*
- Chen, Y.**, see Chen, C., *TMTT July 2020 2779-2795*
- Chen, Y.**, see Lin, Q., *TMTT July 2020 3148-3158*
- Chen, Y.**, Li, J., Zhuo, J., Han, F., and Liu, Q.H., Fast Multiparametric Electromagnetic Full-Wave Inversion via Solving Contracting Scattering Data Equations Optimized by the 3-D MRF Model; *TMTT Nov. 2020 4515-4527*
- Chen, Y.**, see Li, Q., *TMTT Nov. 2020 4940-4950*
- Chen, Y.**, see Song, K., *TMTT Dec. 2020 5279-5287*
- Chen, Y.**, see Zhang, Y., *TMTT Dec. 2020 5307-5316*
- Chen, Z.**, Wu, Y., Yu, Y., Zhao, C., Liu, H., and Kang, K., A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor; *TMTT May 2020 1688-1696*
- Cheng, B.**, see Zhu, R., *TMTT Jan. 2020 387-397*
- Cheng, C.**, see Lyu, Y., *TMTT Dec. 2020 5221-5234*
- Cheng, J.**, see Xia, B., *TMTT Oct. 2020 4249-4256*
- Cheng, J.**, see Xia, B., *TMTT Dec. 2020 5235-5243*
- Cheng, K.-K.M.**, see Liu, H.-Y., *TMTT March 2020 1012-1021*
- Cheng, M.M.**, see Zhu, L., *TMTT Nov. 2020 4846-4854*
- Cheng, Q.S.**, see Li, S., *TMTT June 2020 2172-2182*
- Cheng, Q.S.**, see Yu, Y., *TMTT March 2020 987-999*
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- Chi, P.**, see Zhu, X., *TMTT Feb. 2020 666-680*
- Chi, P.**, see Zhu, X., *TMTT April 2020 1496-1509*
- Chi, P.**, see Zhang, T., *TMTT April 2020 1293-1303*
- Chian, D.**, see Wang, F., *TMTT May 2020 1908-1920*
- Chiao, J.-.**, and Che, W., Guest Editorial; *TMTT March 2020 833-834*
- Chikhi, N.**, see Masullo, M.R., *TMTT April 2020 1340-1346*
- Chiong, C.**, see Wu, Y., *TMTT Dec. 2020 5408-5422*
- Chisum, J.D.**, see Connelly, D.A., *TMTT Oct. 2020 4188-4205*
- Cho, I.**, see Chae, U., *TMTT Aug. 2020 3461-3470*
- Cho, K.**, see Kim, Y., *TMTT Dec. 2020 5055-5064*
- Choi, E.**, see Choi, H.E., *TMTT Feb. 2020 808-815*
- Choi, H.E.**, Choi, W., Simakov, E.I., Zuboraj, M., Carlsten, B.E., and Choi, E., Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band; *TMTT Feb. 2020 808-815*
- Choi, J.**, Park, J., Youn, Y., Hwang, W., Seong, H., Whang, Y.N., and Hong, W., Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum; *TMTT May 2020 1872-1881*
- Choi, P.**, see Liu, B., *TMTT Jan. 2020 264-276*
- Choi, P.**, see Liu, B., *TMTT Sept. 2020 4018-4030*
- Choi, W.**, see Wang, X., *TMTT Jan. 2020 102-110*
- Choi, W.**, see Choi, H.E., *TMTT Feb. 2020 808-815*
- Chu, C.**, Chen, Y., Gao, J., Ke, C., Chen, Y., Chang, L., Su, B., Chu, T., and Wang, Y., A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs; *TMTT Jan. 2020 288-300*
- Chu, C.**, see Pang, J., *TMTT Oct. 2020 4466-4478*
- Chu, H.**, see Xiong, J., *TMTT Nov. 2020 4814-4824*
- Chu, J.**, see Yang, B., *TMTT Nov. 2020 4951-4959*
- Chu, P.**, Guo, L., Zhang, L., Xu, F., Hong, W., and Wu, K., Wide Stopband Substrate Integrated Waveguide Filter Implemented by Orthogonal Ports' Offset; *TMTT March 2020 964-970*
- Chu, Q.**, see Xie, Y., *TMTT July 2020 2691-2700*
- Chu, T.**, see Chu, C., *TMTT Jan. 2020 288-300*
- Chung, H.**, see Ku, B., *TMTT May 2020 1697-1705*
- Chung, H.**, Ma, Q., Sayginer, M., and Rebeiz, G.M., A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers; *TMTT May 2020 1794-1808*
- Chung, H.**, see Yin, Y., *TMTT Nov. 2020 4753-4764*
- Chung, W.**, Kim, C., Kim, S.S., and Hong, S., Design of 94-GHz Highly Efficient Frequency Octupler Using 47-GHz Current-Reusing Class-C Frequency Quadrupler; *TMTT Feb. 2020 775-784*
- Ciccognani, W.**, see Colangeli, S., *TMTT July 2020 2571-2578*
- Ciccognani, W.**, see Colangeli, S., *TMTT Oct. 2020 4177-4187*
- Cilici, F.**, Barragan, M.J., Lauga-Larroze, E., Bourdel, S., Leger, G., Vincent, L., and Mir, S., A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits; *TMTT Aug. 2020 3565-3579*
- Ciou, Y.**, see Jang, S., *TMTT March 2020 844-853*
- Codecasa, L.**, Gentili, G.G., and Politi, M., Exploiting Port Responses for Wideband Analysis of Multimode Lossless Devices; *TMTT Feb. 2020 555-563*
- Cogollos, S.**, see Valencia, J., *TMTT Jan. 2020 87-101*
- Cogollos, S.**, see Melgarejo, J.C., *TMTT July 2020 2590-2600*
- Cohen, E.**, see Ginzberg, N., *TMTT June 2020 2030-2040*
- Cohen, E.**, see Zolkov, E., *TMTT Dec. 2020 5381-5394*
- Colangeli, S.**, Ciccognani, W., Serino, A., Longhi, P.E., Pace, L., Poulain, J., Leblanc, R., and Limiti, E., Nondestructive, Self-Contained Extraction Method of Parasitic Resistances in HEMT Devices; *TMTT July 2020 2571-2578*
- Colangeli, S.**, Ciccognani, W., Longhi, P.E., and Limiti, E., A Test for Unconditional Stability Based on Polynomial Convexification; *TMTT Oct. 2020 4177-4187*
- Colantonio, P.**, see Ali, A., *TMTT July 2020 2701-2715*
- Collado, C.**, see Garcia-Pastor, D., *TMTT April 2020 1304-1311*
- Collantes, J.**, see Mori, L., *TMTT Sept. 2020 3686-3696*
- Connelly, D.A.**, and Chisum, J.D., Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material; *TMTT Oct. 2020 4188-4205*

- Corchia, L.**, see Monti, G., *TMTT May 2020 1809-1818*
- Corona-Chavez, A.**, see Morales-Lovera, H., *TMTT April 2020 1610-1616*
- Corsi, J.**, see Bertrand, M., *TMTT Dec. 2020 4978-4983*
- Coves, A.**, see San-Blas, A.A., *TMTT Oct. 2020 4390-4404*
- Craton, M.T.**, Albrecht, J.D., Chahal, P., and Papapolymerou, J., *In Situ* Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing; *TMTT May 2020 1646-1659*
- Craton, M.T.**, Konstantinou, X., Albrecht, J.D., Chahal, P., and Papapolymerou, J., A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing; *TMTT Aug. 2020 3418-3427*
- Crawley, B.R.**, Baum, T.C., Nicholson, K.J., and Ghorbani, K., Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique; *TMTT May 2020 1954-1963*
- Crespo-Cadenas, C.**, see Becerra, J.A., *TMTT Nov. 2020 4570-4578*
- Cresson, P.**, Boussatour, G., Li, S., Genestie, B., Joly, N., and Lasri, T., Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films; *TMTT June 2020 2144-2150*
- Cruciani, S.**, see Campi, T., *TMTT Sept. 2020 3969-3977*
- Cui, H.**, see Guo, Q., *TMTT March 2020 1164-1174*
- Cui, H.**, see Wang, Z., *TMTT March 2020 1185-1194*
- Cui, H.**, see Zhang, X., *TMTT March 2020 1074-1085*
- Cui, T.J.**, see Wang, M., *TMTT Feb. 2020 732-740*
- Cui, X.**, Wang, G., Li, H., Meng, X., and Liu, X., A Novel High-Efficiency Segmented Design Method for High-Power Serpentine Shaped Mode Converter; *TMTT Feb. 2020 628-635*
- Cunha, T.R.**, see Tome, P.M., *TMTT Sept. 2020 3709-3723*
- D**
- Dai, Z.**, see Pang, J., *TMTT June 2020 2382-2397*
- Dai, Z.**, see Pang, J., *TMTT May 2020 1741-1753*
- Dai, Z.**, see Yang, Z., *TMTT Sept. 2020 3732-3744*
- Dai, Z.**, Pang, J., Li, M., Li, Q., Peng, J., and He, S., A Direct Solving Approach for High-Order Power Amplifier Matching Network Design; *TMTT Aug. 2020 3278-3286*
- Dalmay, C.**, see Nefzi, A., *TMTT March 2020 1142-1150*
- Dambrine, G.**, see Deng, M., *TMTT June 2020 2116-2123*
- Daneshgar, S.**, Dasgupta, K., Thakkar, C., Chakrabarti, A., Levy, C.S., Jaussi, J.E., and Casper, B., High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Submicrometer Planar and FinFET Bulk CMOS; *TMTT June 2020 2041-2056*
- Daneshmand, M.**, see Deif, S., *TMTT July 2020 2856-2866*
- Daneshmand, M.**, see Hosseini, N., *TMTT Sept. 2020 3958-3968*
- Daneshmand, M.**, see Der, E.T., *TMTT Aug. 2020 3379-3388*
- Daneshmand, M.**, see Abbasi, Z., *TMTT Nov. 2020 4855-4864*
- Dang, Z.**, Zhu, H., Huang, J., and He, H., An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave; *TMTT April 2020 1376-1389*
- Daniel, L.**, see Kozlov, M., *TMTT Feb. 2020 509-515*
- Danneville, F.**, see Ghanem, H., *TMTT June 2020 2268-2277*
- Darraji, R.**, see Dhar, S.K., *TMTT July 2020 3120-3133*
- Darraji, R.**, see Dhar, S.K., *TMTT Oct. 2020 4216-4228*
- Darwish, A.M.**, see Jaffri, I., *TMTT Sept. 2020 3942-3957*
- Dasgupta, K.**, see Daneshgar, S., *TMTT June 2020 2041-2056*
- Davis, W.A.**, see Refai, W.Y., *TMTT Aug. 2020 3519-3531*
- De Angelis, C.**, see Mauro, G.S., *TMTT May 2020 1621-1626*
- de la Rubia, V.**, see Szypulski, D., *TMTT Aug. 2020 3229-3241*
- De Martino, C.**, Galatro, L., Romano, R., Parisi, G., and Spirito, M., Hardware and Software Solutions for Active Frequency Scalable (Sub)mm-Wave Load-Pull; *TMTT Sept. 2020 3769-3775*
- De Matos, M.**, see Deng, M., *TMTT June 2020 2116-2123*
- de Villiers, D.I.L.**, see du Toit, H.J., *TMTT July 2020 2531-2538*
- De Zutter, D.**, see Huynen, M., *TMTT April 2020 1217-1233*
- Deif, S.**, and Daneshmand, M., Long Array of Microwave Sensors for Real-Time Coating Defect Detection; *TMTT July 2020 2856-2866*
- del Rio, D.**, see Rezola, A., *TMTT Jan. 2020 340-352*
- Delmonte, N.**, see Zhou, Y., *TMTT Feb. 2020 543-554*
- Delmonte, N.**, see Garcia-Martinez, H., *TMTT Oct. 2020 4361-4368*
- Deng, G.**, see Guo, L., *TMTT March 2020 854-866*
- Deng, J.**, Li, M., Sun, D., Guo, L., and Ma, X., Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter; *TMTT July 2020 2625-2632*
- Deng, M.**, Fadol, D., Wei, W., Pallecchi, E., Happy, H., Dambrine, G., De Matos, M., Zimmer, T., and Fregonese, S., High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors; *TMTT June 2020 2116-2123*
- Deng, X.**, see Chen, K., *TMTT Jan. 2020 398-404*
- Der, E.T.**, Jones, T.R., and Daneshmand, M., Miniaturized 4×4 Butler Matrix and Tunable Phase Shifter Using Ridged Half-Mode Substrate Integrated Waveguide; *TMTT Aug. 2020 3379-3388*
- Deslandes, D.**, see Wang, X., *TMTT April 2020 1347-1354*
- Deutschmann, B.**, and Jacob, A.F., Broadband Septum Polarizer With Triangular Common Port; *TMTT Feb. 2020 693-700*
- Dhar, S.K.**, Sharma, T., Zhu, N., Darraji, R., McLaren, R., Holmes, D.G., Mallette, V., and Ghannouchi, F.M., Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications; *TMTT July 2020 3120-3133*
- Dhar, S.K.**, Sharma, T., Zhu, N., Darraji, R., Holmes, D.G., Staudinger, J., Helaoui, M., Mallette, V., and Ghannouchi, F.M., Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers; *TMTT Oct. 2020 4216-4228*
- Dhayalan, Y.**, see Guo, C., *TMTT March 2020 1035-1044*
- Ding, D.**, see Chen, S., *TMTT July 2020 2579-2589*
- Ding, L.**, see Zhang, J., *TMTT Oct. 2020 4161-4168*
- Ding, L.**, see Wu, S., *TMTT Nov. 2020 4672-4683*
- Ding, S.**, see Zhou, Y., *TMTT Feb. 2020 543-554*
- Dionigi, M.**, see Venanzoni, G., *TMTT July 2020 2633-2643*
- Dogiamis, G.C.**, see Holloway, J.W., *TMTT Aug. 2020 3428-3438*
- Dong, C.**, see Chen, H., *TMTT March 2020 951-963*
- Dong, C.**, see Zhang, Y., *TMTT Dec. 2020 5307-5316*
- Dong, J.**, see Peng, H., *TMTT April 2020 1487-1495*
- Dong, S.**, Zhang, Y., Ma, C., Zhu, C., Gu, Z., Lv, Q., Zhang, B., Li, C., and Ran, L., Doppler Cardiogram: A Remote Detection of Human Heart Activities; *TMTT March 2020 1132-1141*
- Dong, S.**, see You, F., *TMTT Oct. 2020 4433-4444*
- Dong, S.**, see Zhang, Y., *TMTT Nov. 2020 4642-4651*
- Doroshewitz, J.J.**, see Ellison, S.M., *TMTT Jan. 2020 277-287*
- Dou, Y.**, see Jiang, Y., *TMTT Jan. 2020 27-38*
- Dragas, S.**, see Cano, J.L., *TMTT March 2020 980-986*
- Drikas, Z.B.**, Addissie, B.D., Mendez, V.M., and Raman, S., A Compact, High-Gain, High-Power, Ultrawideband Microwave Pulse Compressor Using Time-Reversal Techniques; *TMTT Aug. 2020 3355-3367*
- Drisko, J.A.**, see Popovic, N.B., *TMTT Jan. 2020 184-195*
- Drisko, J.A.**, Chamberlin, R.A., Booth, J.C., Orloff, N.D., and Long, C.J., Optimal Series Resistors for On-Wafer Calibrations; *TMTT Jan. 2020 196-210*
- Du, X.**, Helaoui, M., Jarndal, A., Liu, T., Hu, B., Hu, X., and Ghannouchi, F.M., ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization; *TMTT July 2020 3090-3099*
- du Toit, H.J.**, and de Villiers, D.I.L., A Fully Isolated N -Way Radial Power Combiner; *TMTT July 2020 2531-2538*
- Duan, Y.**, see Liu, Y., *TMTT Feb. 2020 564-572*
- Duarte, C.**, see Gomes, R., *TMTT Feb. 2020 785-795*
- Ducournau, G.**, see Ghanem, H., *TMTT June 2020 2268-2277*
- Duda, N.**, Weigel, R., and Koelpin, A., Low-Weight Wireless Sensor Node With Sensor-Data-Enhanced Dual-Frequency RSSI-Based Distance Estimation; *TMTT Oct. 2020 4131-4137*
- Dulme, S.**, see Makhlof, S., *TMTT Nov. 2020 4611-4619*
- Durgun, A.C.**, see Torun, H.M., *TMTT Oct. 2020 4290-4304*
- Durr, A.**, Kramer, R., Schwarz, D., Geiger, M., and Waldschmidt, C., Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars; *TMTT July 2020 2768-2778*
- Durr, A.**, see Hafner, S., *TMTT March 2020 1065-1073*
- Durr, A.**, see Geiger, M., *TMTT Nov. 2020 4825-4834*
- Dutkiewicz, E.**, see Xu, J., *TMTT May 2020 1668-1677*

Duvvuri, D., see Bassirian, P., *TMTT Sept. 2020 3920-3929*
Dytioco Santos, J.P., Fereidoony, F., Hedayati, M., and Wang, Y.E., High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation; *TMTT Dec. 2020 5029-5041*

E

Ebrahimpouri, M., see Alex-Amor, A., *TMTT Oct. 2020 4236-4248*
Eissa, M.H., Maletic, N., Lopacinski, L., Malignaggi, A., Panic, G., Kraemer, R., Fischer, G., and Kissinger, D., Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS; *TMTT Jan. 2020 239-251*
El-Aassar, O., and Rebeiz, G.M., A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5 dBm Peak Output Power and Over 4.5-THz GBW; *TMTT July 2020 3111-3119*
El-Aassar, O., and Rebeiz, G.M., Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI; *TMTT Oct. 2020 4445-4454*
Elamien, M.B., Maundy, B.J., Belostotski, L., and Elwakil, A.S., Synthesis of Wideband High-Quality Factor Delay- Tunable Fully Differential All-Pass Filters; *TMTT Oct. 2020 4348-4360*
Eliezer, O., Guest Editorial; *TMTT June 2020 1981-1982*
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Fang, M., and Yoshimasu, T., A -197.3 -dBc/Hz FoM_T Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI; *TMTT Oct. 2020 4116-4121*

Fang, X., Li, Y.C., Xue, Q., Wu, D., and Wong, S., Dual-Mode Filtering Baluns Based on Hybrid Cavity-Microstrip Structures; *TMTT May 2020 1637-1645*
Fang, X., Xia, J., and Boumaiza, S., A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic; *TMTT July 2020 3017-3027*
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Fang, Z., Lou, L., Tang, K., Wang, W., Wang, Y., Guo, T., Yang, C., and Zheng, Y., Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor; *TMTT Sept. 2020 4054-4065*
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Feng, F., Zhang, J., Jin, J., Na, W., Yan, S., and Zhang, Q., Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method; *TMTT June 2020 2194-2205*
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Feng, F., Na, W., Liu, W., Yan, S., Zhu, L., and Zhang, Q., Parallel Gradient-Based EM Optimization for Microwave Components Using Adjoint-Sensitivity-Based Neuro-Transfer Function Surrogate; *TMTT Sept. 2020 3606-3620*
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Gao, Y., Zhang, F., Lv, X., Guo, C., Shang, X., Li, L., Liu, J., Liu, Y., Wang, Y., and Lancaster, M.J., Substrate Integrated Waveguide Filter–Amplifier Design Using Active Coupling Matrix Technique; *MTT May 2020* 1706-1716
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Garcia-Pastor, D., Collado, C., Mateu, J., and Aigner, R., Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators; *MTT April 2020* 1304-1311
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Ghaderi, E., Ramani, A.S., Rahimi, A.A., Heo, D., Shekhar, S., and Gupta, S., Four-Element Wide Modulated Bandwidth MIMO Receiver With >35-dB Interference Cancellation; *MTT Sept. 2020* 3930-3941
Ghaleb, H., Carlowitz, C., Fritsche, D., Starke, P., Protze, F., Carta, C., and Ellinger, F., A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery; *MTT June 2020* 2011-2019
Ghaneizadeh, A., Joodaki, M., Borcsok, J., Golmakani, A., and Mafinezhad, K., Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS; *MTT June 2020* 2108-2115
Ghanem, H., Goncalves, J.C.A., Chevalier, P., Alaji, I., Ouimeur, W., Lepilliet, S., Gloria, D., Gaquiere, C., Danneville, F., and Ducournau, G., Modeling

and Analysis of a Broadband Schottky Diode Noise Source Up To 325 GHz Based on 55-nm SiGe BiCMOS Technology; *MTT June 2020* 2268-2277
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Gomes, R., Duarte, C., and Pedro, J.C., Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current; *MTT Feb. 2020* 785-795
Gomez Molina, C., Pereira, F.Q., Melcon, A.A., Marini, S., Sanchez-Soriano, M.A., Boria, V.E., and Guglielmi, M., Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits; *MTT July 2020* 2501-2514
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Gossye, M., Gordebeke, G., Kapusuz, K.Y., Ginste, D.V., and Rogier, H., Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing; *MTT July 2020* 2485-2494
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Grasso, L., Sorbello, G., Ragonese, E., and Palmisano, G., Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting; *MTT Jan. 2020* 365-376
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- Guan, Z.**, Zhang, Y., Han, F., Zhu, C., and Liu, Q.H., Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method; *TMTT June 2020 2183-2193*
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- Guo, C.**, Dhayalan, Y., Shang, X., Powell, J., Lancaster, M.J., Xu, J., Wang, Y., Wang, H., Alderman, B., and Huggard, P.G., A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides; *TMTT March 2020 1035-1044*
- Guo, J.**, and Chang, C., SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise; *TMTT June 2020 2259-2267*
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- Guo, L.**, Li, J., Huang, W., Shao, H., Xie, S., Deng, G., Zhang, Y., and Ren, J., A High-Isolation Eight-Way Power Combiner; *TMTT March 2020 854-866*
- Guo, L.**, see Gu, X., *TMTT Sept. 2020 4040-4053*
- Guo, Q.**, Wang, Z., Chang, T., and Cui, H., Millimeter-Wave 3-D Imaging Testbed With MIMO Array; *TMTT March 2020 1164-1174*
- Guo, Q.**, see Wang, Z., *TMTT March 2020 1185-1194*
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- Guo, Z.**, Zhu, L., and Wong, S., Modular Synthesis of Waveguide Bandpass Filters Using Dual-Mode Resonators; *TMTT May 2020 1660-1667*
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- Hassan, E.**, Scheiner, B., Michler, F., Berggren, M., Wadbro, E., Rohrl, F., Zorn, S., Weigel, R., and Lurz, F., Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions; *TMTT April 2020 1326-1339*
- Haynes, M.S.**, see Prager, S., *TMTT Nov. 2020 4787-4804*
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- Hernandez-Escobar, A.**, Abdo-Sanchez, E., Esteban, J., Martin-Guerrero, T.M., and Camacho-Penalosa, C., Broadband Determination of the Even- and Odd-Mode Propagation Constants of Coupled Lines Based on Two-Port Measurements; *TMTT Feb. 2020 648-654*
- Herrera, A.**, see Ponton, M., *TMTT June 2020 2358-2373*
- Herrojo, C.**, Paredes, F., Bonache, J., and Martin, F., 3-D-Printed High Data-Density Electromagnetic Encoders Based on Permittivity Contrast for Motion Control and Chipless-RFID; *TMTT May 2020 1839-1850*
- Herschel, R.**, see Kueppers, S., *TMTT June 2020 2124-2133*
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- Hirai, A.**, Fujiwara, T., Tsuru, M., Mori, K., and Shimozawa, M., Vector-Sum Phase Shifter Using a Tunable Active g_m -C Polyphase Filter; *TMTT Oct. 2020 4091-4102*
- Hirvonen, M.**, see Forsten, H., *TMTT July 2020 2845-2855*
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- Hammer, F.**, see Scherhauff, M., *TMTT Sept. 2020 3784-3793*
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- Hosseini, N.**, Baghelani, M., and Daneshmand, M., Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics; *TMTT Sept. 2020 3958-3968*
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- Huang, C.**, Determination of Characteristic Impedance of Planar Transmission Lines on Lossy/Dispersive Substrates by Using Series Resistor With Frequency-Dependent Inductance; *TMTT Oct. 2020 4229-4235*
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- Huang, H.**, Xia, J., and Boumaiza, S., Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters; *TMTT Sept. 2020 4066-4076*
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- Hussein, H.M.E.**, Ibrahim, M.A.A., Michetti, G., Rinaldi, M., Onabajo, M., and Cassella, C., Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers; *TMTT Aug. 2020 3497-3509*
- Huynen, M.**, Kapusuz, K.Y., Sun, X., Van der Plas, G., Beyne, E., De Zutter, D., and Vande Ginste, D., Entire Domain Basis Function Expansion of the Differential Surface Admittance for Efficient Broadband Characterization of Lossy Interconnects; *TMTT April 2020 1217-1233*
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- Jaffri, I.**, Ayed, A.B., Darwish, A.M., Mitran, P., and Boumaiza, S., Novel Baseband Equivalent Model for Digital Predistortion of Wideband Frequency-Multiplier-Based Millimeter Wave Sources; *TMTT Sept. 2020 3942-3957*
- Jamali, B.**, and Babakhani, A., Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector; *TMTT Jan. 2020 160-169*
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- Jang, S.**, Li, G., and Lai, W., Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing; *TMTT March 2020 894-903*
- Jang, S.**, Lai, W., Ciou, Y., Hou, J.C., and Syu, J., Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator; *TMTT March 2020 844-853*
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- Jeong, J.**, and Park, J., A Microcontroller Unit-Based Electromagnetic Bandgap Control Scheme: Application for Enhancing Isolation in an Antenna Array and the EMI Scanner System Speed Thereof; *TMTT Nov. 2020 4536-4553*
- Jha, A.K.**, Lamecki, A., Mrozowski, M., and Bozzi, M., A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation; *TMTT April 2020 1598-1609*
- Ji, L.**, Li, X., and Mao, J., Half-Mode Substrate Integrated Waveguide Dispersion Tailoring Using 2.5-D Spoof Surface Plasmon Polaritons Structure; *TMTT July 2020 2539-2550*
- Jia, H.**, and Mansour, R.R., An Efficient Technique for Tuning and Design of Filters and Diplexers; *TMTT July 2020 2610-2624*
- Jiang, G.**, see Zhu, R., *TMTT Jan. 2020 387-397*
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- Jiang, Y.**, Dou, Y., and Wu, K., Generalized PEEC Model for Conductor-Dielectric Problems With Radiation Effect; *TMTT Jan. 2020 27-38*
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- Ioannidis, Z.C.**, Savaidis, S.P., Mitilneos, S.A., Livieratos, S., and Stathopoulos, N.A., Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities; *TMTT Aug. 2020 3255-3262*
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- Jacob, A.F.**, see Deutschmann, B., *TMTT Feb. 2020 693-700*

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Jung, D., see Park, J., *TMTT May 2020 1858-1871*
Jung, K.P., Son, H.S., Kim, J.H., and Park, C.S., Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process; *TMTT July 2020 3045-3055*
Jung, M., and Min, B., A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems; *TMTT Dec. 2020 5371-5380*
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Kim, N., A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC; *TMTT June 2020 2020-2029*
Kim, S.H., Jang, T.H., Kim, J.H., and Park, C.S., A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation; *TMTT June 2020 2419-2427*
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Kim, Y., Park, G., Cho, K., Raj, P.M., Tummala, R.R., and Kim, J., Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure; *TMTT Dec. 2020 5055-5064*
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Leon, A., Reig, B., Perret, E., Podevin, F., Saint-Patrice, D., Puyal, V., Lugo-Alvarez, J., and Ferrari, P., RF Power-Handling Performance for Direct Actuation of Germanium Telluride Switches; *TMTT Jan. 2020 60-73*
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Li, H., Xu, J., Yang, Y., and Zhang, X.Y., Novel Switchable Filtering Circuit With Function Reconfigurability Between SPQT Filtering Switch and Four-Way Filtering Power Divider; *TMTT March 2020 867-876*
Li, H., see Wang, K., *TMTT Aug. 2020 3287-3297*
Li, H., see Xi, Q., *TMTT Nov. 2020 4579-4588*
Li, J., Zhuo, J., Chen, Y., Han, F., and Liu, Q.H., Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO; *TMTT May 2020 1896-1907*
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Li, Q., Chen, Y., Caisse, C., Horn, A., and Harris, V.G., A Position-Independent Approach to Accurate Measurement of Broadband Electromagnetic Constitutive Parameters of Magnetodielectric Materials; *TMTT Nov. 2020 4940-4950*
Li, S., Fan, X., Laforge, P.D., and Cheng, Q.S., Surrogate Model-Based Space Mapping in Postfabrication Bandpass Filters' Tuning; *TMTT June 2020 2172-2182*
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Li, Y., and Zhu, A., On-Demand Real-Time Optimizable Dynamic Model Sizing for Digital Predistortion of Broadband RF Power Amplifiers; *TMTT July 2020 2891-2901*
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Li, Z., Tang, X., Lu, D., and Yu, M., Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth; *TMTT Feb. 2020 721-731*
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- Li, Z.**, see Tang, F., *TMTT April 2020 1564-1575*
- Lian, J.**, Ban, Y., Zhu, H., and Guo, Y.J., Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas; *TMTT Nov. 2020 4706-4718*
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- Liang, Z.**, see Liu, B., *TMTT Jan. 2020 264-276*
- Liao, X.**, Wu, Z., Zhang, Y., Wang, M., Li, F., Liu, G., Wang, J., and Luo, Y., Analysis of the Synthesis Method for Broadband Oversized TE₀₁-to-TE₁₁ Mode Converter; *TMTT Feb. 2020 620-627*
- Liao, X.**, Wu, Z., Wang, M., Pu, Y., Jiang, W., and Luo, Y., Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave; *TMTT Aug. 2020 3271-3277*
- Liao, X.**, Wu, Z., Wang, M., Zhang, R., Pu, Y., Wang, J., and Luo, Y., Design of a Ku/Ka-Band Oversized Waveguide Bend for High-Power Transmission Line; *TMTT April 2020 1355-1364*
- Liao, X.**, see Pu, Y., *TMTT April 2020 1284-1292*
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- Lin, J.**, see Peng, K., *TMTT Sept. 2020 3724-3731*
- Lin, N.**, see Peng, H., *TMTT April 2020 1487-1495*
- Lin, Q.**, Wu, H., Hua, Y., Chen, Y., Hu, L., Liu, L., and Chen, S., A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique; *TMTT July 2020 3148-3158*
- Lin, T.**, see Watanabe, A.O., *TMTT Dec. 2020 5082-5092*
- Lin, T.**, Zhang, Z., Liu, J., Zhao, S., Li, J., Zou, C., Wang, J., Zhang, K., and Jiang, W., Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System; *TMTT Dec. 2020 5317-5327*
- Lin, X.Q.**, see Su, Y., *TMTT June 2020 2320-2330*
- Lin, Y.**, and Wei, C., A Novel Miniature Dual-Band Impedance Matching Network for Frequency-Dependent Complex Impedances; *TMTT Oct. 2020 4314-4326*
- Lin, Z.**, see Tang, F., *TMTT April 2020 1564-1575*
- Link, S.**, see Zhang, S., *TMTT Sept. 2020 3653-3666*
- Liu, B.**, Yi, X., Yang, K., Liang, Z., Feng, G., Choi, P., Boon, C.C., and Li, C., A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS; *TMTT Jan. 2020 264-276*
- Liu, B.**, see Pang, J., *TMTT Jan. 2020 252-263*
- Liu, B.**, see Yu, Y., *TMTT March 2020 987-999*
- Liu, B.**, Quan, X., Boon, C.C., Khanna, D., Choi, P., and Yi, X., Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS; *TMTT Sept. 2020 4018-4030*
- Liu, C.**, see Wu, A., *TMTT Aug. 2020 3558-3564*
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- Liu, H.**, see Wu, Y., *TMTT Oct. 2020 4082-4090*
- Liu, H.**, see Yu, Y., *TMTT Dec. 2020 5359-5370*
- Liu, H.-Y.**, Zhai, C., Cheng, K.-K.M., Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range; *TMTT March 2020 1012-1021*
- Liu, H.W.**, see Pan, Y.F., *TMTT Feb. 2020 681-692*
- Liu, J.**, Zheng, J., Wang, Q., Kainz, W., and Chen, J., Erratum to “A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices” *TMTT June 2020 2468*
- Liu, J.**, Liu, N., and Liu, Q.H., Microscopic Modeling of Metasurfaces by the Mixed Finite Element Numerical Mode-Matching Method; *TMTT Feb. 2020 469-478*
- Liu, J.**, see Gao, Y., *TMTT May 2020 1706-1716*
- Liu, J.**, see Chen, K., *TMTT Aug. 2020 3219-3228*
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- Liu, W.**, see Feng, F., *TMTT Sept. 2020 3606-3620*
- Liu, X.**, see Cui, X., *TMTT Feb. 2020 628-635*
- Liu, X.**, and Luong, H.C., A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement; *TMTT July 2020 2668-2678*
- Liu, X.**, see Wu, X., *TMTT April 2020 1462-1475*
- Liu, Y.**, Shi, L., Wang, J., Chen, H., Lei, Q., Duan, Y., Zhang, Q., Fu, S., and Sun, Z., TO-FDTD Method for Arbitrary Skewed Periodic Structures at Oblique Incidence; *TMTT Feb. 2020 564-572*
- Liu, Y.**, see Gao, Y., *TMTT May 2020 1706-1716*
- Liu, Y.**, see Cao, T., *TMTT May 2020 1819-1829*
- Liu, Y.**, see Chen, L., *TMTT July 2020 2796-2807*
- Liu, Y.**, see Ren, Y., *TMTT July 2020 2475-2484*
- Liu, Y.**, Zhu, L., and Sun, S., Proposal and Design of a Power Divider With Wideband Power Division and Port-to-Port Isolation: A New Topology; *TMTT April 2020 1431-1438*
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- Lokhandwala, M.**, Gao, L., and Rebeiz, G.M., A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI; *TMTT Nov. 2020 4775-4786*
- Lombardi, L.**, Romano, D., and Antonini, G., Efficient Numerical Computation of Full-Wave Partial Elements Modeling Magnetic Materials in the PEEC Method; *TMTT March 2020 915-925*
- Lombardi, L.**, see Kovacevic-Badstuebner, I., *TMTT Aug. 2020 3242-3254*
- Lombardi, V.**, Bozzi, M., and Perregrini, L., Exploiting Symmetries in the Variational Meshless Method for 3-D Inhomogeneous Cavities; *TMTT Feb. 2020 432-440*
- Long, C.J.**, see Popovic, N.B., *TMTT Jan. 2020 184-195*
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- Lu, R.**, Yang, Y., Li, M., Breen, M., and Gong, S., 5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film; *TMTT Feb. 2020 573-589*
- Lu, R.**, see Zhang, S., *TMTT Sept. 2020 3653-3666*
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- Lugo-Alvarez, J.**, see Margalef-Rovira, M., *TMTT Dec. 2020 5014-5028*
- Lukasik, K.**, Cheron, J., Avolio, G., Lewandowski, A., Williams, D.F., Wiatr, W., and Schreurs, D.M.M., Uncertainty in Large-Signal Measurements Under Variable Load Conditions; *TMTT Aug. 2020 3532-3546*
- Luo, G.Q.**, Yu, W., Yu, Y., Zhang, X.H., and Shen, Z., A Three-Dimensional Design of Ultra-Wideband Microwave Absorbers; *TMTT Oct. 2020 4206-4215*
- Luo, Q.**, Zhu, X., Yu, C., and Hong, W., Single-Receiver Over-the-Air Digital Predisortion for Massive MIMO Transmitters With Antenna Crosstalk; *TMTT Jan. 2020 301-315*
- Luo, X.**, see Pang, J., *TMTT Jan. 2020 252-263*
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- Luo, Y.**, see Wang, W., *TMTT Nov. 2020 4554-4559*
- Luong, H.C.**, see Liu, X., *TMTT July 2020 2668-2678*
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- Lv, X.**, see Gao, Y., *TMTT May 2020 1706-1716*
- Lyu, H.**, and Chen, K., Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch; *TMTT May 2020 1717-1728*
- Lyu, H.**, Wang, Z., and Babakhani, A., A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring; *TMTT Nov. 2020 4886-4895*
- Lyu, Y.**, see Qiu, L., *TMTT April 2020 1423-1430*
- Lyu, Y.**, Zhu, L., and Cheng, C., Wideband Phase Shifters With Miniaturized Size on Multiple Series and Shunt Resonators: Proposal and Synthetic Design; *TMTT Dec. 2020 5221-5234*
- M**
- Ma, C.**, see Dong, S., *TMTT March 2020 1132-1141*
- Ma, C.**, see Xi, Q., *TMTT Nov. 2020 4579-4588*
- Ma, H.F.**, see Wang, M., *TMTT Feb. 2020 732-740*
- Ma, J.**, Multiband RF Power Amplifiers for 5G and Beyond; *TMTT June 2020 2168-2171*
- Ma, J.**, see Zhang, J., *TMTT June 2020 2215-2233*
- Ma, J.**, Editorial; *TMTT Jan. 2020 3-15*
- Ma, J.**, Design for Cost: The Key of Success for 5G and Beyond; *TMTT Jan. 2020 16*
- Ma, J.**, Ultra-Broadband Phase Shifters for 5G Mobile Applications; *TMTT Feb. 2020 530*
- Ma, J.**, see Zhang, W., *TMTT Feb. 2020 479-489*
- Ma, J.**, see Feng, F., *TMTT Feb. 2020 531-542*
- Ma, J.**, Highly Efficient Wideband RF Power Amplifier Design for 5G and Beyond; *TMTT May 2020 1620*
- Ma, J.**, Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond; *TMTT July 2020 2473-2474*
- Ma, J.**, Overall Efficiency Improvements of Phased Arrays for 5G and Beyond; *TMTT March 2020 914*
- Ma, J.**, Harvesting Ambient RF Energies for Powering Wearable Devices; *TMTT Sept. 2020 3605*
- Ma, J.**, Miniaturized Butler Matrix and Tunable Phase Shifters for 5G and Beyond; *TMTT Aug. 2020 3209*
- Ma, J.**, Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond; *TMTT Oct. 2020 4150*
- Ma, J.**, High-Performance Synthesizer Design for 5G and Beyond; *TMTT April 2020 1216*
- Ma, J.**, Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond; *TMTT Nov. 2020 4505*
- Ma, J.**, BiCMOS-Based High-Performance THz-Wave Couplers for 5G and Beyond; *TMTT Dec. 2020 4977*
- Ma, J.**, see Zhang, W., *TMTT Dec. 2020 5288-5306*
- Ma, K.**, see Cai, Q., *TMTT July 2020 3068-3078*
- Ma, K.**, see Wang, Y., *TMTT Dec. 2020 5178-5189*
- Ma, M.**, and Jiao, D., Accuracy Controlled Structure-Preserving \mathcal{H}^2 -Matrix-Matrix Product in Linear Complexity With Change of Cluster Bases; *TMTT Feb. 2020 441-455*
- Ma, Q.**, see Chung, H., *TMTT May 2020 1794-1808*
- Ma, Q.**, see Gao, L., *TMTT July 2020 2823-2832*
- Ma, Q.**, see Yin, Y., *TMTT Nov. 2020 4753-4764*
- Ma, X.**, Wang, Y., Lu, L., Zhang, X., Chen, Q., You, X., Lin, J., and Li, L., Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection; *TMTT July 2020 2876-2890*
- Ma, X.**, see Deng, J., *TMTT July 2020 2625-2632*
- Macchiarella, G.**, Gentili, G.G., Tomassoni, C., Bastioli, S., and Snyder, R.V., Design of Waveguide Filters With Cascaded Singlelets Through a Synthesis-Based Approach; *TMTT June 2020 2308-2319*
- Madjar, A.**, see Zolkov, E., *TMTT Dec. 2020 5381-5394*
- Madsen, S.L.**, and Bobowski, J.S., The Complex Permeability of Split-Ring Resonator Arrays Measured at Microwave Frequencies; *TMTT Aug. 2020 3547-3557*
- Mafinezhad, K.**, see Ghaneizadeh, A., *TMTT June 2020 2108-2115*
- Mak, P.**, see Yu, H., *TMTT Jan. 2020 144-159*
- Makhlof, S.**, Steeg, M., Haddad, T., Tebart, J., Dulme, S., Grzeslo, M., Lu, P., Estevez, J.L.F., Malz, S., Pfeiffer, U.R., and Stohr, A., Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners; *TMTT Nov. 2020 4611-4619*
- Maki, S.**, see Pang, J., *TMTT Jan. 2020 252-263*
- Maktoomi, M.H.**, Ren, H., Marbell, M.N., Klein, V., Wilson, R., and Arigong, B., A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push-Pull Power Amplifier; *TMTT Nov. 2020 4560-4569*
- Maletic, N.**, see Eissa, M.H., *TMTT Jan. 2020 239-251*
- Malignaggi, A.**, see Eissa, M.H., *TMTT Jan. 2020 239-251*
- Mallete, V.**, see Dhar, S.K., *TMTT July 2020 3120-3133*
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- Mansour, R.R.**, see Chan, K.Y., *TMTT Feb. 2020 750-761*
- Mansour, R.R.**, see Jia, H., *TMTT July 2020 2610-2624*
- Mansour, R.R.**, see Singh, T., *TMTT Sept. 2020 3745-3755*
- Manurkar, P.**, Horansky, R.D., Jamroz, B.F., Jargon, J.A., Williams, D.F., and Remley, K.A., Precision Millimeter-Wave-Modulated Wideband Source at 92.4 GHz as a Step Toward an Over-the-Air Reference; *TMTT July 2020 2644-2654*
- Mao, J.**, see Ji, L., *TMTT July 2020 2539-2550*
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- Maradei, F.**, see Campi, T., *TMTT Sept. 2020 3969-3977*

- Marahrens, S.**, see Boes, F., *TMTT June 2020 2161-2167*
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- Marconi, S.**, see Garcia-Martinez, H., *TMTT Oct. 2020 4361-4368*
- Margalef-Rovira, M.**, Lugo-Alvarez, J., Bautista, A., Vincent, L., Lepilliet, S., Saadi, A.A., Podevin, F., Barragan, M.J., Pistono, E., Bourdel, S., Gaquiere, C., and Ferrari, P., Design of mm-Wave Slow-Wave-Coupled Coplanar Waveguides; *TMTT Dec. 2020 5014-5028*
- Marini, S.**, see Gomez Molina, C., *TMTT July 2020 2501-2514*
- Marini, S.**, see Molina, C.G., *TMTT Dec. 2020 5004-5013*
- Marongiu, P.**, see Montisci, G., *TMTT Feb. 2020 611-619*
- Marra, F.**, Lecini, J., Tamburrano, A., Pisu, L., and Sarto, M.S., Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite; *TMTT Feb. 2020 590-601*
- Martel, J.**, see Mouris, B.A., *TMTT April 2020 1365-1375*
- Martelius, M.**, Stadius, K., Lemberg, J., Roverato, E., Nieminen, T., Antonov, Y., Anttila, L., Valkama, M., Kosunen, M., and Ryyanen, J., A Class-D Tri-Phasing CMOS Power Amplifier With an Extended Marchand-Balun Power Combiner; *TMTT March 2020 1022-1034*
- Martin, B.**, see Rezola, A., *TMTT Jan. 2020 340-352*
- Martin, D.N.**, Enrico de Falco, P., Roberg, M., Lasser, G., and Barton, T.W., An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier; *TMTT July 2020 3028-3038*
- Martin, F.**, see Herrojo, C., *TMTT May 2020 1839-1850*
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- Martin-Guerrero, T.M.**, see Hernandez-Escobar, A., *TMTT Feb. 2020 648-654*
- Martin-Guerrero, T.M.**, Santarelli, A., Gibiino, G.P., Traverso, P.A., Camacho-Penalosa, C., and Filicori, F., Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling; *TMTT May 2020 1627-1636*
- Martinez-Lopez, J.I.**, see Chang, H., *TMTT July 2020 3184-3196*
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- Massa, A.**, see Zhong, Y., *TMTT April 2020 1234-1247*
- Mastri, F.**, see Monti, G., *TMTT May 2020 1809-1818*
- Masullo, M.R.**, Vaccaro, V.G., Losito, R., Masi, A., Passarelli, A., Chikhi, N., Papari, G., and Andreone, A., Metamaterial-Based Absorbers for the Reduction of Accelerator Beam-Coupling Impedance; *TMTT April 2020 1340-1346*
- Mata-Contreras, J.**, see Munoz-Enano, J., *TMTT April 2020 1312-1325*
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- Maudy, B.J.**, see Elamien, M.B., *TMTT Oct. 2020 4348-4360*
- Mauro, G.S.**, Locatelli, A., Torrisi, G., Leonardi, O., Celona, L., De Angelis, C., and Sorbello, G., Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources; *TMTT May 2020 1621-1626*
- Mayer, J.**, see Nuss, B., *TMTT Sept. 2020 3861-3871*
- Mbugua, A.W.**, Fan, W., Olesen, K., Cai, X., and Pedersen, G.F., Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder; *TMTT Feb. 2020 636-647*
- McConney, M.E.**, see Chen, H., *TMTT March 2020 951-963*
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- Mealy, T.**, and Capolino, F., General Conditions to Realize Exceptional Points of Degeneracy in Two Uniform Coupled Transmission Lines; *TMTT Aug. 2020 3342-3354*
- Medi, A.**, see Ghazizadeh, M.H., *TMTT April 2020 1542-1552*
- Medi, A.**, see Ghazizadeh, M.H., *TMTT April 2020 1553-1563*
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- Mehri, M.**, see Amini, A., *TMTT Aug. 2020 3298-3307*
- Mehri, M.**, and Amini, A., Stochastic EMI Noise Model of PCB Layout for Circuit-Level Analysis of System in IoT Applications; *TMTT Dec. 2020 5072-5081*
- Melcon, A.A.**, see Gomez Molina, C., *TMTT July 2020 2501-2514*
- Melcon, A.A.**, see Molina, C.G., *TMTT Dec. 2020 5004-5013*
- Melgarejo, J.C.**, Cogollos, S., Guglielmi, M., and Boria, V.E., A New Family of Multiband Waveguide Filters Based on a Folded Topology; *TMTT July 2020 2590-2600*
- Melgarejo, J.C.**, see San-Blas, A.A., *TMTT Oct. 2020 4390-4404*
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- Meng, M.**, see Ren, Y., *TMTT July 2020 2475-2484*
- Meng, X.**, see Cui, X., *TMTT Feb. 2020 628-635*
- Meng, Y.**, Lin, C., Zang, J., Qing, A., and Nikolova, N.K., General Theory of Holographic Inversion With Linear Frequency Modulation Radar and its Application to Whole-Body Security Scanning; *TMTT Nov. 2020 4694-4705*
- Mesa, F.**, see Mouris, B.A., *TMTT April 2020 1365-1375*
- Mesa, F.**, see Chen, Q., *TMTT Dec. 2020 4984-4994*
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- Michetti, G.**, see Hussein, H.M.E., *TMTT Aug. 2020 3497-3509*
- Michler, F.**, see Hassan, E., *TMTT April 2020 1326-1339*
- Miek, D.**, Simmich, S., Kamrath, F., and Hoft, M., Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies; *TMTT June 2020 2097-2107*
- Miilunpalo, T.**, see Zahra, M., *TMTT Sept. 2020 3852-3860*
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- Mitran, P.**, see Jaffri, I., *TMTT Sept. 2020 3942-3957*
- Miura, T.**, and Tahara, K., Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method; *TMTT May 2020 1773-1782*
- Moghaddam, M.**, see Prager, S., *TMTT Nov. 2020 4787-4804*
- Mohammadpour-Aghdam, K.**, see Rezaei, M., *TMTT Dec. 2020 5103-5114*
- Molina, C.G.**, Pereira, F.Q., Marini, S., Melcon, A.A., Boria, V.E., and Guglielmi, M., Multimode Equivalent Networks for Shielded Microwave Circuits With Thick Metallizations; *TMTT Dec. 2020 5004-5013*
- Mondal, S.**, see Singh, R., *TMTT Sept. 2020 3794-3803*
- Monediere, T.**, see Olivier, V., *TMTT July 2020 2521-2530*
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- Monorchio, A.**, see Brizi, D., *TMTT Sept. 2020 3814-3822*
- Montalto, A.**, see Campi, T., *TMTT Sept. 2020 3969-3977*
- Monti, G.**, Mastri, F., Mongiardo, M., Corchia, L., and Tarricone, L., Load-Independent Operative Regime for an Inductive Resonant WPT Link in Parallel Configuration; *TMTT May 2020 1809-1818*
- Montisci, G.**, Valente, G., Muntoni, G., Marongiu, P., and Pisanu, T., A Compact Q-Band Rectangular Waveguide Thermal Isolator; *TMTT Feb. 2020 611-619*
- Morales-Lovera, H.**, Olvera-Cervantes, J., Corona-Chavez, A., and Kataria, T.K., Dielectric Anisotropy Sensor Using Coupled Resonators; *TMTT April 2020 1610-1616*
- Mori, K.**, see Hirai, A., *TMTT Oct. 2020 4091-4102*
- Mori, L.**, Lizarraga, I., Anakabe, A., Collantes, J., Armengaud, V., and Soubercaze-Pun, G., Efficient Calculation of Stabilization Parameters in RF Power Amplifiers; *TMTT Sept. 2020 3686-3696*
- Morini, A.**, and Zappelli, L., Estimation of the Losses of 1:N Dividers by the Measurement of the Reflection When the Outputs Are Shorted; *TMTT Aug. 2020 3592-3601*
- Morris, A.S.**, see Zhang, J., *TMTT March 2020 1103-1117*
- Motz, C.**, see Sadjina, S., *TMTT March 2020 1118-1131*
- Mouris, B.A.**, Fernandez-Prieto, A., Thobaben, R., Martel, J., Mesa, F., and Quevedo-Teruel, O., On the Increment of the Bandwidth of Mushroom-Type EBG Structures With Glide Symmetry; *TMTT April 2020 1365-1375*
- Mrozowski, M.**, see Szypulski, D., *TMTT Aug. 2020 3229-3241*
- Mrozowski, M.**, see Jha, A.K., *TMTT April 2020 1598-1609*

Mumcu, G., see Gonzalez-Carvajal, E., *TMTT Sept. 2020 3756-3768*
Munoz-Enano, J., Velez, P., Gil Barba, M., Mata-Contreras, J., and Martin, F., Differential-Mode to Common-Mode Conversion Detector Based on Race Hybrid Couplers: Analysis and Application to Differential Sensors and Comparators; *TMTT April 2020 1312-1325*
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Murch, R.D., see Zhou, H., *TMTT Oct. 2020 4455-4465*
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Na, D., see Nayak, I., *TMTT Feb. 2020 501-508*
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Naah, G., and Gofre, R., Empowering the Bandwidth of Continuous-Mode Symmetrical Doherty Amplifiers by Leveraging on Fuzzy Logic Techniques; *TMTT July 2020 3134-3147*
Nafe, A., Sayginer, M., Kibaroglu, K., and Rebeiz, G.M., 2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO; *TMTT Sept. 2020 3872-3884*
Nallam, N., see Badiyari, K., *TMTT Dec. 2020 5347-5358*
Nallandhigal, S.N., Burasa, P., and Wu, K., Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS; *TMTT Oct. 2020 4405-4423*
Nallandhigal, S.N., Lu, Y., and Wu, K., Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis; *TMTT Dec. 2020 5244-5258*
Nam, S., see Lee, J., *TMTT June 2020 2300-2307*
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Nasr, M.A., and Kishk, A.A., Analysis and Design of Broadband Ridge-Gap-Waveguide Tight and Loose Hybrid Couplers; *TMTT Aug. 2020 3368-3378*
Nauwelaers, B., see Bao, X., *TMTT June 2020 2080-2089*
Nawaz, A.A., Albrecht, J.D., and Cagri Ulusoy, A., A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers; *TMTT July 2020 3197-3205*
Nayak, I., Na, D., Nicolini, J.L., Omelchenko, Y.A., and Teixeira, F.L., Progress in Kinetic Plasma Modeling for High-Power Microwave Devices: Analysis of Multipactor Mitigation in Coaxial Cables; *TMTT Feb. 2020 501-508*
Nayyeri, V., see Albishi, A.M., *TMTT Oct. 2020 4340-4347*
Nefzi, A., Carr, L., Dalmay, C., Pothier, A., Leveque, P., and Arnaud-Cormos, D., Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples; *TMTT March 2020 1142-1150*
Negra, R., see Hamed, A., *TMTT June 2020 2090-2096*
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Neumann, K., Kuhnelt, L., Langer, F., Rennings, A., Benson, N., Schmechel, R., and Erni, D., A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics; *TMTT June 2020 2151-2160*
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Ng, H.J., see Ali, A., *TMTT July 2020 2701-2715*
Ngo, T., see Gao, S., *TMTT Dec. 2020 5200-5210*
Nguyen, D.P., Nguyen, N.L.K., Stameroff, A.N., Camarchia, V., Pirola, M., and Pham, A., A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell; *TMTT July 2020 2984-2997*
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Nguyen, N.L.K., see Nguyen, D.P., *TMTT July 2020 2984-2997*
Nguyen, N.L.K., Killeen, N.S., Nguyen, D.P., Stameroff, A.N., and Pham, A., A Wideband Gain-Enhancement Technique for Distributed Amplifiers; *TMTT Sept. 2020 3697-3708*
Nguyen, T.D., and Hong, J., A High Fundamental Frequency Sub-THz CMOS Oscillator With a Capacitive Load Reduction Circuit; *TMTT July 2020 2655-2667*
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Nimura, S., Furusu, D., and Tamura, M., Improvement in Power Transmission Efficiency for Cavity Resonance-Enabled Wireless Power Transfer by Utilizing Probes With Variable Reactance; *TMTT July 2020 2734-2744*
Ning, J., see Wu, B., *TMTT Dec. 2020 5270-5278*
Nopchinda, D., Eriksson, T., Zirath, H., and Buisman, K., Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation; *TMTT Jan. 2020 222-235*
Nuss, B., Mayer, J., Marahrens, S., and Zwick, T., Frequency Comb OFDM Radar System With High Range Resolution and Low Sampling Rate; *TMTT Sept. 2020 3861-3871*

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Oberberg, M., see Pohle, D., *TMTT June 2020 2067-2079*
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Oezdamer, O., Weigel, R., Hagelauer, A., and Solomko, V., Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices; *TMTT Oct. 2020 4122-4130*
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Olivier, V., Huitema, L., Lenoir, B., Turki, H., Breuil, C., Pouliguen, P., and Monediere, T., Dual-Band Ferrite Circulators Operating on Weak Field Conditions: Design Methodology and Bandwidths' Improvement; *TMTT July 2020 2521-2530*
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Omar, A., Characterization of a Multiport Coaxial Line Adaptor for Multimodal Waveguides; *TMTT March 2020 971-979*
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Ou, X., see Zhang, S., *TMTT Sept. 2020 3653-3666*
Ouyang, Z., Zhu, L., Qiu, L., and Feng, L., Proposal of Coplanar Stripline Series Stub Structure for Wideband Bandpass Filters; *TMTT Aug. 2020 3397-3407*
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- Palmisano, G.**, see Grasso, L., *TMTT Jan. 2020 365-376*
- Palomares-Caballero, A.**, Alex-Amor, A., Padilla, P., and Valenzuela-Valdes, J.F., Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Hole Structures; *TMTT Dec. 2020 5132-5144*
- Pan, Y.F.**, Zheng, S.Y., Chan, W.S., and Liu, H.W., Compact Phase-Reconfigurable Couplers With Wide Tuning Range; *TMTT Feb. 2020 681-692*
- Pang, J.**, Dai, Z., Li, Y., Li, M., and Zhu, A., Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications; *TMTT June 2020 2382-2397*
- Pang, J.**, Tokgoz, K.K., Maki, S., Li, Z., Luo, X., Abdo, I., Kawai, S., Liu, H., Sun, Z., Liu, B., Katsuragi, M., Kimura, K., Shirane, A., and Okada, K., A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay; *TMTT Jan. 2020 252-263*
- Pang, J.**, Li, Y., Li, M., Zhang, Y., Zhou, X.Y., Dai, Z., and Zhu, A., Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier; *TMTT May 2020 1741-1753*
- Pang, J.**, see Dai, Z., *TMTT Aug. 2020 3278-3286*
- Pang, J.**, Chu, C., Li, Y., and Zhu, A., Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment; *TMTT Oct. 2020 4466-4478*
- Pang, J.**, see Zhou, X.Y., *TMTT Nov. 2020 4599-4610*
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- Papapolymerou, J.**, see Craton, M.T., *TMTT Aug. 2020 3418-3427*
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- Parisi, G.**, see De Martino, C., *TMTT Sept. 2020 3769-3775*
- Park, C.**, Park, J., Shin, Y., Kim, J., Huh, S., Kim, D., Park, S., and Ahn, S., Separated Circular Capacitive Coupler for Reducing Cross-Coupling Capacitance in Drone Wireless Power Transfer System; *TMTT Sept. 2020 3978-3985*
- Park, C.S.**, see Kim, S.H., *TMTT June 2020 2419-2427*
- Park, C.S.**, see Byeon, C.W., *TMTT July 2020 2902-2910*
- Park, C.S.**, see Jung, K.P., *TMTT July 2020 3045-3055*
- Park, C.S.**, see Park, G.H., *TMTT Dec. 2020 5395-5407*
- Park, G.**, see Kim, Y., *TMTT Dec. 2020 5055-5064*
- Park, G.H.**, Byeon, C.W., and Park, C.S., A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS; *TMTT Dec. 2020 5395-5407*
- Park, J.**, Jung, D., Bae, K., and Park, S., Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique; *TMTT May 2020 1858-1871*
- Park, J.**, see Choi, J., *TMTT May 2020 1872-1881*
- Park, J.**, see Park, C., *TMTT Sept. 2020 3978-3985*
- Park, J.**, see Jeong, J., *TMTT Nov. 2020 4536-4553*
- Park, K.**, Lee, S., and Jeon, S., A New Compact CMOS Distributed Digital Attenuator; *TMTT Nov. 2020 4631-4640*
- Park, M.**, Comments on "Decoupling Capacitor Placement on Resonant Parallel-Plates Via Driving Point Impedance" [Jun 19 2162-2171]; *TMTT Feb. 2020 824-825*
- Park, S.**, see Park, J., *TMTT May 2020 1858-1871*
- Park, S.**, see Park, C., *TMTT Sept. 2020 3978-3985*
- Park, S.**, Shin, D., Koh, K., and Raman, S., A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers; *TMTT April 2020 1576-1590*
- Passarelli, A.**, see Masullo, M.R., *TMTT April 2020 1340-1346*
- Pastorino, M.**, see Bisio, I., *TMTT May 2020 1882-1895*
- Pedersen, G.F.**, see Mbugua, A.W., *TMTT Feb. 2020 636-647*
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- Pedro, J.C.**, see Gomes, R., *TMTT Feb. 2020 785-795*
- Pedro, J.C.**, see Tome, P.M., *TMTT Sept. 2020 3709-3723*
- Peng, H.**, Zhao, F., Dong, J., Tatu, S.O., Liu, Y., Lin, N., and Yang, T., Substrate Integrated Waveguide Equalizers and Attenuators With Surface Resistance; *TMTT April 2020 1487-1495*
- Peng, J.**, He, S., Shi, W., Yao, T., Wu, J., and Wang, J., Adaptive Signal Separation for Dual-Input Doherty Power Amplifier; *TMTT Jan. 2020 121-131*
- Peng, J.**, see Dai, Z., *TMTT Aug. 2020 3278-3286*
- Peng, K.**, and Lee, J., A Novel Active/Passive Dual-Mode Sensing Technique for Detecting Vital Signs; *TMTT Jan. 2020 414-424*
- Peng, K.**, Wu, W., and Lin, J., Reduction of Phase Noise in Fractional-N Frequency Synthesizer Using Self-Injection Locking Loop; *TMTT Sept. 2020 3724-3731*
- Peng, Y.**, see Zhang, J., *TMTT Jan. 2020 170-183*
- Pereira, F.Q.**, see Gomez Molina, C., *TMTT July 2020 2501-2514*
- Pereira, F.Q.**, see Molina, C.G., *TMTT Dec. 2020 5004-5013*
- Peroulis, D.**, see Zhang, R., *TMTT June 2020 2289-2299*
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- Peroulis, D.**, see Yang, L., *TMTT March 2020 877-893*
- Perregrini, L.**, see Lombardi, V., *TMTT Feb. 2020 432-440*
- Perregrini, L.**, see Yasir, M., *TMTT Feb. 2020 701-710*
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- Podevin, F.**, see Margalef-Rovira, M., *TMTT Dec. 2020 5014-5028*
- Podilchak, S.K.**, see Rotenberg, S.A., *TMTT May 2020 1921-1932*
- Pohl, N.**, see Rolfes, I., *TMTT June 2020 2065-2066*
- Pohl, N.**, see Kueppers, S., *TMTT June 2020 2124-2133*
- Pohl, N.**, see Welp, B., *TMTT March 2020 1195-1211*
- Pohle, D.**, Schulz, C., Oberberg, M., Awakowicz, P., and Rolfes, I., The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes; *TMTT June 2020 2067-2079*
- Politi, M.**, see Codecasa, L., *TMTT Feb. 2020 555-563*
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- Ponton, D.**, see Kalcher, M., *TMTT Aug. 2020 3510-3518*
- Ponton, M.**, Ramirez, F., Herrera, A., and Suarez, A., Oscillator Stabilization Through Feedback With Slow Wave Structures; *TMTT June 2020 2358-2373*
- Popovic, N.B.**, Hagerstrom, A.M., Drisko, J.A., Booth, J.C., Garboczi, E.J., Long, C.J., and Orloff, N.D., Materials Characterization With Multiple Off-set Reflects at Frequencies to 110 GHz; *TMTT Jan. 2020 184-195*
- Popovic, N.B.**, Schlomann, E.A., Weiss, A.J., Rentz, R.A., Garboczi, E.J., Orloff, N.D., and Long, C.J., Microwave Measurements for Conductive Anisotropic Materials; *TMTT Nov. 2020 4913-4924*
- Popovic, Z.**, see Antonio Estrada, J., *TMTT Sept. 2020 3908-3919*
- Porch, A.**, see Hamzah, H., *TMTT May 2020 1830-1838*
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Pu, Y., Wu, Z., Liao, X., Wang, M., Li, D., and Luo, Y., Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend; *TMTT April 2020 1284-1292*
Pu, Y., see Wang, W., *TMTT Nov. 2020 4641*
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Qiu, L., Zhu, L., and Lyu, Y., Schiffman Phase Shifters With Wide Phase Shift Range Under Operation of First and Second Phase Periods in a Coupled Line; *TMTT April 2020 1423-1430*
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Raffo, A., Vadala, V., Yamamoto, H., Kikuchi, K., Bosi, G., Ui, N., Inoue, K., and Vannini, G., A New Modeling Technique for Microwave Multicell Transistors Based on EM Simulations; *TMTT July 2020 3100-3110*
Raghuwanshi, S.K., see Srivastava, N.K., *TMTT May 2020 1851-1857*
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Rahimian Omam, Z., Pourziad, A., Abdel-Wahab, W.M., Nikmehr, S., Gigoian, S., and Safavi-Naeini, S., Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies; *TMTT Feb. 2020 711-720*
Raj, P.M., see Kim, Y., *TMTT Dec. 2020 5055-5064*
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Rance, O., Barbot, N., and Perret, E., Design of Planar Resonant Scatterer With Roll-Invariant Cross Polarization; *TMTT Oct. 2020 4305-4313*
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Ren, Y., Chen, Y., Meng, M., Liu, Y., Xu, K., and Li, J., A Surface Integral Equation Formulation for Efficient Simulation of Finite-Sized Multilayered Parallel-Plate Structure; *TMTT July 2020 2475-2484*
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Rezaee, M., and Zaman, A.U., Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications; *TMTT July 2020 2601-2609*
Rezaei, M., and Mohammadpour-Aghdam, K., On Postprocessing Reduction of Phase Noise in FMCW Radars; *TMTT Dec. 2020 5103-5114*
Rezola, A., Sevillano, J.F., del Rio, D., Martin, B., Gurutzeaga, I., Velez, I., and Berenguer, R., Temperature-Dependent I/Q Imbalance Compensation in Ultra-Wideband Millimeter-Wave Multi-Gigabit Transmitters; *TMTT Jan. 2020 340-352*
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Rocco, G.M., Bozzi, M., Schreurs, D., Perregini, L., Marconi, S., Alaimo, G., and Auricchio, F., 3-D Printed Microfluidic Sensor in SiW Technology for Liquids' Characterization; *TMTT March 2020 1175-1184*
Roche, M., see Alkhafaji, N., *TMTT Jan. 2020 329-339*
Rodriguez-Vazquez, P., Grzyb, J., Heinemann, B., and Pfeiffer, U.R., Corrections to "A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220-255 GHz Tunable LO in a SiGe HBT Technology" *TMTT Sept. 2020 3783*
Rodriguez-Vazquez, P., Grzyb, J., Heinemann, B., and Pfeiffer, U.R., A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220-255 GHz Tunable LO in a SiGe HBT Technology; *TMTT Sept. 2020 3834-3851*

- Roger, M.**, see Wang, S., *TMTT July 2020 2725-2733*
- Roger, M.**, see Wang, S., *TMTT Nov. 2020 4835-4845*
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- Rolfes, I.**, and Pohl, N., Guest Editorial; *TMTT June 2020 2065-2066*
- Rolfes, I.**, see Pohle, D., *TMTT June 2020 2067-2079*
- Romano, D.**, see Lombardi, L., *TMTT March 2020 915-925*
- Romano, D.**, see Kovacevic-Badstuebner, I., *TMTT Aug. 2020 3242-3254*
- Romano, R.**, see De Martino, C., *TMTT Sept. 2020 3769-3775*
- Rotenberg, S.A.**, Podilchak, S.K., Re, P.D.H., Mateo-Segura, C., Goussetis, G., and Lee, J., Efficient Rectifier for Wireless Power Transmission Systems; *TMTT May 2020 1921-1932*
- Roverato, E.**, see Martelius, M., *TMTT March 2020 1022-1034*
- Rowe, W.S.T.**, see Ahmed, A., *TMTT Jan. 2020 51-59*
- Ruan, C.**, see Shu, G., *TMTT June 2020 2251-2258*
- Rupakula, B.**, see Kodak, U., *TMTT July 2020 2745-2767*
- Rupakula, B.**, Aljuhani, A.H., and Rebeiz, G.M., ACPR Improvement in Large Phased Arrays With Complex Modulated Waveforms; *TMTT March 2020 1045-1053*
- Ryan, M.J.**, see Gu, D., *TMTT Nov. 2020 4925-4939*
- Ryu, J.**, and Yu, J., Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses; *TMTT Aug. 2020 3471-3479*
- Ryynanen, J.**, see Ul Haq, F., *TMTT May 2020 1964-1976*
- Ryynanen, J.**, see Martelius, M., *TMTT March 2020 1022-1034*
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- S**
- Saadi, A.A.**, see Margalef-Rovira, M., *TMTT Dec. 2020 5014-5028*
- Sadjina, S.**, Motz, C., Paireder, T., Huemer, M., and Pretl, H., A Survey of Self-Interference in LTE-Advanced and 5G New Radio Wireless Transceivers; *TMTT March 2020 1118-1131*
- Saeed, M.**, see Hamed, A., *TMTT June 2020 2090-2096*
- Safavi-Naeini, S.**, see Rahimian Omam, Z., *TMTT Feb. 2020 711-720*
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- Salama, K.N.**, see Almansouri, A.S., *TMTT May 2020 1754-1762*
- Saleem, A.R.**, Stadius, K., Hannula, J., Lehtovuori, A., Kosunen, M., Viikari, V., and Ryynanen, J., A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster; *TMTT Nov. 2020 4728-4739*
- Salski, B.**, Karpisz, T., Kopyt, P., and Krupka, J., Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator; *TMTT Dec. 2020 5093-5102*
- Salucci, M.**, see Zhong, Y., *TMTT April 2020 1234-1247*
- San-Blas, A.A.**, Guglielmi, M., Melgarejo, J.C., Coves, A., and Boria, V.E., Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators; *TMTT Oct. 2020 4390-4404*
- Sanada, A.**, see Kato, Y., *TMTT April 2020 1401-1408*
- Sanamzadeh, M.**, and Tsang, L., Broadband Vector Potential Dyadic Green's Function and Normal Modes in 3-D Cavity of Irregular Shape; *TMTT Aug. 2020 3210-3218*
- Sanchez-Soriano, M.A.**, see Gomez Molina, C., *TMTT July 2020 2501-2514*
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- Saurav, K.**, see Sofi, M.A., *TMTT Oct. 2020 4138-4149*
- Savaidis, S.P.**, Mitilineos, S.A., Ioannidis, Z.C., and Stathopoulos, N.A., Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor; *TMTT June 2020 2374-2381*
- Savaidis, S.P.**, see Ioannidis, Z.C., *TMTT Aug. 2020 3255-3262*
- Savic, A.**, Meyne, N., and Jacob, A.F., Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors; *TMTT March 2020 1086-1094*
- Sayginer, M.**, see Chung, H., *TMTT May 2020 1794-1808*
- Sayginer, M.**, see Nafe, A., *TMTT Sept. 2020 3872-3884*
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- Scharl, A.**, see Sepaintner, F., *TMTT June 2020 2134-2143*
- Scheiner, B.**, see Hassan, E., *TMTT April 2020 1326-1339*
- Scherhauff, M.**, Hammer, F., Pichler-Scheder, M., Kastl, C., and Stelzer, A., Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity; *TMTT Sept. 2020 3784-3793*
- Schlomann, E.A.**, see Popovic, N.B., *TMTT Nov. 2020 4913-4924*
- Schmechel, R.**, see Neumann, K., *TMTT June 2020 2151-2160*
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- Sepaintner, F.**, Scharl, A., Rohrl, F., Bogner, W., and Zorn, S., Characterization and Production of PCB Structures With Increased Ratio of Electromagnetic Field in Air; *TMTT June 2020 2134-2143*
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- Shao, G.**, and Guo, Y., Hybrid Wireless Positioning and Charging With Switched Field Helmholtz Coils for Wireless Capsule Endoscopy; *TMTT March 2020 904-913*
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- Shen, J.**, and Ricketts, D.S., Compact W-Band "Swan Neck" Turnstile Junction Orthomode Transducer Implemented by 3-D Printing; *TMTT Aug. 2020 3408-3417*
- Shen, T.**, see Xia, Y., *TMTT Dec. 2020 5432-5442*
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- Shi, X.**, see Chen, H., *TMTT March 2020 951-963*
- Shi, Y.**, Feng, W., Jiang, X., Xue, Q., and Che, W., Half-Air-Filled Ball-Grid-Array-Based Substrate-Integrated Groove-Gap Waveguide and its Transition to Microstrip at W-Band; *TMTT Dec. 2020 5145-5153*
- Shimozawa, M.**, see Hirai, A., *TMTT Oct. 2020 4091-4102*
- Shin, D.**, see Park, S., *TMTT April 2020 1576-1590*

- Shin, H.**, see Chang, S., *TMTT Nov. 2020 4589-4598*
- Shin, S.**, see Holloway, J.W., *TMTT Aug. 2020 3428-3438*
- Shin, Y.**, see Park, C., *TMTT Sept. 2020 3978-3985*
- Shinohara, N.**, see Takabayashi, N., *TMTT March 2020 1151-1163*
- Shinohara, N.**, see Yang, B., *TMTT Nov. 2020 4951-4959*
- Shirane, A.**, see Pang, J., *TMTT Jan. 2020 252-263*
- Shivamurthy, H.T.**, Hu, Z., Vlachogiannakis, G., Spirito, M., and Neto, A., Equivalent Circuit Modeling of a Single-Ended Patch Sensing Element in Integrated Technology; *TMTT Jan. 2020 17-26*
- Shu, G.**, Ruan, C., and He, W., Study of H-Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices; *TMTT June 2020 2251-2258*
- Shu, Z.**, see Xia, Y., *TMTT Dec. 2020 5432-5442*
- Shubair, R.M.**, see Al-Alem, Y., *TMTT Jan. 2020 39-50*
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- Silvestri, L.**, see Garcia-Martinez, H., *TMTT Oct. 2020 4361-4368*
- Simakov, E.I.**, see Choi, H.E., *TMTT Feb. 2020 808-815*
- Simmich, S.**, see Miek, D., *TMTT June 2020 2097-2107*
- Singh, R.**, Mondal, S., and Paramesh, J., A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads; *TMTT Sept. 2020 3794-3803*
- Singh, T.**, and Mansour, R.R., Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays; *TMTT Sept. 2020 3745-3755*
- Sinha, P.**, Vinoy, K.J., and Rao, C.V.N., Analytical Modeling and Experimental Studies on Tapered Post Re-Entrant Cavity Resonator; *TMTT Dec. 2020 5190-5199*
- Skrupal, A.V.**, Ponomarev, D.V., and Komarov, A.A., Tamm Resonances in the Structure 1-D Microwave Photonic Crystal/Conducting Nanometer Layer; *TMTT Dec. 2020 5115-5122*
- Slawicki, T.**, see Lai, C., *TMTT Oct. 2020 4424-4432*
- Smet, V.**, see Watanabe, A.O., *TMTT Dec. 2020 5082-5092*
- Smith, C.S.**, see Bowrothu, R., *TMTT Dec. 2020 5065-5071*
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- Snyder, R.V.**, see Macchiarella, G., *TMTT June 2020 2308-2319*
- Socher, E.**, see Buadana, N., *TMTT Sept. 2020 3621-3632*
- Sofi, M.A.**, Saurav, K., and Koul, S.K., Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter; *TMTT Oct. 2020 4138-4149*
- Solomko, V.**, Bakalski, W., Cattaneo, A., Tayari, D., Nascimento, P., Essel, J., and Thomas, A., RF Impedance Sensor for Antenna-Tuning Front Ends; *TMTT March 2020 1095-1102*
- Solomko, V.**, see Oezdamar, O., *TMTT Oct. 2020 4122-4130*
- Son, H.S.**, see Jung, K.P., *TMTT July 2020 3045-3055*
- Song, K.**, Yao, J., Chen, Y., Zhou, Y., Zhu, Y., and Fan, Y., Balanced Diplexer Based on Substrate Integrated Waveguide Dual-Mode Resonator; *TMTT Dec. 2020 5279-5287*
- Song, R.**, see Ye, X., *TMTT Nov. 2020 4684-4693*
- Song, S.**, Zheng, J., Wang, Y., Wang, Q., Kainz, W., Long, S.A., and Chen, J., Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices; *TMTT Dec. 2020 5423-5431*
- Sorbello, G.**, see Grasso, L., *TMTT Jan. 2020 365-376*
- Sorbello, G.**, see Mauro, G.S., *TMTT May 2020 1621-1626*
- Sorocki, J.**, Piekarz, I., Wincza, K., Gruszczynski, S., and Papapolymerou, J., Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications; *TMTT July 2020 2808-2822*
- Sorrentino, R.**, see Venanzoni, G., *TMTT July 2020 2633-2643*
- Soubercaze-Pun, G.**, see Mori, L., *TMTT Sept. 2020 3686-3696*
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- Spirito, M.**, see De Martino, C., *TMTT Sept. 2020 3769-3775*
- Srivastava, N.K.**, Parihar, R., and Raghuvanshi, S.K., Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band; *TMTT May 2020 1851-1857*
- Stadius, K.**, see Ul Haq, F., *TMTT May 2020 1964-1976*
- Stadius, K.**, see Martelius, M., *TMTT March 2020 1022-1034*
- Stadius, K.**, see Waheed, M.Z., *TMTT Sept. 2020 3633-3652*
- Stadius, K.**, see Zahra, M., *TMTT Sept. 2020 3852-3860*
- Stadius, K.**, see Saleem, A.R., *TMTT Nov. 2020 4728-4739*
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- Stameroff, A.N.**, see Nguyen, N.L.K., *TMTT Sept. 2020 3697-3708*
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- Starke, P.**, see Ghaleb, H., *TMTT June 2020 2011-2019*
- Stathopoulos, N.A.**, see Savaidis, S.P., *TMTT June 2020 2374-2381*
- Stathopoulos, N.A.**, see Ioannidis, Z.C., *TMTT Aug. 2020 3255-3262*
- Staudinger, J.**, see Dhar, S.K., *TMTT Oct. 2020 4216-4228*
- Steeg, M.**, see Makhlof, S., *TMTT Nov. 2020 4611-4619*
- Steiner, M.**, Grebner, T., and Waldschmidt, C., Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization; *TMTT Nov. 2020 4652-4661*
- Stelzer, A.**, see Scherhauff, M., *TMTT Sept. 2020 3784-3793*
- Stohr, A.**, see Makhlof, S., *TMTT Nov. 2020 4611-4619*
- Su, B.**, see Chu, C., *TMTT Jan. 2020 288-300*
- Su, J.**, see Cai, J., *TMTT April 2020 1409-1422*
- Su, T.**, see Wu, B., *TMTT Dec. 2020 5270-5278*
- Su, W.**, see He, X., *TMTT July 2020 2716-2724*
- Su, Y.**, Fan, Y., Lin, X.Q., and Wu, K., Single-Layer Mode Composite Coplanar Waveguide Dual-Band Filter With Large Frequency Ratio; *TMTT June 2020 2320-2330*
- Suarez, A.**, see Ponton, M., *TMTT June 2020 2358-2373*
- Suh, B.**, and Min, B., A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS; *TMTT June 2020 2057-2064*
- Sun, D.**, see Deng, J., *TMTT July 2020 2625-2632*
- Sun, H.**, see Tan, X., *TMTT Oct. 2020 4276-4289*
- Sun, L.**, see Cai, J., *TMTT April 2020 1409-1422*
- Sun, L.**, see Cai, J., *TMTT Dec. 2020 5042-5054*
- Sun, N.**, see Chen, H., *TMTT March 2020 951-963*
- Sun, N.**, see Chen, H., *TMTT March 2020 951-963*
- Sun, N.**, see Zhang, Y., *TMTT Dec. 2020 5307-5316*
- Sun, N.X.**, see Zhang, Y., *TMTT Dec. 2020 5307-5316*
- Sun, Q.**, see Chen, K., *TMTT Aug. 2020 3219-3228*
- Sun, S.**, and Jiao, D., Multiphysics Modeling and Simulation of 3-D Cu-Graphene Hybrid Nanointerconnects; *TMTT Feb. 2020 490-500*
- Sun, S.**, see Wang, M., *TMTT Feb. 2020 732-740*
- Sun, S.**, see Liu, Y., *TMTT April 2020 1431-1438*
- Sun, X.**, see Huynen, M., *TMTT April 2020 1217-1233*
- Sun, Y.**, see Wang, B., *TMTT Jan. 2020 377-386*
- Sun, Z.**, see Pang, J., *TMTT Jan. 2020 252-263*
- Sun, Z.**, see Liu, Y., *TMTT Feb. 2020 564-572*
- Sutbas, B.**, Ozbay, E., and Atalar, A., Accurate and Process-Tolerant Resistive Load; *TMTT July 2020 2495-2500*
- Sutinjo, A.T.**, Belostotski, L., Juswardy, B., and Ung, D.X.C., A Measure of Well-Spread Points in Noise Wave-Based Source Matrix for Wideband Noise Parameter Measurement: The SKA-Low Example; *TMTT May 2020 1783-1793*
- Swaminathan, M.**, see Torun, H.M., *TMTT Oct. 2020 4290-4304*
- Swaminathan, M.**, see Watanabe, A.O., *TMTT Dec. 2020 5082-5092*
- Syu, J.**, see Jang, S., *TMTT March 2020 844-853*
- Szypulski, D.**, Fotyga, G., de la Rubia, V., and Mrozowski, M., A Subspace-Splitting Moment-Matching Model-Order Reduction Technique for Fast Wideband FEM Simulations of Microwave Structures; *TMTT Aug. 2020 3229-3241*

T

- Taghikhani, P.**, Buisman, K., and Fager, C., Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications; *TMTT Nov. 2020 4740-4752*
- Tahara, K.**, see Miura, T., *TMTT May 2020 1773-1782*
- Takabayashi, N.**, Shinohara, N., Mitani, T., Furukawa, M., and Fujiwara, T., Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays; *TMTT March 2020 1151-1163*
- Takamiya, M.**, see Qiu, H., *TMTT Sept. 2020 4031-4039*

- Tamayo-Dominguez, A.**, Fernandez-Gonzalez, J., and Sierra-Castaner, M., 3-D-Printed Modified Butler Matrix Based on Gap Waveguide at W-Band for Monopulse Radar; *TMTT March 2020* 926-938
- Tamburrano, A.**, see Marra, F., *TMTT Feb. 2020* 590-601
- Tamura, M.**, see Nimura, S., *TMTT July 2020* 2734-2744
- Tan, K.**, Chen, X., Wu, S., and Fang, G., Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array; *TMTT Sept. 2020* 3885-3897
- Tan, X.**, Lin, F., Sun, H., and Xue, Q., Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption; *TMTT Oct. 2020* 4276-4289
- Tang, F.**, see Yang, Z., *TMTT Sept. 2020* 3732-3744
- Tang, F.**, Yang, T., Ye, K., Li, Z., Zhou, X., Lin, Z., Li, P., Hu, S., Li, M., Wang, B., and Bermak, A., A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter; *TMTT April 2020* 1564-1575
- Tang, F.**, see Xia, Y., *TMTT Dec. 2020* 5432-5442
- Tang, K.**, see Fang, Z., *TMTT Sept. 2020* 4054-4065
- Tang, P.**, see Yu, Y., *TMTT Dec. 2020* 5359-5370
- Tang, X.**, see Li, Z., *TMTT Feb. 2020* 721-731
- Tang, X.**, see Yang, Y., *TMTT Nov. 2020* 4896-4904
- Tarricone, L.**, see Monti, G., *TMTT May 2020* 1809-1818
- Tatu, S.O.**, see Peng, H., *TMTT April 2020* 1487-1495
- Tayari, D.**, see Solomko, V., *TMTT March 2020* 1095-1102
- Tazon, A.**, see Cano, J.L., *TMTT March 2020* 980-986
- Tebart, J.**, see Makhlof, S., *TMTT Nov. 2020* 4611-4619
- Tehrani, B.K.**, see He, X., *TMTT July 2020* 2716-2724
- Teixeira, F.L.**, see Nayak, I., *TMTT Feb. 2020* 501-508
- Tenhunen, M.**, see Ul Haq, F., *TMTT May 2020* 1964-1976
- Tentzeris, M.M.**, see He, X., *TMTT July 2020* 2716-2724
- Tentzeris, M.M.**, see Watanabe, A.O., *TMTT Dec. 2020* 5082-5092
- Teran-Bahena, E.Y.**, Sejas-Garcia, S.C., and Torres-Torres, R., Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance; *TMTT June 2020* 2428-2434
- Thakkar, C.**, see Daneshgar, S., *TMTT June 2020* 2041-2056
- Thobaben, R.**, see Mouris, B.A., *TMTT April 2020* 1365-1375
- Thoma, R.**, see Hafner, S., *TMTT March 2020* 1065-1073
- Thomas, A.**, see Solomko, V., *TMTT March 2020* 1095-1102
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- Tokgoz, K.K.**, see Pang, J., *TMTT Jan. 2020* 252-263
- Tomassoni, C.**, see Macchiarella, G., *TMTT June 2020* 2308-2319
- Tomassoni, C.**, see Venanzoni, G., *TMTT July 2020* 2633-2643
- Tome, P.M.**, Barradas, F.M., Cunha, T.R., and Pedro, J.C., A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers; *TMTT Sept. 2020* 3709-3723
- Tong, C.E.**, see Zeng, L., *TMTT July 2020* 2515-2520
- Torregrasa-Penalva, G.**, see Garcia-Martinez, H., *TMTT Oct. 2020* 4361-4368
- Torres-Torres, R.**, see Teran-Bahena, E.Y., *TMTT June 2020* 2428-2434
- Torrisi, G.**, see Mauro, G.S., *TMTT May 2020* 1621-1626
- Torun, H.M.**, Durgun, A.C., Aygun, K., and Swaminathan, M., Causal and Passive Parameterization of S-Parameters Using Neural Networks; *TMTT Oct. 2020* 4290-4304
- Traverso, P.A.**, see Martin-Guerrero, T.M., *TMTT May 2020* 1627-1636
- Truesdell, D.**, see Bassirian, P., *TMTT Sept. 2020* 3920-3929
- Tsang, L.**, see Sanamzadeh, M., *TMTT Aug. 2020* 3210-3218
- Tsao, H.**, see Bassirian, P., *TMTT Sept. 2020* 3920-3929
- Tseng, C.**, and Wu, C., A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection; *TMTT May 2020* 1933-1942
- Tseng, C.**, Tseng, T., and Wu, C., Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor; *TMTT Nov. 2020* 4865-4874
- Tseng, T.**, see Tseng, C., *TMTT Nov. 2020* 4865-4874
- Tsuru, M.**, see Hirai, A., *TMTT Oct. 2020* 4091-4102
- Tummala, R.R.**, see Kim, Y., *TMTT Dec. 2020* 5055-5064
- Tummala, R.R.**, see Watanabe, A.O., *TMTT Dec. 2020* 5082-5092
- Turki, H.**, see Olivier, V., *TMTT July 2020* 2521-2530
- Turkmen, E.**, and Gurbuz, Y., A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs; *TMTT Jan. 2020* 211-221
- Turunen, M.**, see Waheed, M.Z., *TMTT Sept. 2020* 3633-3652
- Turunen, M.**, see Brihuega, A., *TMTT Sept. 2020* 4000-4017

U

- Ui, N.**, see Raffo, A., *TMTT July 2020* 3100-3110
- Ul Haq, F.**, Englund, M., Antonov, Y., Tenhunen, M., Stadius, K., Kosunen, M., Ostman, K.B., Koli, K., and Ryyanen, J., A Six-Phase Two-Stage Blocker-Tolerant Harmonic-Rejection Receiver; *TMTT May 2020* 1964-1976
- Ung, D.X.C.**, see Sutinjo, A.T., *TMTT May 2020* 1783-1793
- Unnikrishnan, V.**, see Zahra, M., *TMTT Sept. 2020* 3852-3860

V

- V. P. Anjos, E.**, Schreurs, D., Vandenbosch, G.A.E., and Geurts, M., Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon; *TMTT Aug. 2020* 3480-3496
- Vaccaro, V.G.**, see Masullo, M.R., *TMTT April 2020* 1340-1346
- Vadala, V.**, see Raffo, A., *TMTT July 2020* 3100-3110
- Vakalis, S.**, Gong, L., He, Y., Papapolymerou, J., and Nanzer, J.A., Experimental Demonstration and Calibration of a 16-Element Active Incoherent Millimeter-Wave Imaging Array; *TMTT Sept. 2020* 3804-3813
- Valencia, J.**, Boria, V.E., Guglielmi, M., and Cogollos, S., Compact Wideband Hybrid Filters in Rectangular Waveguide With Enhanced Out-of-Band Response; *TMTT Jan. 2020* 87-101
- Valente, G.**, see Montisci, G., *TMTT Feb. 2020* 611-619
- Valenzuela-Valdes, J.F.**, see Palomares-Caballero, A., *TMTT Dec. 2020* 5132-5144
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- Valkama, M.**, see Martelius, M., *TMTT March 2020* 1022-1034
- Valkama, M.**, see Waheed, M.Z., *TMTT Sept. 2020* 3633-3652
- Valkama, M.**, see Brihuega, A., *TMTT Sept. 2020* 4000-4017
- Valkama, M.**, see Zahra, M., *TMTT Sept. 2020* 3852-3860
- Van der Plas, G.**, see Huynen, M., *TMTT April 2020* 1217-1233
- Vande Ginste, D.**, see Huynen, M., *TMTT April 2020* 1217-1233
- Vandenbosch, G.A.E.**, see Anjos, E.V.P., *TMTT Feb. 2020* 762-774
- Vandenbosch, G.A.E.**, see V. P. Anjos, E., *TMTT Aug. 2020* 3480-3496
- Vannini, G.**, see Raffo, A., *TMTT July 2020* 3100-3110
- Vardaxoglou, J.C.**, see Whittaker, T.W., *TMTT Jan. 2020* 74-86
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- Velez, I.**, see Rezola, A., *TMTT Jan. 2020* 340-352
- Velez, P.**, see Munoz-Enano, J., *TMTT April 2020* 1312-1325
- Venanzoni, G.**, Tomassoni, C., Dionigi, M., Mongiardo, M., and Sorrentino, R., Design and Fabrication of 3-D Printed Inline Coaxial Filters With Improved Stopband; *TMTT July 2020* 2633-2643
- Venugopal, A.**, Qu, T., and Victora, R.H., Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes; *TMTT Feb. 2020* 602-610
- Victora, R.H.**, see Venugopal, A., *TMTT Feb. 2020* 602-610
- Viikari, V.**, see Zahra, M., *TMTT Sept. 2020* 3852-3860
- Viikari, V.**, see Saleem, A.R., *TMTT Nov. 2020* 4728-4739
- Vincent, L.**, see Cilici, F., *TMTT Aug. 2020* 3565-3579
- Vincent, L.**, see Margalef-Rovira, M., *TMTT Dec. 2020* 5014-5028
- Vinoy, K.J.**, see Sinha, P., *TMTT Dec. 2020* 5190-5199
- Vlachogiannakis, G.**, see Shivamurthy, H.T., *TMTT Jan. 2020* 17-26

W

- Wadbro, E.**, see Hassan, E., *TMTT April 2020* 1326-1339
- Wagih, M.**, Hilton, G.S., Weddell, A.S., and Beeby, S., Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting; *TMTT Nov. 2020* 4960-4972
- Wagner, E.**, see Gao, L., *TMTT Jan. 2020* 132-143

- Wagner, E.**, Shana'a, O., and Rebeiz, G.M., A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS; *TMTT April 2020 1529-1541*
- Waheed, M.Z.**, Korpi, D., Anttila, L., Kiayani, A., Kosunen, M., Stadius, K., Campo, P.P., Turunen, M., Allen, M., Ryyanen, J., and Valkama, M., Passive Intermodulation in Simultaneous Transmit-Receive Systems: Modeling and Digital Cancellation Methods; *TMTT Sept. 2020 3633-3652*
- Waldschmidt, C.**, see Durr, A., *TMTT July 2020 2768-2778*
- Waldschmidt, C.**, see Hafner, S., *TMTT March 2020 1065-1073*
- Waldschmidt, C.**, see Geiger, M., *TMTT Nov. 2020 4825-4834*
- Waldschmidt, C.**, see Steiner, M., *TMTT Nov. 2020 4652-4661*
- Waldschmidt, C.**, see Gruner, P., *TMTT Nov. 2020 4805-4813*
- Walling, J.S.**, see Azam, A., *TMTT June 2020 1983-1994*
- Wang, B.**, Sun, Y., Wang, Z., and Wang, X., Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary; *TMTT Jan. 2020 377-386*
- Wang, B.**, see Xiao, L., *TMTT April 2020 1260-1269*
- Wang, B.**, see Tang, F., *TMTT April 2020 1564-1575*
- Wang, C.**, see Wu, J., *TMTT Oct. 2020 4267-4275*
- Wang, D.**, see Wu, B., *TMTT Dec. 2020 5270-5278*
- Wang, F.**, Juan, P., Chian, D., and Wen, C., Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm; *TMTT May 2020 1908-1920*
- Wang, G.**, see Cui, X., *TMTT Feb. 2020 628-635*
- Wang, G.**, see Wang, W., *TMTT July 2020 3079-3089*
- Wang, H.**, see Chen, C., *TMTT July 2020 2779-2795*
- Wang, H.**, see Camarchia, V., *TMTT July 2020 2957-2983*
- Wang, H.**, see Guo, C., *TMTT March 2020 1035-1044*
- Wang, H.**, Shen, F., Qi, X., Zhang, M., Wang, J., Zhang, B., Li, C., and Ran, L., Analytical Approach to Microwave Orientations Based on a Strongly Coupled Array; *TMTT Sept. 2020 3898-3907*
- Wang, H.**, see Wang, K., *TMTT Aug. 2020 3287-3297*
- Wang, H.**, see Wu, Y., *TMTT Dec. 2020 5408-5422*
- Wang, J.**, see Wang, X., *TMTT Jan. 2020 102-110*
- Wang, J.**, see Peng, J., *TMTT Jan. 2020 121-131*
- Wang, J.**, see Liu, Y., *TMTT Feb. 2020 564-572*
- Wang, J.**, see Liao, X., *TMTT Feb. 2020 620-627*
- Wang, J.**, see Wang, H., *TMTT Sept. 2020 3898-3907*
- Wang, J.**, see Liao, X., *TMTT April 2020 1355-1364*
- Wang, J.**, see Wang, W., *TMTT Nov. 2020 4641*
- Wang, J.**, see Wang, W., *TMTT Nov. 2020 4554-4559*
- Wang, J.**, see Lin, T., *TMTT Dec. 2020 5317-5327*
- Wang, J.**, see Zhang, Y., *TMTT Dec. 2020 5307-5316*
- Wang, K.**, Li, T., Li, H., Luo, Y., Wang, H., Zhou, Y., Hu, B., and He, C., A Compact Dual-Band Mode Converter for High-Power Microwave Applications; *TMTT Aug. 2020 3287-3297*
- Wang, L.**, Zhang, Y., Han, F., Zhou, J., and Liu, Q.H., A Phaseless Inverse Source Method (PISM) Based on Near-Field Scanning for Radiation Diagnosis and Prediction of PCBs; *TMTT Oct. 2020 4151-4160*
- Wang, M.**, Sun, S., Ma, H.F., and Cui, T.J., Supercompact and Ultrawideband Surface Plasmonic Bandpass Filter; *TMTT Feb. 2020 732-740*
- Wang, M.**, see Liao, X., *TMTT Feb. 2020 620-627*
- Wang, M.**, see Liao, X., *TMTT Aug. 2020 3271-3277*
- Wang, M.**, see Liao, X., *TMTT April 2020 1355-1364*
- Wang, M.**, see Pu, Y., *TMTT April 2020 1284-1292*
- Wang, M.**, Qian, C., White, J.K., and Yucel, A.C., VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxalized Structures; *TMTT Dec. 2020 5154-5168*
- Wang, N.**, see Zhang, X., *TMTT March 2020 1074-1085*
- Wang, N.**, see Xiong, J., *TMTT Nov. 2020 4814-4824*
- Wang, Q.**, see Liu, J., *TMTT June 2020 2468*
- Wang, Q.**, see Song, S., *TMTT Dec. 2020 5423-5431*
- Wang, S.**, Roger, M., Sarrazin, J., and Lelandais-Perrault, C., A Joint Crest Factor Reduction and Digital Predistortion for Power Amplifiers Linearization Based on Clipping-and-Bank-Filtering; *TMTT July 2020 2725-2733*
- Wang, S.**, see Zhang, G., *TMTT Sept. 2020 3675-3685*
- Wang, S.**, Roger, M., Sarrazin, J., and Lelandais-Perrault, C., Augmented Iterative Learning Control for Neural-Network-Based Joint Crest Factor Reduction and Digital Predistortion of Power Amplifiers; *TMTT Nov. 2020 4835-4845*
- Wang, W.**, Chen, S., Cai, J., Zhou, X.Y., Chan, W.S., Wang, G., and Xue, Q., A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept; *TMTT July 2020 3079-3089*
- Wang, W.**, see Fang, Z., *TMTT Sept. 2020 4054-4065*
- Wang, W.**, see Wu, H., *TMTT Aug. 2020 3389-3396*
- Wang, W.**, Liu, G., Jiang, W., Pu, Y., Wang, J., and Luo, Y., Corrections to "Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube" *TMTT Nov. 2020 4641*
- Wang, W.**, Liu, G., Jiang, W., Pu, Y., Wang, J., and Luo, Y., Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube; *TMTT Nov. 2020 4554-4559*
- Wang, X.**, see Wang, B., *TMTT Jan. 2020 377-386*
- Wang, X.**, Wang, J., Zhu, L., Choi, W., and Wu, W., Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator; *TMTT Jan. 2020 102-110*
- Wang, X.**, Li, Y., Yu, C., Hong, W., and Zhu, A., Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests; *TMTT Jan. 2020 316-328*
- Wang, X.**, see Chen, K., *TMTT Jan. 2020 398-404*
- Wang, X.**, see Li, Y., *TMTT March 2020 1054-1064*
- Wang, X.**, see Chen, H., *TMTT March 2020 951-963*
- Wang, X.**, Deslandes, D., Feng, W., Chen, H., and Che, W., Coupling Analysis of Adjacent Substrate-Integrated Waveguides Based on the Equivalent Transmission Line Model; *TMTT April 2020 1347-1354*
- Wang, Y.**, see Wang, Z., *TMTT June 2020 2469*
- Wang, Y.**, see Wang, Z., *TMTT June 2020 2234-2242*
- Wang, Y.**, see Chu, C., *TMTT Jan. 2020 288-300*
- Wang, Y.**, see Gao, Y., *TMTT May 2020 1706-1716*
- Wang, Y.**, see Ma, X., *TMTT July 2020 2876-2890*
- Wang, Y.**, see Chen, S., *TMTT July 2020 2579-2589*
- Wang, Y.**, see Chen, C., *TMTT July 2020 2779-2795*
- Wang, Y.**, see Yu, Y., *TMTT March 2020 987-999*
- Wang, Y.**, see Guo, C., *TMTT March 2020 1035-1044*
- Wang, Y.**, see Fang, Z., *TMTT Sept. 2020 4054-4065*
- Wang, Y.**, see Wu, A., *TMTT Aug. 2020 3558-3564*
- Wang, Y.**, see You, F., *TMTT Oct. 2020 4433-4444*
- Wang, Y.**, see Chen, L., *TMTT Nov. 2020 4620-4630*
- Wang, Y.**, see Watanabe, A.O., *TMTT Dec. 2020 5082-5092*
- Wang, Y.**, see Song, S., *TMTT Dec. 2020 5423-5431*
- Wang, Y.**, Yu, M., and Ma, K., Substrate Integrated Suspended Slot Line and Its Application to Differential Coupler; *TMTT Dec. 2020 5178-5189*
- Wang, Y.E.**, see Zou, X., *TMTT Oct. 2020 4479-4490*
- Wang, Y.E.**, see Dytioco Santos, J.P., *TMTT Dec. 2020 5029-5041*
- Wang, Z.**, Zheng, J., Wang, Y., Kainz, W., and Chen, J., Erratum to "On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment" *TMTT June 2020 2469*
- Wang, Z.**, Zheng, J., Wang, Y., Kainz, W., and Chen, J., On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment; *TMTT June 2020 2234-2242*
- Wang, Z.**, see Wang, B., *TMTT Jan. 2020 377-386*
- Wang, Z.**, see Guo, Q., *TMTT March 2020 1164-1174*
- Wang, Z.**, see Chen, H., *TMTT March 2020 951-963*
- Wang, Z.**, Guo, Q., Tian, X., Chang, T., and Cui, H., Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR; *TMTT March 2020 1185-1194*
- Wang, Z.**, see Lyu, H., *TMTT Nov. 2020 4886-4895*
- Warecka, M.**, Lech, R., and Kowalczyk, P., Hybrid Analysis of Structures Composed of Axially Symmetric Objects; *TMTT Nov. 2020 4528-4535*
- Watanabe, A.O.**, Lin, T., Ali, M., Wang, Y., Smet, V., Raj, P.M., Tentzeris, M.M., Tummala, R.R., and Swaminathan, M., Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias; *TMTT Dec. 2020 5082-5092*
- Watanabe, S.**, see Wu, I., *TMTT Feb. 2020 655-665*

- Weddell, A.S., *see* Wagih, M., *TMTT* Nov. 2020 4960-4972
- Wei, C., *see* Lin, Y., *TMTT* Oct. 2020 4314-4326
- Wei, W., *see* Deng, M., *TMTT* June 2020 2116-2123
- Wei, X., *see* Zhang, J., *TMTT* Oct. 2020 4161-4168
- Wei, Y., *see* Chen, H., *TMTT* March 2020 951-963
- Wei, Y., *see* Zhang, Y., *TMTT* Dec. 2020 5307-5316
- Wei, Z., *see* Xu, K., *TMTT* June 2020 2206-2214
- Weigel, R., *see* Oezdamar, O., *TMTT* Oct. 2020 4122-4130
- Weigel, R., *see* Duda, N., *TMTT* Oct. 2020 4131-4137
- Weigel, R., *see* Hassan, E., *TMTT* April 2020 1326-1339
- Weiss, A.J., *see* Popovic, N.B., *TMTT* Nov. 2020 4913-4924
- Weiss, R., *see* Zolkov, E., *TMTT* Dec. 2020 5381-5394
- Weip, B., Hansen, S., Briese, G., Kuppers, S., Thomas, S., Bredendiek, C., and Pohl, N., Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications; *TMTT* March 2020 1195-1211
- Wen, A., *see* Zhai, W., *TMTT* Dec. 2020 5335-5346
- Wen, C., *see* Wang, F., *TMTT* May 2020 1908-1920
- Whang, Y.N., *see* Choi, J., *TMTT* May 2020 1872-1881
- White, J.K., *see* Wang, M., *TMTT* Dec. 2020 5154-5168
- Whittaker, T.W., Whittow, W.G., and Vardaxoglou, J.C., Artificially Engineered Capacitors for Discrete High-Frequency Electronic Circuitry; *TMTT* Jan. 2020 74-86
- Whittow, W.G., *see* Whittaker, T.W., *TMTT* Jan. 2020 74-86
- Wiatr, W., *see* Lukasik, K., *TMTT* Aug. 2020 3532-3546
- Williams, D.F., Jamroz, B.F., Rezac, J.D., and Jones, R.D., Evaluating Uncertainty of Microwave Calibration Models With Regression Residuals; *TMTT* June 2020 2454-2467
- Williams, D.F., *see* Manurkar, P., *TMTT* July 2020 2644-2654
- Williams, D.F., Jamroz, B., and Rezac, J.D., Evaluating Uncertainty of Nonlinear Microwave Calibration Models With Regression Residuals; *TMTT* Sept. 2020 3776-3782
- Williams, D.F., *see* Lukasik, K., *TMTT* Aug. 2020 3532-3546
- Wilson, C., *see* Bonner-Stewart, J., *TMTT* June 2020 2343-2357
- Wilson, R., *see* Maktoomi, M.H., *TMTT* Nov. 2020 4560-4569
- Wincza, K., *see* Sorocki, J., *TMTT* July 2020 2808-2822
- Wong, S., *see* Guo, Z., *TMTT* May 2020 1660-1667
- Wong, S., *see* Fang, X., *TMTT* May 2020 1637-1645
- Wu, A., Liu, C., Liang, F., Zou, X., Wang, Y., Luan, P., Li, C., and Ridler, N., Calibration on the Fly—A Novel Two-Port *S*-Parameter Measurement Method for On-Wafer Leaky Systems; *TMTT* Aug. 2020 3558-3564
- Wu, B., Fan, C., Feng, X., Zhao, Y., Ning, J., Wang, D., and Su, T., Dynamically Tunable Filtering Attenuator Based on Graphene Integrated Microstrip Resonators; *TMTT* Dec. 2020 5270-5278
- Wu, C., *see* Tseng, C., *TMTT* May 2020 1933-1942
- Wu, C., *see* Tseng, C., *TMTT* Nov. 2020 4865-4874
- Wu, C., Liu, Y., Lu, S., Gruszczynski, S., and Yashchysyn, Y., Convenient Waveguide Technique for Determining Permittivity and Permeability of Materials; *TMTT* Nov. 2020 4905-4912
- Wu, D., *see* Fang, X., *TMTT* May 2020 1637-1645
- Wu, D., *see* Li, Y.C., *TMTT* Oct. 2020 4257-4266
- Wu, H., *see* Lin, Q., *TMTT* July 2020 3148-3158
- Wu, H., Wu, Y., Lai, Z., Wang, W., and Yang, Q., A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter; *TMTT* Aug. 2020 3389-3396
- Wu, I., Matsumoto, Y., Gotoh, K., and Watanabe, S., A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals; *TMTT* Feb. 2020 655-665
- Wu, J., *see* Peng, J., *TMTT* Jan. 2020 121-131
- Wu, J., and He, S., Comments on “Analytical Formulas for the Coverage of Tunable Matching Networks for Reconfigurable Applications” *TMTT* Feb. 2020 827
- Wu, J., Wang, C., and Guo, Y., Ridged Waveguide Magic Tees Based on 3-D Printing Technology; *TMTT* Oct. 2020 4267-4275
- Wu, K., *see* Su, Y., *TMTT* June 2020 2320-2330
- Wu, K., *see* Jiang, Y., *TMTT* Jan. 2020 27-38
- Wu, K., *see* Zhang, Y., *TMTT* May 2020 1678-1687
- Wu, K., *see* Chu, P., *TMTT* March 2020 964-970
- Wu, K., *see* Gu, X., *TMTT* Sept. 2020 4040-4053
- Wu, K., *see* Nallandhigal, S.N., *TMTT* Oct. 2020 4405-4423
- Wu, K., *see* Zhao, P., *TMTT* April 2020 1390-1400
- Wu, K., *see* Nallandhigal, S.N., *TMTT* Dec. 2020 5244-5258
- Wu, L., *see* Xia, B., *TMTT* Oct. 2020 4249-4256
- Wu, L., *see* Lai, C., *TMTT* Oct. 2020 4424-4432
- Wu, L., *see* Xia, B., *TMTT* Dec. 2020 5235-5243
- Wu, Q., *see* Yang, Y., *TMTT* Aug. 2020 3439-3447
- Wu, Q., *see* Zou, X., *TMTT* Oct. 2020 4479-4490
- Wu, S., *see* Tan, K., *TMTT* Sept. 2020 3885-3897
- Wu, S., Ding, L., Li, P., Li, Y., Chen, L., and Zhu, Y., Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern; *TMTT* Nov. 2020 4672-4683
- Wu, T., *see* Li, P., *TMTT* April 2020 1476-1486
- Wu, W., *see* Wang, X., *TMTT* Jan. 2020 102-110
- Wu, W., *see* Peng, K., *TMTT* Sept. 2020 3724-3731
- Wu, X., Li, Y., and Liu, X., High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters; *TMTT* April 2020 1462-1475
- Wu, Y., Hao, Z., Lu, R., and Hong, J., A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities; *TMTT* June 2020 2331-2342
- Wu, Y., *see* Zhang, J., *TMTT* Jan. 2020 170-183
- Wu, Y., *see* Chen, Z., *TMTT* May 2020 1688-1696
- Wu, Y., *see* Wu, H., *TMTT* Aug. 2020 3389-3396
- Wu, Y., Huang, C., Yang, K., Yu, Y., Zhao, C., Liu, H., and Kang, K., An Improved Surface-Potential-Based Model for MOSFETs Considering the Carrier Gaussian Distribution; *TMTT* Oct. 2020 4082-4090
- Wu, Y., *see* Yu, Y., *TMTT* Dec. 2020 5359-5370
- Wu, Y., Hwang, Y., Chiong, C., Lu, B., and Wang, H., An Innovative Joint-Injection Mixer With Broadband IF and RF for Advanced Heterodyne Receivers of Millimeter-Wave Astronomy; *TMTT* Dec. 2020 5408-5422
- Wu, Z., *see* Liao, X., *TMTT* Feb. 2020 620-627
- Wu, Z., *see* Liao, X., *TMTT* Aug. 2020 3271-3277
- Wu, Z., *see* Liao, X., *TMTT* April 2020 1355-1364
- Wu, Z., *see* Pu, Y., *TMTT* April 2020 1284-1292
- Wunderlich, A., *see* Kuester, D.G., *TMTT* June 2020 2435-2453

X

- Xi, Q., Ma, C., Li, H., Zhang, B., Li, C., and Ran, L., A Reconfigurable Planar Fresnel Lens for Millimeter-Wave 5G Frontends; *TMTT* Nov. 2020 4579-4588
- Xia, B., Cheng, J., Wu, L., Xiong, C., and Mao, J., A New Compact Power Divider Based on Capacitor Central Loaded Coupled Microstrip Line; *TMTT* Oct. 2020 4249-4256
- Xia, B., Cheng, J., Xiong, C., Xiao, H., Qiu, L., Wu, L., and Mao, J., A Novel Design of Compact Out-of-Phase Power Divider With Arbitrary Ratio; *TMTT* Dec. 2020 5235-5243
- Xia, J., *see* Fang, X., *TMTT* July 2020 3017-3027
- Xia, J., *see* Huang, H., *TMTT* Sept. 2020 4066-4076
- Xia, J., *see* Cai, J., *TMTT* April 2020 1409-1422
- Xia, J., *see* Zhou, X.Y., *TMTT* Nov. 2020 4599-4610
- Xia, Y., Shu, Z., Shen, T., Yin, P., Tang, F., Zhou, X., and Bermak, A., A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-/PI-Based CDR; *TMTT* Dec. 2020 5432-5442
- Xiao, H., *see* Xia, B., *TMTT* Dec. 2020 5235-5243
- Xiao, L., Shao, W., Jin, F., Wang, B., Joines, W.T., and Liu, Q.H., Semisupervised Radial Basis Function Neural Network With an Effective Sampling Strategy; *TMTT* April 2020 1260-1269
- Xie, Q., *see* Cai, J., *TMTT* Dec. 2020 5042-5054
- Xie, S., *see* Guo, L., *TMTT* March 2020 854-866
- Xie, Y., Chen, F., Chu, Q., and Xue, Q., Dual-Band Coaxial Filter and Diplexer Using Stub-Loaded Resonators; *TMTT* July 2020 2691-2700
- Xiong, C., *see* Xia, B., *TMTT* Oct. 2020 4249-4256
- Xiong, C., *see* Xia, B., *TMTT* Dec. 2020 5235-5243

- Xiong, J.**, Hong, H., Zhang, H., Wang, N., Chu, H., and Zhu, X., Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar; *TMTT Nov. 2020* 4814-4824
- Xu, C.**, see Yang, Z., *TMTT Sept. 2020* 3732-3744
- Xu, D.**, see Zhou, Y., *TMTT Feb. 2020* 543-554
- Xu, F.**, see Chu, P., *TMTT March 2020* 964-970
- Xu, J.**, Liu, F., and Feng, Z., Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators; *TMTT Feb. 2020* 741-749
- Xu, J.**, Zhang, X.Y., Li, H., Yang, Y., Dutkiewicz, E., and Xue, Q., Ultracompact Multichannel Bandpass Filter Based on Trimode Dielectric-Loaded Cavities; *TMTT May 2020* 1668-1677
- Xu, J.**, see Li, H., *TMTT March 2020* 867-876
- Xu, J.**, see Guo, C., *TMTT March 2020* 1035-1044
- Xu, J.**, Cai, Q., and Feng, Z., BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique; *TMTT April 2020* 1452-1461
- Xu, K.**, Zhang, L., and Wei, Z., Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem; *TMTT June 2020* 2206-2214
- Xu, K.**, see Ren, Y., *TMTT July 2020* 2475-2484
- Xu, K.**, Luyen, H., and Behdad, N., A Decoupling and Matching Network Design for Single- and Dual-Band Two-Element Antenna Arrays; *TMTT Sept. 2020* 3986-3999
- Xu, K.**, see Zhong, Y., *TMTT April 2020* 1234-1247
- Xu, K.**, see Ye, X., *TMTT Nov. 2020* 4684-4693
- Xu, R.**, see Zhu, X., *TMTT Feb. 2020* 666-680
- Xu, R.**, see Zhu, X., *TMTT April 2020* 1496-1509
- Xu, Z.**, see Zhang, J., *TMTT Oct. 2020* 4161-4168
- Xue, L.**, and Jiao, D., Method for Analytically Finding the Nullspace of Stiffness Matrix for Both Zeroth-Order and Higher Order Curl-Conforming Vector Bases in Unstructured Meshes; *TMTT Feb. 2020* 456-468
- Xue, L.**, and Jiao, D., Rapid Modeling and Simulation of Integrated Circuit Layout in Both Frequency and Time Domains From the Perspective of Inverse; *TMTT April 2020* 1270-1283
- Xue, Q.**, see Fang, X., *TMTT May 2020* 1637-1645
- Xue, Q.**, see Xu, J., *TMTT May 2020* 1668-1677
- Xue, Q.**, see Xie, Y., *TMTT July 2020* 2691-2700
- Xue, Q.**, see Cai, Q., *TMTT July 2020* 3068-3078
- Xue, Q.**, see Wang, W., *TMTT July 2020* 3079-3089
- Xue, Q.**, see Tan, X., *TMTT Oct. 2020* 4276-4289
- Xue, Q.**, see Li, Y.C., *TMTT Oct. 2020* 4257-4266
- Xue, Q.**, see Shi, Y., *TMTT Dec. 2020* 5145-5153
- Y**
- Yamamoto, H.**, see Raffo, A., *TMTT July 2020* 3100-3110
- Yan, P.**, see Zhou, P., *TMTT July 2020* 3056-3067
- Yan, S.**, see Feng, F., *TMTT June 2020* 2194-2205
- Yan, S.**, see Zhang, W., *TMTT Feb. 2020* 479-489
- Yan, S.**, see Feng, F., *TMTT Feb. 2020* 531-542
- Yan, S.**, see Feng, F., *TMTT Sept. 2020* 3606-3620
- Yang, B.**, Chen, X., Chu, J., Mitani, T., and Shinohara, N., A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer; *TMTT Nov. 2020* 4951-4959
- Yang, C.**, see Cao, T., *TMTT May 2020* 1819-1829
- Yang, C.**, see Fang, Z., *TMTT Sept. 2020* 4054-4065
- Yang, D.**, see Cao, T., *TMTT May 2020* 1819-1829
- Yang, G.**, see Zhang, Y., *TMTT Oct. 2020* 4327-4339
- Yang, J.**, see Zhang, G., *TMTT Sept. 2020* 3675-3685
- Yang, J.**, see Yang, Y., *TMTT Aug. 2020* 3439-3447
- Yang, K.**, see Liu, B., *TMTT Jan. 2020* 264-276
- Yang, K.**, see Wu, Y., *TMTT Oct. 2020* 4082-4090
- Yang, L.**, see Zhang, R., *TMTT June 2020* 2289-2299
- Yang, L.**, see Gomez-Garcia, R., *TMTT Feb. 2020* 516-529
- Yang, L.**, Gomez-Garcia, R., Munoz-Ferreras, J., Zhang, R., Peroulis, D., and Zhu, L., Multilayered Reflectionless Wideband Bandpass Filters With Shunt/In-Series Resistively Terminated Microstrip Lines; *TMTT March 2020* 877-893
- Yang, Q.**, see Wu, H., *TMTT Aug. 2020* 3389-3396
- Yang, T.**, see Zhu, X., *TMTT Feb. 2020* 666-680
- Yang, T.**, see Zhu, X., *TMTT April 2020* 1496-1509
- Yang, T.**, see Tang, F., *TMTT April 2020* 1564-1575
- Yang, T.**, see Zhang, T., *TMTT April 2020* 1293-1303
- Yang, T.**, see Peng, H., *TMTT April 2020* 1487-1495
- Yang, Y.**, see Lu, R., *TMTT Feb. 2020* 573-589
- Yang, Y.**, see Xu, J., *TMTT May 2020* 1668-1677
- Yang, Y.**, see Li, H., *TMTT March 2020* 867-876
- Yang, Y.**, see Zhang, S., *TMTT Sept. 2020* 3653-3666
- Yang, Y.**, Yu, M., Wu, Q., Yin, X., and Yang, J., A Fully Integrated Multiplexer Using Unified Extracted Pole Technique; *TMTT Aug. 2020* 3439-3447
- Yang, Y.**, see Lai, C., *TMTT Oct. 2020* 4424-4432
- Yang, Y.**, Fan, Z., Hong, T., Chen, M., Tang, X., He, J., Chen, X., Liu, C., Zhu, H., and Huang, K., Design of Microwave Directional Heating System Based on Phased-Array Antenna; *TMTT Nov. 2020* 4896-4904
- Yang, Y.**, Lu, R., Gao, L., and Gong, S., 10–60-GHz Electromechanical Resonators Using Thin-Film Lithium Niobate; *TMTT Dec. 2020* 5211-5220
- Yang, Y.**, see Zhang, Y., *TMTT Dec. 2020* 5307-5316
- Yang, Z.**, Zhang, R., and Peroulis, D., Design and Optimization of Bidirectional Tunable MEMS All-Silicon Evanescent-Mode Cavity Filter; *TMTT June 2020* 2398-2408
- Yang, Z.**, Li, M., Dai, Z., Xu, C., Jin, Y., Li, T., and Tang, F., A Generalized High-Efficiency Broadband Class-E/F₃ Power Amplifier Based on Design Space Expanding of Load Network; *TMTT Sept. 2020* 3732-3744
- Yao, J.**, see Song, K., *TMTT Dec. 2020* 5279-5287
- Yao, T.**, see Peng, J., *TMTT Jan. 2020* 121-131
- Yashchyshyn, Y.**, see Wu, C., *TMTT Nov. 2020* 4905-4912
- Yasir, M.**, Bistarelli, S., Cataldo, A., Bozzi, M., Perregrini, L., and Bellucci, S., Voltage-Controlled and Input-Matched Tunable Microstrip Attenuators Based on Few-Layer Graphene; *TMTT Feb. 2020* 701-710
- Ye, K.**, see Tang, F., *TMTT April 2020* 1564-1575
- Ye, X.**, Bai, Y., Song, R., Xu, K., and An, J., An Inhomogeneous Background Imaging Method Based on Generative Adversarial Network; *TMTT Nov. 2020* 4684-4693
- Yi, K.**, see Yu, Y., *TMTT Dec. 2020* 5359-5370
- Yi, X.**, see Liu, B., *TMTT Jan. 2020* 264-276
- Yi, X.**, see Liu, B., *TMTT Sept. 2020* 4018-4030
- Yi, Y.**, and Zhang, A., A Tunable Graphene Filtering Attenuator Based on Effective Spoof Surface Plasmon Polariton Waveguide; *TMTT Dec. 2020* 5169-5177
- Yin, H.**, see Yu, C., *TMTT July 2020* 2833-2844
- Yin, P.**, see Xia, Y., *TMTT Dec. 2020* 5432-5442
- Yin, W.**, see Yu, Y., *TMTT Dec. 2020* 5359-5370
- Yin, X.**, see Yang, Y., *TMTT Aug. 2020* 3439-3447
- Yin, X.**, see Chen, Q., *TMTT Dec. 2020* 4984-4994
- Yin, Y.**, Zahir, S., Kanar, T., Ma, Q., Chung, H., Gao, L., and Rebeiz, G.M., A 37–42-GHz 8 × 8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors; *TMTT Nov. 2020* 4753-4764
- Ying, Z.**, see Zhang, J., *TMTT March 2020* 1103-1117
- Yoo, H.**, see Basir, A., *TMTT May 2020* 1943-1953
- Yoo, H.**, see Shah, S.A.A., *TMTT July 2020* 2944-2953
- Yoon, Y.**, see Bowrothu, R., *TMTT Dec. 2020* 5065-5071
- Yoshimasu, T.**, see Fang, M., *TMTT Oct. 2020* 4116-4121
- You, F.**, Dong, S., Wang, Y., Zhang, S., Yu, X., and He, S., Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms; *TMTT Oct. 2020* 4433-4444
- You, X.**, see Ma, X., *TMTT July 2020* 2876-2890
- Youn, Y.**, see Choi, J., *TMTT May 2020* 1872-1881
- Yu, C.**, see Wang, X., *TMTT Jan. 2020* 316-328
- Yu, C.**, see Luo, Q., *TMTT Jan. 2020* 301-315
- Yu, C.**, Lu, Q., Yin, H., Cai, J., Chen, J., Zhu, X., and Hong, W., Linear-Decomposition Digital Predistortion of Power Amplifiers for 5G Ultrabroadband Applications; *TMTT July 2020* 2833-2844

- Yu, C.**, see Cai, J., *TMTT Dec. 2020 5042-5054*
- Yu, H.**, Chen, Y., Boon, C.C., Mak, P., and Martins, R.P., A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration; *TMTT Jan. 2020 144-159*
- Yu, H.**, see Chae, U., *TMTT Aug. 2020 3461-3470*
- Yu, J.**, see Zhou, P., *TMTT July 2020 3056-3067*
- Yu, J.**, see Ryu, J., *TMTT Aug. 2020 3471-3479*
- Yu, M.**, see Li, Z., *TMTT Feb. 2020 721-731*
- Yu, M.**, see Chen, S., *TMTT July 2020 2579-2589*
- Yu, M.**, see Yang, Y., *TMTT Aug. 2020 3439-3447*
- Yu, M.**, see Wang, Y., *TMTT Dec. 2020 5178-5189*
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 A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*
 A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*
 A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*
 A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. *Tome, P.M.*, +, *TMTT Sept. 2020 3709-3723*
 A Review of Technologies and Design Techniques of Millimeter-Wave Power Amplifiers. *Camarchia, V.*, +, *TMTT July 2020 2957-2983*
 A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*

- A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*
- Accurate and Process-Tolerant Resistive Load. *Sutbas, B.*, +, *TMTT July 2020 2495-2500*
- Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. *Peng, J.*, +, *TMTT Jan. 2020 121-131*
- An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier. *Martin, D.N.*, +, *TMTT July 2020 3028-3038*
- An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*
- An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z.*, +, *TMTT April 2020 1376-1389*
- Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*
- ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. *Du, X.*, +, *TMTT July 2020 3090-3099*
- Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*
- Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*
- Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*
- Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*
- Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*
- Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*
- Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. *Dhar, S.K.*, +, *TMTT Oct. 2020 4216-4228*
- Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*
- Nondestructive, Self-Contained Extraction Method of Parasitic Resistances in HEMT Devices. *Colangeli, S.*, +, *TMTT July 2020 2571-2578*
- Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S.*, +, *TMTT Nov. 2020 4611-4619*
- Pseudo-Doherty Load-Modulated Balanced Amplifier With Wide Bandwidth and Extended Power Back-Off Range. *Cao, Y.*, +, *TMTT July 2020 3172-3183*
- Space Mapping Technique Using Decomposed Mappings for GaN HEMT Modeling. *Zhao, Z.*, +, *TMTT Aug. 2020 3318-3341*
- Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020 1304-1311*
- A**
- AC-DC power converters**
- An Ultralow-Power Crystal-Free Batteryless TDD Radio for Medical Implantable Applications. *Cai, M.*, +, *TMTT Nov. 2020 4875-4885*
- Acceleration**
- Nested Fast Adaptive Cross Approximation Algorithm for Solving Electromagnetic Scattering Problems. *Fang, X.*, +, *TMTT Dec. 2020 4995-5003*
- VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxalized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*
- Accelerator cavities**
- Metamaterial-Based Absorbers for the Reduction of Accelerator Beam-Coupling Impedance. *Masullo, M.R.*, +, *TMTT April 2020 1340-1346*
- Acoustic delay lines**
- 5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film. *Lu, R.*, +, *TMTT Feb. 2020 573-589*
- Acoustic resonator filters**
- A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*
- Acoustic resonators**
- Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020 1304-1311*
- Acoustic tomography**
- Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*
- Acoustic wave propagation**
- 5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film. *Lu, R.*, +, *TMTT Feb. 2020 573-589*
- Acoustics**
- 10–60-GHz Electromechanical Resonators Using Thin-Film Lithium Niobate. *Yang, Y.*, +, *TMTT Dec. 2020 5211-5220*
- Active antenna arrays**
- Active Phase-Conjugating Rotman Lens With Reflection Amplifiers for Backscattering Enhancement. *Keshavarzian, P.*, +, *TMTT Jan. 2020 405-413*
- Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nal-landhigal, S.N.*, +, *TMTT Oct. 2020 4405-4423*
- Efficient Rectifier for Wireless Power Transmission Systems. *Rotenberg, S.A.*, +, *TMTT May 2020 1921-1932*
- Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N.*, +, *TMTT Jan. 2020 329-339*
- Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A.*, +, *TMTT Sept. 2020 4000-4017*
- Active filters**
- Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*
- Active networks**
- Novel Reconfigurable Negative Group Delay Circuits With Independent Group Delay and Transmission Loss/Gain Control. *Zhang, T.*, +, *TMTT April 2020 1293-1303*
- Ad hoc networks**
- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*
- Adaptive filters**
- Spatially Variant Apodization for Grating and Sidelobe Suppression in Near-Range MIMO Array Imaging. *Zhu, R.*, +, *TMTT Nov. 2020 4662-4671*
- Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth. *Li, Z.*, +, *TMTT Feb. 2020 721-731*
- Adaptive signal processing**
- Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. *Peng, J.*, +, *TMTT Jan. 2020 121-131*
- Adjacent channel interference**
- Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*
- Admittance**
- A Combined Broadband Model for GaN HEMTs in Admittance Domain Based on Canonical Piecewise Linear Functions. *Cai, J.*, +, *TMTT Dec. 2020 5042-5054*
- Air gaps**
- Half-Air-Filled Ball-Grid-Array-Based Substrate-Integrated Groove-Gap Waveguide and its Transition to Microstrip at W-Band. *Shi, Y.*, +, *TMTT Dec. 2020 5145-5153*

Airborne radar

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

All-pass filters

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

Alumina

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*

Aluminum

Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M.*, +, *TMTT July 2020 2601-2609*

Aluminum compounds

ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. *Du, X.*, +, *TMTT July 2020 3090-3099*

Integrated Tunable Magnetolectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*

The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*

Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020 1304-1311*

Amplifiers

A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*

Novel Reconfigurable Negative Group Delay Circuits With Independent Group Delay and Transmission Loss/Gain Control. *Zhang, T.*, +, *TMTT April 2020 1293-1303*

Amplitude modulation

3-D-Printed High Data-Density Electromagnetic Encoders Based on Permittivity Contrast for Motion Control and Chipless-RFID. *Herrojo, C.*, +, *TMTT May 2020 1839-1850*

A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, I.*, +, *TMTT Feb. 2020 655-665*

Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*

Amplitude shift keying

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

Analog-digital conversion

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020 288-300*

Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *An, S.*, +, *TMTT Nov. 2020 4719-4727*

Four-Element Wide Modulated Bandwidth MIMO Receiver With >35-dB Interference Cancellation. *Ghadery, E.*, +, *TMTT Sept. 2020 3930-3941*

Frequency Comb OFDM Radar System With High Range Resolution and Low Sampling Rate. *Nuss, B.*, +, *TMTT Sept. 2020 3861-3871*

Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N.*, +, *TMTT June 2020 2030-2040*

Analytical models

Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis. *Nallandhigal, S.N.*, +, *TMTT Dec. 2020 5244-5258*

Anechoic chambers (electromagnetic)

Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*

Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N.*, +, *TMTT Jan. 2020 329-339*

Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W.*, +, *TMTT Feb. 2020 636-647*

Angular velocity measurement

A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*

Anisotropic media

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Anodes

Highly Efficient Microwave Power System of Magnetrons Utilizing Frequency-Searching Injection-Locking Technique With No Phase Shifter. *Lai, C.*, +, *TMTT Oct. 2020 4424-4432*

Antenna accessories

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Antenna arrays

A Microcontroller Unit-Based Electromagnetic Bandgap Control Scheme: Application for Enhancing Isolation in an Antenna Array and the EMI Scanner System Speed Thereof. *Jeong, J.*, +, *TMTT Nov. 2020 4536-4553*

Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M.*, +, *TMTT Jan. 2020 277-287*

Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X.*, +, *TMTT Jan. 2020 316-328*

Enhanced Wireless Interchip Communication Performance Using Symmetrical Layers and Soft/Hard Surface Concepts. *Al-Alem, Y.*, +, *TMTT Jan. 2020 39-50*

Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays. *Takabayashi, N.*, +, *TMTT March 2020 1151-1163*

RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Wideband Phase Shifters With Miniaturized Size on Multiple Series and Shunt Resonators: Proposal and Synthetic Design. *Lyu, Y.*, +, *TMTT Dec. 2020 5221-5234*

Antenna feeds

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticle-to-Reticle Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

A Wideband Filtering Antenna Array With Harmonic Suppression. *Zhang, Y.*, +, *TMTT Oct. 2020 4327-4339*

Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O.*, +, *TMTT Oct. 2020 4122-4130*

Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nallandhigal, S.N.*, +, *TMTT Oct. 2020 4405-4423*

Estimation of the Losses of 1:N Dividers by the Measurement of the Reflection When the Outputs Are Shorted. *Morini, A.*, +, *TMTT Aug. 2020 3592-3601*

Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J.*, +, *TMTT May 2020 1872-1881*

- Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A., +, TMTT Oct. 2020 4138-4149*
- Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B., +, TMTT March 2020 835-843*
- Radiation-Pattern Reconfigurable Phased Array With p-i-n Diodes Controlled for 5G Mobile Terminals. *Zhang, J., +, TMTT March 2020 1103-1117*
- Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X., +, TMTT Aug. 2020 3271-3277*
- Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J., +, TMTT Nov. 2020 4706-4718*
- Antenna measurements**
- High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P., +, TMTT Dec. 2020 5029-5041*
- Antenna phased arrays**
- 2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A., +, TMTT Sept. 2020 3872-3884*
- 60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticle-to-Reticle Stitching. *Kodak, U., +, TMTT July 2020 2745-2767*
- A 22–44-GHz Phased-Array Receive Beamformer in 45-nm CMOS SOI for 5G Applications With 3–3.6-dB NF. *Gao, L., +, TMTT Nov. 2020 4765-4774*
- A 37–42-GHz 8×8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y., +, TMTT Nov. 2020 4753-4764*
- A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer. *Yang, B., +, TMTT Nov. 2020 4951-4959*
- A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M., +, TMTT Nov. 2020 4775-4786*
- A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C., +, TMTT Jan. 2020 288-300*
- ACPR Improvement in Large Phased Arrays With Complex Modulated Waveforms. *Rupakula, B., +, TMTT March 2020 1045-1053*
- Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y., +, TMTT Nov. 2020 4896-4904*
- Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K., +, TMTT May 2020 1851-1857*
- Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond. *Ma, J., TMTT Oct. 2020 4150*
- Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T., +, TMTT Sept. 2020 3745-3755*
- Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N., +, TMTT Jan. 2020 329-339*
- Radiation-Pattern Reconfigurable Phased Array With p-i-n Diodes Controlled for 5G Mobile Terminals. *Zhang, J., +, TMTT March 2020 1103-1117*
- Ultra-Broadband Phase Shifters for 5G Mobile Applications. *Ma, J., TMTT Feb. 2020 530*
- Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond. *Ma, J., TMTT Nov. 2020 4505*
- Antenna radiation patterns**
- 3-D-Printed Modified Butler Matrix Based on Gap Waveguide at W-Band for Monopulse Radar. *Tamayo-Dominguez, A., +, TMTT March 2020 926-938*
- 60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticle-to-Reticle Stitching. *Kodak, U., +, TMTT July 2020 2745-2767*
- A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer. *Yang, B., +, TMTT Nov. 2020 4951-4959*
- A Decoupling and Matching Network Design for Single- and Dual-Band Two-Element Antenna Arrays. *Xu, K., +, TMTT Sept. 2020 3986-3999*
- A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C., +, TMTT Jan. 2020 288-300*
- A Wideband Filtering Antenna Array With Harmonic Suppression. *Zhang, Y., +, TMTT Oct. 2020 4327-4339*
- Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M., +, TMTT Nov. 2020 4960-4972*
- Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O., +, TMTT Oct. 2020 4122-4130*
- Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nal-landhigal, S.N., +, TMTT Oct. 2020 4405-4423*
- Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y., +, TMTT Nov. 2020 4896-4904*
- Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K., +, TMTT May 2020 1851-1857*
- Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J., +, TMTT May 2020 1872-1881*
- Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications. *Taghikhani, P., +, TMTT Nov. 2020 4740-4752*
- Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B., +, TMTT March 2020 835-843*
- Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N., +, TMTT Jan. 2020 329-339*
- Radiation-Pattern Reconfigurable Phased Array With p-i-n Diodes Controlled for 5G Mobile Terminals. *Zhang, J., +, TMTT March 2020 1103-1117*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A., +, TMTT July 2020 2944-2953*
- RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J., +, TMTT Sept. 2020 3908-3919*
- Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X., +, TMTT Aug. 2020 3271-3277*
- Antenna testing**
- Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J., +, TMTT Aug. 2020 3408-3417*
- Antenna theory**
- High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P., +, TMTT Dec. 2020 5029-5041*
- Antennas**
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A., +, TMTT May 2020 1943-1953*
- Aperture antennas**
- Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O., +, TMTT Oct. 2020 4122-4130*
- Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R., +, TMTT Jan. 2020 387-397*
- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P., +, TMTT Nov. 2020 4805-4813*
- Apertures**
- Multimode Equivalent Networks for Shielded Microwave Circuits With Thick Metallizations. *Molina, C.G., +, TMTT Dec. 2020 5004-5013*
- Approximation theory**
- A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, L., +, TMTT Feb. 2020 655-665*

Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*

Array signal processing

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrans for Wireless Power Transfer. *Yang, B.*, +, *TMTT Nov. 2020 4951-4959*

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020 288-300*

A Reconfigurable Planar Fresnel Lens for Millimeter-Wave 5G Frontends. *Xi, Q.*, +, *TMTT Nov. 2020 4579-4588*

Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M.*, +, *TMTT Jan. 2020 277-287*

Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K.*, +, *TMTT May 2020 1851-1857*

Estimation of the Losses of 1:N Dividers by the Measurement of the Reflection When the Outputs Are Shorted. *Morini, A.*, +, *TMTT Aug. 2020 3592-3601*

High-Performance Synthesizer Design for 5G and Beyond. *Ma, J.*, *TMTT April 2020 1216*

Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond. *Ma, J.*, *TMTT Oct. 2020 4150*

Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications. *Taghikhani, P.*, +, *TMTT Nov. 2020 4740-4752*

Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N.*, +, *TMTT Jan. 2020 329-339*

Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*

Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar. *Xiong, J.*, +, *TMTT Nov. 2020 4814-4824*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays. *Takabayashi, N.*, +, *TMTT March 2020 1151-1163*

Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q.*, +, *TMTT Jan. 2020 301-315*

Spatially Variant Apodization for Grating and Sidelobe Suppression in Near-Range MIMO Array Imaging. *Zhu, R.*, +, *TMTT Nov. 2020 4662-4671*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Ultra-Broadband Phase Shifters for 5G Mobile Applications. *Ma, J.*, *TMTT Feb. 2020 530*

Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*

Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond. *Ma, J.*, *TMTT July 2020 2473-2474*

Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond. *Ma, J.*, *TMTT Nov. 2020 4505*

Assembling

Ridged Waveguide Magic Tees Based on 3-D Printing Technology. *Wu, J.*, +, *TMTT Oct. 2020 4267-4275*

Attenuation

A Tunable Graphene Filtering Attenuator Based on Effective Spoof Surface Plasmon Polariton Waveguide. *Yi, Y.*, +, *TMTT Dec. 2020 5169-5177*

Accurate Characterization and Design Guidelines of Glide-Symmetric Holey EBG. *Chen, Q.*, +, *TMTT Dec. 2020 4984-4994*

On Postprocessing Reduction of Phase Noise in FMCW Radars. *Rezaei, M.*, +, *TMTT Dec. 2020 5103-5114*

On the Effect of Field Spatial Separation on Slow Wave Propagation. *Bertrand, M.*, +, *TMTT Dec. 2020 4978-4983*

The Transition Between Reactive and Radiative Regimes for Leaky Modes in Planar Waveguides Based on Homogenized Partially Reflecting Surfaces. *Fuscaldo, W.*, +, *TMTT Dec. 2020 5259-5269*

Attenuators

A New Compact CMOS Distributed Digital Attenuator. *Park, K.*, +, *TMTT Nov. 2020 4631-4640*

A Tunable Graphene Filtering Attenuator Based on Effective Spoof Surface Plasmon Polariton Waveguide. *Yi, Y.*, +, *TMTT Dec. 2020 5169-5177*

Dynamically Tunable Filtering Attenuator Based on Graphene Integrated Microstrip Resonators. *Wu, B.*, +, *TMTT Dec. 2020 5270-5278*

B

Backpropagation

An Inhomogeneous Background Imaging Method Based on Generative Adversarial Network. *Ye, X.*, +, *TMTT Nov. 2020 4684-4693*

Analytical Approach to Microwave Orientations Based on a Strongly Coupled Array. *Wang, H.*, +, *TMTT Sept. 2020 3898-3907*

Backscatter

Active Phase-Conjugating Rotman Lens With Reflection Amplifiers for Backscattering Enhancement. *Keshavarzian, P.*, +, *TMTT Jan. 2020 405-413*

Baluns

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended March-and-Balun Power Combiner. *Martelius, M.*, +, *TMTT March 2020 1022-1034*

A Series-Connected-Load Doherty Power Amplifier With Push–Pull Main and Auxiliary Amplifiers for Base Station Applications. *Jundi, A.*, +, *TMTT Feb. 2020 796-807*

A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push–Pull Power Amplifier. *Maktoomi, M.H.*, +, *TMTT Nov. 2020 4560-4569*

Dual-Mode Filtering Baluns Based on Hybrid Cavity-Microstrip Structures. *Fang, X.*, +, *TMTT May 2020 1637-1645*

Tunable 0.7–2.8-GHz Reflection-Mode N-Path Filters in 45-nm SOI CMOS. *Bonner-Stewart, J.*, +, *TMTT June 2020 2343-2357*

Band-pass filters

108–316- and 220–290-GHz Ultrabroadband Distributed Frequency Doublers. *Lee, I.*, +, *TMTT March 2020 1000-1011*

220-to-330-GHz Manifold Triplexer With Wide Stopband Utilizing Ridged Substrate Integrated Waveguides. *Holloway, J.W.*, +, *TMTT Aug. 2020 3428-3438*

Ku -Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities. *Wu, Y.*, +, *TMTT June 2020 2331-2342*

A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*

A Hybrid Low-Cost Bandpass Filter With SAW Resonators and External Lumped Inductors Using a Dual-Coupling Scheme. *Zhang, R.*, +, *TMTT June 2020 2289-2299*

A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*

A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dB Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. *Miek, D.*, +, *TMTT June 2020 2097-2107*

An Efficient Technique for Tuning and Design of Filters and Diplexers. *Jia, H.*, +, *TMTT July 2020 2610-2624*

BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique. *Xu, J.*, +, *TMTT April 2020 1452-1461*

Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter. *Deng, J.*, +, *TMTT July 2020 2625-2632*

- Compact Single- and Dual-Band Filtering 180° Hybrid Couplers on Circular Patch Resonator. *Zhang, G.*, +, *TMTT Sept. 2020 3675-3685*
- Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*
- Compact Wideband Hybrid Filters in Rectangular Waveguide With Enhanced Out-of-Band Response. *Valencia, J.*, +, *TMTT Jan. 2020 87-101*
- Coupling Coefficients Between Resonators in Stripline Combline and Pseudocombline Bandpass Filters. *Zakharov, A.*, +, *TMTT July 2020 2679-2690*
- Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*
- Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators. *San-Blas, A.A.*, +, *TMTT Oct. 2020 4390-4404*
- Direct Synthesis and Design of Dispersive Waveguide Bandpass Filters. *Zhang, Y.*, +, *TMTT May 2020 1678-1687*
- Dual-Band Coaxial Filter and Diplexer Using Stub-Loaded Resonators. *Xie, Y.*, +, *TMTT July 2020 2691-2700*
- Dual-Mode Filtering Baluns Based on Hybrid Cavity-Microstrip Structures. *Fang, X.*, +, *TMTT May 2020 1637-1645*
- Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E.*, +, *TMTT Sept. 2020 3756-3768*
- Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M.*, +, *TMTT July 2020 2601-2609*
- High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X.*, +, *TMTT April 2020 1462-1475*
- Improvement of Passband Flatness for a Compact, Narrowband, and Highly Selective TM Dual-Mode Filter. *Eskandari, A.R.*, +, *TMTT April 2020 1591-1597*
- Lossy Signal-Interference Filters and Applications. *Gomez-Garcia, R.*, +, *TMTT Feb. 2020 516-529*
- Modular Synthesis of Waveguide Bandpass Filters Using Dual-Mode Resonators. *Guo, Z.*, +, *TMTT May 2020 1660-1667*
- Multilayered Reflectionless Wideband Bandpass Filters With Shunt/In-Series Resistively Terminated Microstrip Lines. *Yang, L.*, +, *TMTT March 2020 877-893*
- Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiover Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X.*, +, *TMTT April 2020 1496-1509*
- Novel Tunable Isolation Network Used in Ring-Type Single-to-Balanced, Power-Dividing, and Single-Ended Filter With Arbitrary Power-Division Ratios. *Zhu, X.*, +, *TMTT Feb. 2020 666-680*
- Proposal of Coplanar Stripline Series Stub Structure for Wideband Bandpass Filters. *Ouyang, Z.*, +, *TMTT Aug. 2020 3397-3407*
- Rigorous Design Method for Symmetric Reflectionless Filters With Arbitrary Prescribed Transmission Response. *Lee, J.*, +, *TMTT June 2020 2300-2307*
- Semisupervised Radial Basis Function Neural Network With an Effective Sampling Strategy. *Xiao, L.*, +, *TMTT April 2020 1260-1269*
- Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*
- Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators. *Xu, J.*, +, *TMTT Feb. 2020 741-749*
- Single-Layer Mode Composite Coplanar Waveguide Dual-Band Filter With Large Frequency Ratio. *Su, Y.*, +, *TMTT June 2020 2320-2330*
- Substrate Integrated Waveguide Filter-Amplifier Design Using Active Coupling Matrix Technique. *Gao, Y.*, +, *TMTT May 2020 1706-1716*
- Supercompact and Ultrawideband Surface Plasmonic Bandpass Filter. *Wang, M.*, +, *TMTT Feb. 2020 732-740*
- Surface Acoustic Wave Devices Using Lithium Niobate on Silicon Carbide. *Zhang, S.*, +, *TMTT Sept. 2020 3653-3666*
- Surrogate Model-Based Space Mapping in Postfabrication Bandpass Filters' Tuning. *Li, S.*, +, *TMTT June 2020 2172-2182*
- Tunable 0.7–2.8-GHz Reflection-Mode N-Path Filters in 45-nm SOI CMOS. *Bonner-Stewart, J.*, +, *TMTT June 2020 2343-2357*
- Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth. *Li, Z.*, +, *TMTT Feb. 2020 721-731*
- Ultracompact Multichannel Bandpass Filter Based on Trimode Dielectric-Loaded Cavities. *Xu, J.*, +, *TMTT May 2020 1668-1677*
- Wide Stopband Substrate Integrated Waveguide Filter Implemented by Orthogonal Ports' Offset. *Chu, P.*, +, *TMTT March 2020 964-970*
- Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*
- Band-stop filters**
- 220-to-330-GHz Manifold Triplexer With Wide Stopband Utilizing Ridged Substrate Integrated Waveguides. *Holloway, J.W.*, +, *TMTT Aug. 2020 3428-3438*
- A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities. *Wu, Y.*, +, *TMTT June 2020 2331-2342*
- Arbitrary-Order Distributed-Element Narrowband Reflectionless Bandstop Filter With Canonical Transmission Response and Broadband Matching. *Lee, J.*, +, *TMTT Oct. 2020 4381-4389*
- Compact Mechanically Tunable Microstrip Bandstop Filter With Constant Absolute Bandwidth Using an Embedded Metamaterial-Based EBG. *Brown, J.A.*, +, *TMTT Oct. 2020 4369-4380*
- Design and Fabrication of 3-D Printed Inline Coaxial Filters With Improved Stopband. *Venzoni, G.*, +, *TMTT July 2020 2633-2643*
- Design Procedure of Continuous Profile Stopband Filters Implemented With Empty Substrate Integrated Coaxial Lines. *Borja, A.L.*, +, *TMTT April 2020 1520-1528*
- High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X.*, +, *TMTT April 2020 1462-1475*
- Lossy Signal-Interference Filters and Applications. *Gomez-Garcia, R.*, +, *TMTT Feb. 2020 516-529*
- Wide Stopband Substrate Integrated Waveguide Filter Implemented by Orthogonal Ports' Offset. *Chu, P.*, +, *TMTT March 2020 964-970*
- Bandwidth**
- High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P.*, +, *TMTT Dec. 2020 5029-5041*
- Barium**
- 35-GHz Barium Hexaferrite/PDMS Composite-Based Millimeter-Wave Circulators for 5G Applications. *Bowrothu, R.*, +, *TMTT Dec. 2020 5065-5071*
- Barium compounds**
- In Situ* Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*
- Beam handling techniques**
- Metamaterial-Based Absorbers for the Reduction of Accelerator Beam-Coupling Impedance. *Masullo, M.R.*, +, *TMTT April 2020 1340-1346*
- Beam steering**
- A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020 288-300*
- Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications. *Taghikhani, P.*, +, *TMTT Nov. 2020 4740-4752*
- Miniaturized 4 × 4 Butler Matrix and Tunable Phase Shifter Using Ridged Half-Mode Substrate Integrated Waveguide. *Der, E.T.*, +, *TMTT Aug. 2020 3379-3388*
- Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*
- Bending**
- A Multimodal Dielectric Waveguide-Based Monopulse Radar at 160 GHz. *Geiger, M.*, +, *TMTT Nov. 2020 4825-4834*
- Design of a Ku/Ka-Band Oversized Waveguide Bend for High-Power Transmission Line. *Liao, X.*, +, *TMTT April 2020 1355-1364*
- Bessel functions**
- Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

BiCMOS integrated circuits

- 220–360-GHz Broadband Frequency Multiplier Chains (x8) in 130-nm BiCMOS Technology. *Ali, A.*, +, *TMTT July 2020 2701-2715*
- A 14–50-GHz Phase Shifter With All-Pass Networks for 5G Mobile Applications. *Anjos, E.V.P.*, +, *TMTT Feb. 2020 762-774*
- A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*
- A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*
- A 38-GHz Millimeter-Wave Double-Stacked HBT Class-F⁻¹ High-Gain Power Amplifier in 130-nm SiGe-BiCMOS. *Ali, S.M.A.*, +, *TMTT July 2020 3039-3044*
- A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Boroujeni, S.R.*, +, *TMTT July 2020 3159-3171*
- A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*
- A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*
- A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs. *Turkmen, E.*, +, *TMTT Jan. 2020 211-221*
- A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*
- Design of mm-Wave Slow-Wave-Coupled Coplanar Waveguides. *Margalef-Rovira, M.*, +, *TMTT Dec. 2020 5014-5028*
- Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*
- Modeling and Analysis of a Broadband Schottky Diode Noise Source Up To 325 GHz Based on 55-nm SiGe BiCMOS Technology. *Ghanem, H.*, +, *TMTT June 2020 2268-2277*
- Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*
- Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Binary sequences

- A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

Biographies

- Corrections to “A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology”. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3783*

Biological effects of fields

- Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

Biological effects of microwaves

- Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*
- Using a Coned Cable to Simplify the Accurate Numerical Dosimetry of a Resonant Exposure Setup Operating at 1710.2–1989.8 MHz. *Zhao, J.*, +, *TMTT June 2020 2278-2288*

Biological techniques

- Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020 2144-2150*

Biological tissues

- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*

Biomedical communication

- A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H.*, +, *TMTT Nov. 2020 4886-4895*
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Biomedical electronics

- Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Biomedical equipment

- A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020 1933-1942*
- Doppler Cardiogram: A Remote Detection of Human Heart Activities. *Dong, S.*, +, *TMTT March 2020 1132-1141*
- On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. *Wang, Z.*, +, *TMTT June 2020 2234-2242*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*
- Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Biomedical imaging

- Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020 1882-1895*

Biomedical MRI

- Doppler Cardiogram: A Remote Detection of Human Heart Activities. *Dong, S.*, +, *TMTT March 2020 1132-1141*
- Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*
- On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. *Wang, Z.*, +, *TMTT June 2020 2234-2242*

Biomedical telemetry

- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*
- Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Biomedical ultrasonics

- Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Biomimetics

- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P.*, +, *TMTT Nov. 2020 4805-4813*

Biothermics

- Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Bipolar MIMIC

- A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*
- A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*

- A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Boroujeni, S.R.*, +, *TMTT July 2020 3159-3171*

Bipolar transistor circuits

- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*

Bipolar transistors

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020* 4855-4864

Blood

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020* 4865-4874

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020* 3969-3977

Blood pressure measurement

A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020* 1933-1942

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020* 4865-4874

Blood vessels

A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020* 1933-1942

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020* 4865-4874

Bluetooth

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020* 4589-4598

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020* 2020-2029

Boltzmann equation

Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020* 490-500

Boundary integral equations

Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits. *Gomez Molina, C.*, +, *TMTT July 2020* 2501-2514

Bow-tie antennas

RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020* 3908-3919

Bragg gratings

Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K.*, +, *TMTT May 2020* 1851-1857

Study of *H*-Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices. *Shu, G.*, +, *TMTT June 2020* 2251-2258

Brain

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020* 1882-1895

Bridge circuits

A Novel Miniature Dual-Band Impedance Matching Network for Frequency-Dependent Complex Impedances. *Lin, Y.*, +, *TMTT Oct. 2020* 4314-4326

Broadband amplifiers

Guest Editorial. *Camarchia, V.*, +, *TMTT July 2020* 2955-2956

Broadband antennas

A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTT Nov. 2020* 4728-4739

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020* 288-300

A Wideband Filtering Antenna Array With Harmonic Suppression. *Zhang, Y.*, +, *TMTT Oct. 2020* 4327-4339

Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B.*, +, *TMTT March 2020* 835-843

Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020* 2944-2953

RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020* 3908-3919

Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X.*, +, *TMTT Aug. 2020* 3271-3277

Ultra-Broadband Phase Shifters for 5G Mobile Applications. *Ma, J.*, *TMTT Feb. 2020* 530

Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond. *Ma, J.*, *TMTT Nov. 2020* 4505

Broadband communication

An Innovative Joint-Injection Mixer With Broadband IF and RF for Advanced Heterodyne Receivers of Millimeter-Wave Astronomy. *Wu, Y.*, +, *TMTT Dec. 2020* 5408-5422

Corrections to “Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube”. *Wang, W.*, +, *TMTT Nov. 2020* 4641

Buffer circuits

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020* 1564-1575

A High Fundamental Frequency Sub-THz CMOS Oscillator With a Capacitive Load Reduction Circuit. *Nguyen, T.D.*, +, *TMTT July 2020* 2655-2667

Bulk acoustic wave devices

A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020* 3389-3396

Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020* 1304-1311

Butterworth filters

Arbitrary-Order Distributed-Element Narrowband Reflectionless Bandstop Filter With Canonical Transmission Response and Broadband Matching. *Lee, J.*, +, *TMTT Oct. 2020* 4381-4389

C**Calcium compounds**

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the *W*-Band. *Choi, H.E.*, +, *TMTT Feb. 2020* 808-815

Calibration

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020* 2020-2029

A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, I.*, +, *TMTT Feb. 2020* 655-665

Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020* 2808-2822

Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020* 1074-1085

Calibrated Broadband Measurement Technique for Complex Permittivity and Permeability. *Hossain, M.I.*, +, *TMTT Aug. 2020* 3580-3591

Calibration on the Fly—A Novel Two-Port *S*-Parameter Measurement Method for On-Wafer Leaky Systems. *Wu, A.*, +, *TMTT Aug. 2020* 3558-3564

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020* 2768-2778

Characterization of a Multiport Coaxial Line Adaptor for Multimodal Waveguides. *Omar, A.*, *TMTT March 2020* 971-979

Convenient Waveguide Technique for Determining Permittivity and Permeability of Materials. *Wu, C.*, +, *TMTT Nov. 2020* 4905-4912

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020* 4865-4874

Determination of Characteristic Impedance of Planar Transmission Lines on Lossy/Dispersive Substrates by Using Series Resistor With Frequency-Dependent Inductance. *Huang, C.*, *TMTT Oct. 2020* 4229-4235

Evaluating Uncertainty of Microwave Calibration Models With Regression Residuals. *Williams, D.F.*, +, *TMTT June 2020* 2454-2467

Evaluating Uncertainty of Nonlinear Microwave Calibration Models With Regression Residuals. *Williams, D.F.*, +, *TMTT Sept. 2020 3776-3782*
 Experimental Demonstration and Calibration of a 16-Element Active Incoherent Millimeter-Wave Imaging Array. *Vakalis, S.*, +, *TMTT Sept. 2020 3804-3813*

General Theory of Holographic Inversion With Linear Frequency Modulation Radar and its Application to Whole-Body Security Scanning. *Meng, Y.*, +, *TMTT Nov. 2020 4694-4705*

Materials Characterization With Multiple Offset Reflects at Frequencies to 110 GHz. *Popovic, N.B.*, +, *TMTT Jan. 2020 184-195*

Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Optimal Series Resistors for On-Wafer Calibrations. *Drisko, J.A.*, +, *TMTT Jan. 2020 196-210*

Precision Millimeter-Wave-Modulated Wideband Source at 92.4 GHz as a Step Toward an Over-the-Air Reference. *Manurkar, P.*, +, *TMTT July 2020 2644-2654*

Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique. *Park, J.*, +, *TMTT May 2020 1858-1871*

Using Pulsed-RF Signals as Phase Standards for Millimeter-Wave Modulated Measurement and Calibration in Frequency Domain. *Zhang, Y.*, *TMTT July 2020 2930-2943*

Capacitance

Analytical Modeling and Experimental Studies on Tapered Post Re-Entrant Cavity Resonator. *Sinha, P.*, +, *TMTT Dec. 2020 5190-5199*

Exploiting MOS Parametric Amplification to Suppress Noise in Switched-Capacitor RF Receivers. *Badiyari, K.*, +, *TMTT Dec. 2020 5347-5358*

Separated Circular Capacitive Coupler for Reducing Cross-Coupling Capacitance in Drone Wireless Power Transfer System. *Park, C.*, +, *TMTT Sept. 2020 3978-3985*

VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxalized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*

Capacitance measurement

Optimal Series Resistors for On-Wafer Calibrations. *Drisko, J.A.*, +, *TMTT Jan. 2020 196-210*

Capacitors

A 68.5~90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing. *Craton, M.T.*, +, *TMTT Aug. 2020 3418-3427*

Artificially Engineered Capacitors for Discrete High-Frequency Electronic Circuitry. *Whittaker, T.W.*, +, *TMTT Jan. 2020 74-86*

Authors' Reply. *Erdin, I.*, +, *TMTT Feb. 2020 826*

Comments on "Decoupling Capacitor Placement on Resonant Parallel-Plates Via Driving Point Impedance" [Jun 19 2162-2171]. *Park, M.*, *TMTT Feb. 2020 824-825*

Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*

Exploiting MOS Parametric Amplification to Suppress Noise in Switched-Capacitor RF Receivers. *Badiyari, K.*, +, *TMTT Dec. 2020 5347-5358*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Carbon

A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*

Cardiology

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Cardiovascular system

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020 4865-4874*

Cascade networks

A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*

Cavity resonator filters

Ku -Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities. *Wu, Y.*, +, *TMTT June 2020 2331-2342*

Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter. *Deng, J.*, +, *TMTT July 2020 2625-2632*

Design and Optimization of Bidirectional Tunable MEMS All-Silicon Evanescent-Mode Cavity Filter. *Yang, Z.*, +, *TMTT June 2020 2398-2408*

Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators. *San-Blas, A.A.*, +, *TMTT Oct. 2020 4390-4404*

Improvement of Passband Flatness for a Compact, Narrowband, and Highly Selective TM Dual-Mode Filter. *Eskandari, A.R.*, +, *TMTT April 2020 1591-1597*

Modular Synthesis of Waveguide Bandpass Filters Using Dual-Mode Resonators. *Guo, Z.*, +, *TMTT May 2020 1660-1667*

Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*

Cavity resonators

3-D Printed Microfluidic Sensor in SIW Technology for Liquids' Characterization. *Rocco, G.M.*, +, *TMTT March 2020 1175-1184*

An SIW-Based GaN Power Amplifier Module in LTCC. *Rave, C.*, +, *TMTT Dec. 2020 5328-5334*

Analytical Modeling and Experimental Studies on Tapered Post Re-Entrant Cavity Resonator. *Sinha, P.*, +, *TMTT Dec. 2020 5190-5199*

Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C.*, +, *TMTT Aug. 2020 3255-3262*

Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method. *Miura, T.*, +, *TMTT May 2020 1773-1782*

Improvement in Power Transmission Efficiency for Cavity Resonance-Enabled Wireless Power Transfer by Utilizing Probes With Variable Reactance. *Nimura, S.*, +, *TMTT July 2020 2734-2744*

Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*

Three Numerical Eigensolvers for 3-D Cavity Resonators Filled With Anisotropic and Nonconductive Media. *Jiang, W.*, +, *TMTT Nov. 2020 4506-4514*

Cellular radio

A Survey of Self-Interference in LTE-Advanced and 5G New Radio Wireless Transceivers. *Sadjina, S.*, +, *TMTT March 2020 1118-1131*

Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O.*, +, *TMTT Oct. 2020 4122-4130*

Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*

Using a Coned Cable to Simplify the Accurate Numerical Dosimetry of a Resonant Exposure Setup Operating at 1710.2–1989.8 MHz. *Zhao, J.*, +, *TMTT June 2020 2278-2288*

Ceramic packaging

LTCC-Based Fluidic Tuners for Low Microwave Frequency Reconfigurable Circuits. *Bahloul, D.*, +, *TMTT Aug. 2020 3308-3317*

Ceramics

In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*

Substrate Integrated Waveguide Equalizers and Attenuators With Surface Resistance. *Peng, H.*, +, *TMTT April 2020 1487-1495*

Channel bank filters

Ku -Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

A Joint Crest Factor Reduction and Digital Predistortion for Power Amplifiers Linearization Based on Clipping-and-Bank-Filtering. *Wang, S.*, +, *TMTT July 2020 2725-2733*

Channel capacity

Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond. *Ma, J.*, *TMTT July 2020 2473-2474*

Channel estimation

Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *An, S.*, +, *TMTT Nov. 2020 4719-4727*

Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond. *Ma, J.*, *TMTT July 2020 2473-2474*

Chaos

Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. *Gossye, M.*, +, *TMTT July 2020 2485-2494*

Charge pump circuits

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

Chebyshev approximation

Nested Fast Adaptive Cross Approximation Algorithm for Solving Electromagnetic Scattering Problems. *Fang, X.*, +, *TMTT Dec. 2020 4995-5003*

Chebyshev filters

Homotopy Optimization of Microwave and Millimeter-Wave Filters Based on Neural Network Model. *Zhao, P.*, +, *TMTT April 2020 1390-1400*

Proposal of Coplanar Stripline Series Stub Structure for Wideband Bandpass Filters. *Ouyang, Z.*, +, *TMTT Aug. 2020 3397-3407*

Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*

Chemical sensors

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020 2856-2866*

Selective Volume Fraction Sensing Using Resonant- Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

Chemical vapor deposition

High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors. *Deng, M.*, +, *TMTT June 2020 2116-2123*

Chemical variables measurement

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Selective Volume Fraction Sensing Using Resonant- Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

Chirp modulation

Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K.*, +, *TMTT May 2020 1851-1857*

Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*

Circuit analysis computing

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. *Zhang, J.*, +, *TMTT June 2020 2215-2233*

Circuit CAD

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. *Zhang, J.*, +, *TMTT June 2020 2215-2233*

Circuit feedback

A 0.096-mm² 1 –20-GHz Triple-Path Noise- Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*

Circuit noise

A Measure of Well-Spread Points in Noise Wave-Based Source Matrix for Wideband Noise Parameter Measurement: The SKA-Low Example. *Sutinjo, A.T.*, +, *TMTT May 2020 1783-1793*

Circuit optimization

A Fully Integrated Multiplexer Using Unified Extracted Pole Technique. *Yang, Y.*, +, *TMTT Aug. 2020 3439-3447*

A General Coupling Matrix Synthesis Method for All-Resonator Diplexers and Multiplexers. *Yu, Y.*, +, *TMTT March 2020 987-999*

A Test for Unconditional Stability Based on Polynomial Convexification. *Colangeli, S.*, +, *TMTT Oct. 2020 4177-4187*

Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*

Design of Waveguide Filters With Cascaded Singlets Through a Synthesis-Based Approach. *Macchiarella, G.*, +, *TMTT June 2020 2308-2319*

Circuit oscillations

A Class E/F_{odd} Power Oscillator Incorporating a Distributed Active Transformer. *Apperley, T.*, +, *TMTT June 2020 2409-2418*

Circuit simulation

Accelerated *N*-Path Network Analysis Using the Floquet Scattering Matrix Method. *Scarborough, C.*, +, *TMTT April 2020 1248-1259*

Comments on “Analytical Formulas for the Coverage of Tunable Matching Networks for Reconfigurable Applications”. *Wu, J.*, +, *TMTT Feb. 2020 827*

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Circuit stability

A 68.5–90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

Circuit tuning

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*

A Tunable Attenuator Based on a Graphene-Loaded Coupled Microstrip Line. *Zhang, A.*, +, *TMTT March 2020 939-950*

Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V.P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

Circular waveguides

A Compact Dual-Band Mode Converter for High-Power Microwave Applications. *Wang, K.*, +, *TMTT Aug. 2020 3287-3297*

Broadband Septum Polarizer With Triangular Common Port. *Deutschmann, B.*, +, *TMTT Feb. 2020 693-700*

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the *W*-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*

Hybrid Analysis of Structures Composed of Axially Symmetric Objects. *Warecka, M.*, +, *TMTT Nov. 2020 4528-4535*

Circulators

35-GHz Barium Hexaferrite/PDMS Composite-Based Millimeter-Wave Circulators for 5G Applications. *Bowrothu, R.*, +, *TMTT Dec. 2020 5065-5071*

Clocks

A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-PI-Based CDR. *Xia, Y.*, +, *TMTT Dec. 2020 5432-5442*

- A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*
- Analysis and Design of N -Path True-Time-Delay Circuit. *Zolkov, E.*, +, *TMTT Dec. 2020 5381-5394*
- Exploiting MOS Parametric Amplification to Suppress Noise in Switched-Capacitor RF Receivers. *Badiyari, K.*, +, *TMTT Dec. 2020 5347-5358*
- Closed loop systems**
- Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*
- CMOS analog integrated circuits**
- 2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*
- A -197.3-dBc/Hz FoM_r Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI. *Fang, M.*, +, *TMTT Oct. 2020 4116-4121*
- A 0.096-mm² 1 -20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS-nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*
- A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTT Jan. 2020 252-263*
- A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor. *Chen, Z.*, +, *TMTT May 2020 1688-1696*
- A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement. *Chen, L.*, +, *TMTT Nov. 2020 4620-4630*
- A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*
- Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*
- Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI. *El-Aassar, O.*, +, *TMTT Oct. 2020 4445-4454*
- Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*
- Multi-port Active Load Pulling for mm-Wave 5G Power Amplifiers: Bandwidth, Back-Off Efficiency, and VSWR Tolerance. *Chappidi, C.R.*, +, *TMTT July 2020 2998-3016*
- CMOS digital integrated circuits**
- Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*
- CMOS integrated circuits**
- 1-3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*
- 38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{dB}}$ /IP3/RR3 Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C.*, +, *TMTT July 2020 2779-2795*
- A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTT June 2020 1995-2010*
- A 1.5-5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTT Nov. 2020 4728-4739*
- A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*
- A 2-5.5 GHz Beamsteering Receiver IC With 4-Element Vivaldi Antenna Array. *Zahra, M.*, +, *TMTT Sept. 2020 3852-3860*
- A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*
- A 20-44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
- A 22-44-GHz Phased-Array Receive Beamformer in 45-nm CMOS SOI for 5G Applications With 3-3.6-dB NF. *Gao, L.*, +, *TMTT Nov. 2020 4765-4774*
- A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic. *Fang, X.*, +, *TMTT July 2020 3017-3027*
- A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTT June 2020 2057-2064*
- A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*
- A 37-42-GHz 8×8 Phased-Array With 48-51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y.*, +, *TMTT Nov. 2020 4753-4764*
- A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*
- A Class-D Tri-Phasing CMOS Power Amplifier With an Extended March-and-Balun Power Combiner. *Martelius, M.*, +, *TMTT March 2020 1022-1034*
- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*
- A Dual-Mode Nested Rectifier for Ambient Wireless Powering in CMOS Technology. *Almansouri, A.S.*, +, *TMTT May 2020 1754-1762*
- A High Fundamental Frequency Sub-THz CMOS Oscillator With a Capacitive Load Reduction Circuit. *Nguyen, T.D.*, +, *TMTT July 2020 2655-2667*
- A High-Power 24-40-GHz Transmit-Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M.*, +, *TMTT Nov. 2020 4775-4786*
- A Line-Array Technique for Wireless Power Transfer Toward a 100 $\mu\text{m} \times 100 \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTT Jan. 2020 353-364*
- A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*
- A Multiport Chip-Scale Dielectric Resonator Antenna for CMOS THz Transmitters. *Buadana, N.*, +, *TMTT Sept. 2020 3621-3632*
- A New Compact CMOS Distributed Digital Attenuator. *Park, K.*, +, *TMTT Nov. 2020 4631-4640*
- A New mm-Wave Multiple-Band Single-Pole Multiple-Throw Switch With Variable Transmission Lines. *Kim, Y.*, +, *TMTT July 2020 2551-2561*
- A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits. *Cilici, F.*, +, *TMTT Aug. 2020 3565-3579*
- A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H.*, +, *TMTT Nov. 2020 4886-4895*
- A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*
- An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*
- An Ultralow-Power Crystal-Free Batteryless TDD Radio for Medical Implantable Applications. *Cai, M.*, +, *TMTT Nov. 2020 4875-4885*
- Codensing of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*
- Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nal-landhigal, S.N.*, +, *TMTT Oct. 2020 4405-4423*
- Design of 94-GHz Highly Efficient Frequency Octupler Using 47-GHz Current-Reusing Class-C Frequency Quadrupler. *Chung, W.*, +, *TMTT Feb. 2020 775-784*
- Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTT July 2020 2876-2890*
- Design of an S-Band Nanowatt-Level Wakeup Receiver With Envelope Detector-First Architecture. *Bassirian, P.*, +, *TMTT Sept. 2020 3920-3929*
- Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Equivalent Circuit Modeling of a Single-Ended Patch Sensing Element in Integrated Technology. *Shivamurthy, H.T.*, +, *TMTT Jan. 2020 17-26*
- Four-Element Wide Modulated Bandwidth MIMO Receiver With >35-dB Interference Cancellation. *Ghaderi, E.*, +, *TMTT Sept. 2020 3930-3941*
- High Precision CMOS Integrated Delay Chain for X-Ku Band Applications. *Ghazizadeh, M.H.*, +, *TMTT April 2020 1553-1563*

High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Sub-micrometer Planar and FinFET Bulk CMOS. *Daneshgar, S.*, +, *TMTT June 2020 2041-2056*

Novel Trombone Topology for Wideband True-Time-Delay Implementation. *Ghazizadeh, M.H.*, +, *TMTT April 2020 1542-1552*

Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Sept. 2020 4018-4030*

SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Tunable 0.7–2.8-GHz Reflection-Mode N-Path Filters in 45-nm SOI CMOS. *Bonner-Stewart, J.*, +, *TMTT June 2020 2343-2357*

Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*

Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N.*, +, *TMTT June 2020 2030-2040*

Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

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Design Procedure of Continuous Profile Stopband Filters Implemented With Empty Substrate Integrated Coaxial Lines. *Borja, A.L.*, +, *TMTT April 2020 1520-1528*

Highly Efficient Microwave Power System of Magnetrons Utilizing Frequency-Searching Injection-Locking Technique With No Phase Shifter. *Lai, C.*, +, *TMTT Oct. 2020 4424-4432*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Probing the Theoretical Ultimate Limit of Coaxial Cable Sensing: Measuring Nanometer-Scale Displacements. *Zhu, C.*, +, *TMTT Feb. 2020 816-823*

Progress in Kinetic Plasma Modeling for High-Power Microwave Devices: Analysis of Multipactor Mitigation in Coaxial Cables. *Nayak, I.*, +, *TMTT Feb. 2020 501-508*

Coaxial waveguides

A Compact Dual-Band Mode Converter for High-Power Microwave Applications. *Wang, K.*, +, *TMTT Aug. 2020 3287-3297*

Characterization of a Multiport Coaxial Line Adaptor for Multimodal Waveguides. *Omar, A.*, *TMTT March 2020 971-979*

Code division multiple access

Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*

Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range. *Liu, H.-Y.*, +, *TMTT March 2020 1012-1021*

Coils

A Line-Array Technique for Wireless Power Transfer Toward a $100\ \mu\text{m} \times 100\ \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTT Jan. 2020 353-364*

A Novel Miniature Dual-Band Impedance Matching Network for Frequency-Dependent Complex Impedances. *Lin, Y.*, +, *TMTT Oct. 2020 4314-4326*

Digital Transmitter Coil for Wireless Power Transfer Robust Against Variation of Distance and Lateral Misalignment. *Qiu, H.*, +, *TMTT Sept. 2020 4031-4039*

On the Design of Planar Arrays of Nonresonant Coils for Tunable Wireless Power Transfer Applications. *Brizi, D.*, +, *TMTT Sept. 2020 3814-3822*

On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. *Wang, Z.*, +, *TMTT June 2020 2234-2242*

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

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Metamaterial-Based Absorbers for the Reduction of Accelerator Beam-Coupling Impedance. *Masullo, M.R.*, +, *TMTT April 2020 1340-1346*

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Erratum to "A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices". *Liu, J.*, +, *TMTT June 2020 2468*

Erratum to "On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment". *Wang, Z.*, +, *TMTT June 2020 2469*

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Compensation

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. *Tome, P.M.*, +, *TMTT Sept. 2020 3709-3723*

A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*

Temperature-Dependent I/Q Imbalance Compensation in Ultra-Wideband Millimeter-Wave Multi-Gigabit Transmitters. *Rezola, A.*, +, *TMTT Jan. 2020 340-352*

Complexity theory

Nested Fast Adaptive Cross Approximation Algorithm for Solving Electromagnetic Scattering Problems. *Fang, X.*, +, *TMTT Dec. 2020 4995-5003*

Composite materials

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Compressed sensing

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

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Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C.*, +, *TMTT Aug. 2020 3255-3262*

Computational complexity

Accuracy Controlled Structure-Preserving \mathcal{H}^2 -Matrix-Matrix Product in Linear Complexity With Change of Cluster Bases. *Ma, M.*, +, *TMTT Feb. 2020 441-455*

Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X.*, +, *TMTT Jan. 2020 316-328*

Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*

Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A.*, +, *TMTT Sept. 2020 4000-4017*

Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. *Becerra, J.A.*, +, *TMTT Nov. 2020 4570-4578*

Computational electromagnetics

EM-Centric Multiphysics Optimization of Microwave Components Using Parallel Computational Approach. *Zhang, W.*, +, *TMTT Feb. 2020 479-489*

Fast Multiparametric Electromagnetic Full-Wave Inversion via Solving Contracting Scattering Data Equations Optimized by the 3-D MRF Model. *Chen, Y.*, +, *TMTT Nov. 2020 4515-4527*

Method for Analytically Finding the Nullspace of Stiffness Matrix for Both Zeroth-Order and Higher Order Curl-Conforming Vector Bases in Unstructured Meshes. *Xue, L.*, +, *TMTT Feb. 2020 456-468*

- Parallel Gradient-Based EM Optimization for Microwave Components Using Adjoint- Sensitivity-Based Neuro-Transfer Function Surrogate. *Feng, F.*, +, *TMTT Sept. 2020 3606-3620*
- Computational modeling**
- Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator. *Sal-ski, B.*, +, *TMTT Dec. 2020 5093-5102*
- Computerized numerical control**
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- Computerized tomography**
- Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*
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- Control system synthesis**
- Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*
- Convergence of numerical methods**
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- Analytical Modeling of Participation Reduction in Superconducting Coplanar Resonator and Qubit Designs Through Substrate Trenching. *Murray, C.E.*, *TMTT Aug. 2020 3263-3270*
- Determination of Characteristic Impedance of Planar Transmission Lines on Lossy/Dispersive Substrates by Using Series Resistor With Frequency-Dependent Inductance. *Huang, C.*, *TMTT Oct. 2020 4229-4235*
- Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A.*, +, *TMTT Oct. 2020 4188-4205*
- LTCC-Based Fluidic Tuners for Low Microwave Frequency Reconfigurable Circuits. *Bahloul, D.*, +, *TMTT Aug. 2020 3308-3317*
- Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*
- Micromachined Silicon-Core Substrate-Integrated Waveguides at 220–330 GHz. *Krivovitca, A.*, +, *TMTT Dec. 2020 5123-5131*
- Optimal Series Resistors for On-Wafer Calibrations. *Drisko, J.A.*, +, *TMTT Jan. 2020 196-210*
- Proposal of Coplanar Stripline Series Stub Structure for Wideband Bandpass Filters. *Ouyang, Z.*, +, *TMTT Aug. 2020 3397-3407*
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- Copper**
- 220-to-330-GHz Manifold Triplexer With Wide Stopband Utilizing Ridged Substrate Integrated Waveguides. *Holloway, J.W.*, +, *TMTT Aug. 2020 3428-3438*
- Characterization and Production of PCB Structures With Increased Ratio of Electromagnetic Field in Air. *Sepaintner, F.*, +, *TMTT June 2020 2134-2143*
- Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*
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- Coupled circuits**
- Differential-Mode to Common-Mode Conversion Detector Based on Rat-Race Hybrid Couplers: Analysis and Application to Differential Sensors and Comparators. *Munoz-Enano, J.*, +, *TMTT April 2020 1312-1325*
- Coupled transmission lines**
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- High Precision CMOS Integrated Delay Chain for X-Ku Band Applications. *Ghazizadeh, M.H.*, +, *TMTT April 2020 1553-1563*
- High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X.*, +, *TMTT April 2020 1462-1475*
- Couplers**
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- Substrate Integrated Suspended Slot Line and Its Application to Differential Coupler. *Wang, Y.*, +, *TMTT Dec. 2020 5178-5189*
- Couplings**
- 10–60-GHz Electromechanical Resonators Using Thin-Film Lithium Niobate. *Yang, Y.*, +, *TMTT Dec. 2020 5211-5220*
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- Separated Circular Capacitive Coupler for Reducing Cross-Coupling Capacitance in Drone Wireless Power Transfer System. *Park, C.*, +, *TMTT Sept. 2020 3978-3985*
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- Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. *Becerra, J.A.*, +, *TMTT Nov. 2020 4570-4578*
- Cracks**
- Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020 2856-2866*

Crosstalk

Calibration on the Fly—A Novel Two-Port *S*-Parameter Measurement Method for On-Wafer Leaky Systems. *Wu, A.*, +, *TMTT Aug. 2020* 3558-3564

Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020* 490-500

Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q.*, +, *TMTT Jan. 2020* 301-315

Cryogenic electronics

A Compact *Q*-Band Rectangular Waveguide Thermal Isolator. *Montisci, G.*, +, *TMTT Feb. 2020* 611-619

Crystal oscillators

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020* 2020-2029

Cutoff frequency

A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems. *Jung, M.*, +, *TMTT Dec. 2020* 5371-5380

Corrections to “Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube”. *Wang, W.*, +, *TMTT Nov. 2020* 4641

The Transition Between Reactive and Radiative Regimes for Leaky Modes in Planar Waveguides Based on Homogenized Partially Reflecting Surfaces. *Fuscaldo, W.*, +, *TMTT Dec. 2020* 5259-5269

CW radar

A Compact 24 × 24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020* 2124-2133

Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020* 1074-1085

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020* 2768-2778

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTT July 2020* 2876-2890

Mitigation of RF Impairments of a 160-GHz MMIC FMCW Radar Using Model-Based Estimation. *Hafner, S.*, +, *TMTT March 2020* 1065-1073

Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm. *Wang, F.*, +, *TMTT May 2020* 1908-1920

Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar. *Xiong, J.*, +, *TMTT Nov. 2020* 4814-4824

Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity. *Scherhauff, M.*, +, *TMTT Sept. 2020* 3784-3793

Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique. *Park, J.*, +, *TMTT May 2020* 1858-1871

Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020* 2845-2855

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020* 1195-1211

D**Damping**

The Complex Permeability of Split-Ring Resonator Arrays Measured at Microwave Frequencies. *Madsen, S.L.*, +, *TMTT Aug. 2020* 3547-3557

Data acquisition

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020* 1954-1963

Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X.*, +, *TMTT Jan. 2020* 316-328

Data models

Lookup-Table-Based Automated Rectifier Synthesis. *Gao, S.*, +, *TMTT Dec. 2020* 5200-5210

Parallel Decomposition Approach to Wide-Range Parametric Modeling With Applications to Microwave Filters. *Zhang, W.*, +, *TMTT Dec. 2020* 5288-5306

DC-DC power converters

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020* 2020-2029

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. *You, F.*, +, *TMTT Oct. 2020* 4433-4444

Delamination

Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020* 2856-2866

Delay circuits

A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTT Nov. 2020* 4728-4739

High Precision CMOS Integrated Delay Chain for X-Ku Band Applications. *Ghazizadeh, M.H.*, +, *TMTT April 2020* 1553-1563

Novel Reconfigurable Negative Group Delay Circuits With Independent Group Delay and Transmission Loss/Gain Control. *Zhang, T.*, +, *TMTT April 2020* 1293-1303

Novel Trombone Topology for Wideband True-Time-Delay Implementation. *Ghazizadeh, M.H.*, +, *TMTT April 2020* 1542-1552

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Analysis and Design of *N*-Path True-Time-Delay Circuit. *Zolkov, E.*, +, *TMTT Dec. 2020* 5381-5394

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Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020* 3745-3755

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A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems. *Jung, M.*, +, *TMTT Dec. 2020* 5371-5380

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On Postprocessing Reduction of Phase Noise in FMCW Radars. *Rezaei, M.*, +, *TMTT Dec. 2020* 5103-5114

Delta-sigma modulation

Reduction of Phase Noise in Fractional-*N* Frequency Synthesizer Using Self-Injection Locking Loop. *Peng, K.*, +, *TMTT Sept. 2020* 3724-3731

Demodulation

A Novel Active/Passive Dual-Mode Sensing Technique for Detecting Vital Signs. *Peng, K.*, +, *TMTT Jan. 2020* 414-424

A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020* 1933-1942

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Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020* 4361-4368

Dielectric devices

Enhancing the Sensitivity of Dielectric Sensors With Multiple Coupled Complementary Split-Ring Resonators. *Albishi, A.M.*, +, *TMTT Oct. 2020* 4340-4347

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Dielectric liquids

Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020* 2808-2822

Dielectric loss measurement

Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020* 2144-2150

Dielectric losses

In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*

Dielectric materials

A Position-Independent Approach to Accurate Measurement of Broadband Electromagnetic Constitutive Parameters of Magnetodielectric Materials. *Li, Q.*, +, *TMTT Nov. 2020 4940-4950*

Dielectric Anisotropy Sensor Using Coupled Resonators. *Morales-Lovera, H.*, +, *TMTT April 2020 1610-1616*

Enhancing the Sensitivity of Dielectric Sensors With Multiple Coupled Complementary Split-Ring Resonators. *Albishi, A.M.*, +, *TMTT Oct. 2020 4340-4347*

Generalized PEEC Model for Conductor–Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTT Jan. 2020 27-38*

Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance. *Teran-Bahena, E.Y.*, +, *TMTT June 2020 2428-2434*

Dielectric resonator antennas

A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*

A Multiport Chip-Scale Dielectric Resonator Antenna for CMOS THz Transmitters. *Buadana, N.*, +, *TMTT Sept. 2020 3621-3632*

Dielectric resonator filters

Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*

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Dielectric Anisotropy Sensor Using Coupled Resonators. *Morales-Lovera, H.*, +, *TMTT April 2020 1610-1616*

Miniaturized Single-Ended and Balanced Dual-Band Diplexers Using Dielectric Resonators. *Li, Y.C.*, +, *TMTT Oct. 2020 4257-4266*

Dielectric thin films

The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*

Dielectric waveguides

A Multimodal Dielectric Waveguide-Based Monopulse Radar at 160 GHz. *Geiger, M.*, +, *TMTT Nov. 2020 4825-4834*

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*

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Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator. *Sal-ski, B.*, +, *TMTT Dec. 2020 5093-5102*

Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias. *Watanabe, A.O.*, +, *TMTT Dec. 2020 5082-5092*

VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxellized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*

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Pseudo-Doherty Load-Modulated Balanced Amplifier With Wide Bandwidth and Extended Power Back-Off Range. *Cao, Y.*, +, *TMTT July 2020 3172-3183*

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RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

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A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

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A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*

Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N.*, +, *TMTT June 2020 2030-2040*

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60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

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A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H.*, +, *TMTT Nov. 2020 4886-4895*

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B.*, +, *TMTT March 2020 835-843*

Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias. *Watanabe, A.O.*, +, *TMTT Dec. 2020 5082-5092*

Direction-of-arrival estimation

Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar. *Xiong, J.*, +, *TMTT Nov. 2020 4814-4824*

Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P.*, +, *TMTT Nov. 2020 4805-4813*

Directional couplers

A Single-Layer Balanced Directional Coupler Design Based on Crossover Structures. *Amini, A.*, +, *TMTT Aug. 2020 3298-3307*

Analysis and Design of Broadband Ridge-Gap-Waveguide Tight and Loose Hybrid Couplers. *Nasr, M.A.*, +, *TMTT Aug. 2020 3368-3378*

Coupling Analysis of Adjacent Substrate-Integrated Waveguides Based on the Equivalent Transmission Line Model. *Wang, X.*, +, *TMTT April 2020 1347-1354*

Design of Broadband Doubly Asymmetrical Branch-Line Directional Couplers. *Buesa-Zubiria, A.*, +, *TMTT April 2020 1439-1451*

Directive antennas

Efficient Rectifier for Wireless Power Transmission Systems. *Rotenberg, S.A.*, +, *TMTT May 2020 1921-1932*

Enhanced Wireless Interchip Communication Performance Using Symmetrical Layers and Soft/Hard Surface Concepts. *Al-Alem, Y.*, +, *TMTT Jan. 2020 39-50*

Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

Low-Weight Wireless Sensor Node With Sensor-Data-Enhanced Dual-Frequency RSSI-Based Distance Estimation. *Duda, N.*, +, *TMTT Oct. 2020 4131-4137*

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Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

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- A Tunable Graphene Filtering Attenuator Based on Effective Spoof Surface Plasmon Polariton Waveguide. *Yi, Y.*, +, *TMTT Dec. 2020 5169-5177*
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- Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A.*, +, *TMTT Dec. 2020 5132-5144*
- Nonreciprocal Isolating Bandpass Filter With Enhanced Isolation Using Metallized Ferrite. *Zhang, Y.*, +, *TMTT Dec. 2020 5307-5316*
- Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T.*, +, *TMTT Dec. 2020 5317-5327*
- Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure. *Kim, Y.*, +, *TMTT Dec. 2020 5055-5064*

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- A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*
- Probing the Theoretical Ultimate Limit of Coaxial Cable Sensing: Measuring Nanometer-Scale Displacements. *Zhu, C.*, +, *TMTT Feb. 2020 816-823*

Distance measurement

- Low-Weight Wireless Sensor Node With Sensor-Data-Enhanced Dual-Frequency RSSI-Based Distance Estimation. *Duda, N.*, +, *TMTT Oct. 2020 4131-4137*
- Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity. *Scherhaufl, M.*, +, *TMTT Sept. 2020 3784-3793*

Distortion

- A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*
- A Joint Crest Factor Reduction and Digital Predistortion for Power Amplifiers Linearization Based on Clipping-and-Bank-Filtering. *Wang, S.*, +, *TMTT July 2020 2725-2733*
- A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters. *Chen, L.*, +, *TMTT July 2020 2796-2807*
- Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*

Distributed amplifiers

- A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5 dBm Peak Output Power and Over 4.5-THz GBW. *El-Aassar, O.*, +, *TMTT July 2020 3111-3119*
- A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*
- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*

Distributed sensors

- Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

Doppler measurement

- Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020 1954-1963*

Doppler radar

- 3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*
- A Novel Active/Passive Dual-Mode Sensing Technique for Detecting Vital Signs. *Peng, K.*, +, *TMTT Jan. 2020 414-424*
- Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTT July 2020 2876-2890*
- Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar. *Xiong, J.*, +, *TMTT Nov. 2020 4814-4824*

Doppler shift

- Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique. *Park, J.*, +, *TMTT May 2020 1858-1871*

Dosimetry

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- Using a Coned Cable to Simplify the Accurate Numerical Dosimetry of a Resonant Exposure Setup Operating at 1710.2–1989.8 MHz. *Zhao, J.*, +, *TMTT June 2020 2278-2288*

Driver circuits

- A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
- A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

Drugs

- Erratum to “A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices”. *Liu, J.*, +, *TMTT June 2020 2468*
- Erratum to “On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment”. *Wang, Z.*, +, *TMTT June 2020 2469*

Dyes

- Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

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- Broadband Vector Potential Dyadic Green’s Function and Normal Modes in 3-D Cavity of Irregular Shape. *Sanamzadeh, M.*, +, *TMTT Aug. 2020 3210-3218*
- Characterization of a Multiport Coaxial Line Adaptor for Multimodal Waveguides. *Omar, A.*, *TMTT March 2020 971-979*
- Dual-Band Ferrite Circulators Operating on Weak Field Conditions: Design Methodology and Bandwidths’ Improvement. *Olivier, V.*, +, *TMTT July 2020 2521-2530*
- Method for Analytically Finding the Nullspace of Stiffness Matrix for Both Zeroth-Order and Higher Order Curl-Conforming Vector Bases in Unstructured Meshes. *Xue, L.*, +, *TMTT Feb. 2020 456-468*
- Microscopic Modeling of Metasurfaces by the Mixed Finite Element Numerical Mode-Matching Method. *Liu, J.*, +, *TMTT Feb. 2020 469-478*
- Three Numerical Eigensolvers for 3-D Cavity Resonators Filled With Anisotropic and Nonconductive Media. *Jiang, W.*, +, *TMTT Nov. 2020 4506-4514*

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Electric field integral equations

- Entire Domain Basis Function Expansion of the Differential Surface Admittance for Efficient Broadband Characterization of Lossy Interconnects. *Huynen, M.*, +, *TMTT April 2020 1217-1233*
- Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

Electric fields

- Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green’s Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*

Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*

Electric impedance

Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

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RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*

Electric motors

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Electric noise measurement

On the Determination of Device Noise Parameters Versus Size. *Boglione, L.*, *TMTT Oct. 2020 4169-4176*

Electric reactance

Improvement in Power Transmission Efficiency for Cavity Resonance-Enabled Wireless Power Transfer by Utilizing Probes With Variable Reactance. *Nimura, S.*, +, *TMTT July 2020 2734-2744*

Electric resistance measurement

Optimal Series Resistors for On-Wafer Calibrations. *Drisko, J.A.*, +, *TMTT Jan. 2020 196-210*

Electric sensing devices

Dielectric Anisotropy Sensor Using Coupled Resonators. *Morales-Lovera, H.*, +, *TMTT April 2020 1610-1616*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*

Electrical conductivity

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Electrocardiography

Doppler Cardiogram: A Remote Detection of Human Heart Activities. *Dong, S.*, +, *TMTT March 2020 1132-1141*

Electrochemical electrodes

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Electromagnetic compatibility

Additively Manufactured mm-Wave Multichip Modules With Fully Printed “Smart” Encapsulation Structures. *He, X.*, +, *TMTT July 2020 2716-2724*

Electromagnetic coupling

BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique. *Xu, J.*, +, *TMTT April 2020 1452-1461*

Electromagnetic field theory

Generalized PEEC Model for Conductor–Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTT Jan. 2020 27-38*

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A Subspace-Splitting Moment-Matching Model-Order Reduction Technique for Fast Wideband FEM Simulations of Microwave Structures. *Szypulski, D.*, +, *TMTT Aug. 2020 3229-3241*

Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y.*, +, *TMTT Nov. 2020 4896-4904*

Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Hybrid Analysis of Structures Composed of Axially Symmetric Objects. *Warecka, M.*, +, *TMTT Nov. 2020 4528-4535*

Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

Electromagnetic interference

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

A Microcontroller Unit-Based Electromagnetic Bandgap Control Scheme: Application for Enhancing Isolation in an Antenna Array and the EMI Scanner System Speed Thereof. *Jeong, J.*, +, *TMTT Nov. 2020 4536-4553*

Additively Manufactured mm-Wave Multichip Modules With Fully Printed “Smart” Encapsulation Structures. *He, X.*, +, *TMTT July 2020 2716-2724*

An EM Imaging Method Based on Plane-Wave Spectrum and Transmission Line Model. *Zhang, J.*, +, *TMTT Oct. 2020 4161-4168*

Stochastic EMI Noise Model of PCB Layout for Circuit-Level Analysis of System in IoT Applications. *Mehri, M.*, +, *TMTT Dec. 2020 5072-5081*

Electromagnetic scattering

Nested Fast Adaptive Cross Approximation Algorithm for Solving Electromagnetic Scattering Problems. *Fang, X.*, +, *TMTT Dec. 2020 4995-5003*

Electromagnetic wave absorption

Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*

Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B.*, +, *TMTT March 2020 835-843*

Electromagnetic wave diffraction

Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*

Electromagnetic wave polarization

2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A.*, +, *TMTT Sept. 2020 3872-3884*

A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*

A Wideband Filtering Antenna Array With Harmonic Suppression. *Zhang, Y.*, +, *TMTT Oct. 2020 4327-4339*

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Design of Planar Resonant Scatterer With Roll-Invariant Cross Polarization. *Rance, O.*, +, *TMTT Oct. 2020 4305-4313*

Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B.*, +, *TMTT March 2020 835-843*

RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*

Single-Ended-to-Balanced Power Divider With Extended Common-Mode Suppression and Its Application to Differential 2×4 Butler Matrices. *Zhu, H.*, +, *TMTT April 2020 1510-1519*

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A Multiresolution Contraction Integral Equation Method for Solving Highly Nonlinear Inverse Scattering Problems. *Zhong, Y.*, +, *TMTT April 2020 1234-1247*

A Surface Integral Equation Formulation for Efficient Simulation of Finite-Sized Multilayered Parallel-Plate Structure. *Ren, Y.*, +, *TMTT July 2020 2475-2484*

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Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*

Design of Planar Resonant Scatterer With Roll-Invariant Cross Polarization. *Rance, O.*, +, *TMTT Oct. 2020 4305-4313*

Enhanced Wireless Interchip Communication Performance Using Symmetrical Layers and Soft/Hard Surface Concepts. *Al-Alem, Y.*, +, *TMTT Jan. 2020 39-50*

Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

Fast Multiparametric Electromagnetic Full-Wave Inversion via Solving Contracting Scattering Data Equations Optimized by the 3-D MRF Model. *Chen, Y.*, +, *TMTT Nov. 2020 4515-4527*

Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*

Frequency-Diverse Near-Field Sensing Using Multiple Coupled-Resonator Probes. *Zhou, H.*, +, *TMTT Oct. 2020 4455-4465*

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A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides. *Guo, C.*, +, *TMTT March 2020 1035-1044*

A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique. *Lin, Q.*, +, *TMTT July 2020 3148-3158*

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A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics. *Neumann, K.*, +, *TMTT June 2020 2151-2160*

Design and Optimization of Bidirectional Tunable MEMS All-Silicon Evanescent-Mode Cavity Filter. *Yang, Z.*, +, *TMTT June 2020 2398-2408*

Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI. *El-Aassar, O.*, +, *TMTT Oct. 2020 4445-4454*

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020 2845-2855*

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Hybrid Wireless Positioning and Charging With Switched Field Helmholtz Coils for Wireless Capsule Endoscopy. *Shao, G.*, +, *TMTT March 2020 904-913*

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Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*

- Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*
- Efficient Rectifier for Wireless Power Transmission Systems. *Rotenberg, S.A.*, +, *TMTT May 2020 1921-1932*
- Harvesting Ambient RF Energies for Powering Wearable Devices. *Ma, J.*, *TMTT Sept. 2020 3605*
- RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*

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- A Hybrid Low-Cost Bandpass Filter With SAW Resonators and External Lumped Inductors Using a Dual-Coupling Scheme. *Zhang, R.*, +, *TMTT June 2020 2289-2299*
- A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, L.*, +, *TMTT Feb. 2020 655-665*
- A Three-Dimensional Design of Ultra-Wideband Microwave Absorbers. *Luo, G.Q.*, +, *TMTT Oct. 2020 4206-4215*
- An Improved Surface-Potential-Based Model for MOSFETs Considering the Carrier Gaussian Distribution. *Wu, Y.*, +, *TMTT Oct. 2020 4082-4090*
- Analysis and Design Guidelines for Wideband CRLH SRR-loaded Coplanar Waveguide. *Elsheikh, M.A.G.*, +, *TMTT July 2020 2562-2570*
- Analytical Approach to Microwave Orientations Based on a Strongly Coupled Array. *Wang, H.*, +, *TMTT Sept. 2020 3898-3907*
- Artificially Engineered Capacitors for Discrete High-Frequency Electronic Circuitry. *Whittaker, T.W.*, +, *TMTT Jan. 2020 74-86*
- Coupling Analysis of Adjacent Substrate-Integrated Waveguides Based on the Equivalent Transmission Line Model. *Wang, X.*, +, *TMTT April 2020 1347-1354*
- Design of Waveguide Filters With Cascaded Singlets Through a Synthesis-Based Approach. *Macchiarella, G.*, +, *TMTT June 2020 2308-2319*
- Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A.*, +, *TMTT Oct. 2020 4188-4205*
- Efficient Numerical Computation of Full-Wave Partial Elements Modeling Magnetic Materials in the PEEC Method. *Lombardi, L.*, +, *TMTT March 2020 915-925*
- Enhancing the Sensitivity of Dielectric Sensors With Multiple Coupled Complementary Split-Ring Resonators. *Albishi, A.M.*, +, *TMTT Oct. 2020 4340-4347*
- Equivalent Circuit Modeling of a Single-Ended Patch Sensing Element in Integrated Technology. *Shivamurthy, H.T.*, +, *TMTT Jan. 2020 17-26*
- Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*
- Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*
- Generalized PEEC Model for Conductor-Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTT Jan. 2020 27-38*
- Half-Mode Substrate Integrated Waveguide Dispersion Tailoring Using 2.5-D Spoof Surface Plasmon Polaritons Structure. *Ji, L.*, +, *TMTT July 2020 2539-2550*
- Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*
- Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*
- Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*
- On the Increment of the Bandwidth of Mushroom-Type EBG Structures With Glide Symmetry. *Mouris, B.A.*, +, *TMTT April 2020 1365-1375*

- Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

- Ultrabroadband Diplexers for Next-Generation High-Frequency Measurement Applications. *Boes, F.*, +, *TMTT June 2020 2161-2167*

Error statistics

- A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*
- Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*

Estimation theory

- A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*
- Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. *Nopchinda, D.*, +, *TMTT Jan. 2020 222-235*

Etching

- Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*

Exchange interactions (electron)

- Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes. *Venugopal, A.*, +, *TMTT Feb. 2020 602-610*

Extrapolation

- Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

F

Fabrication

- Micromachined Silicon-Core Substrate-Integrated Waveguides at 220–330 GHz. *Krivovitca, A.*, +, *TMTT Dec. 2020 5123-5131*
- VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxelized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*

Fabry-Perot interferometers

- Probing the Theoretical Ultimate Limit of Coaxial Cable Sensing: Measuring Nanometer-Scale Displacements. *Zhu, C.*, +, *TMTT Feb. 2020 816-823*

Fading channels

- Linearized Photonic Microwave and mm-Wave Mixer With Dispersion-Induced Power Fading Compensation. *Zhai, W.*, +, *TMTT Dec. 2020 5335-5346*

Fast Fourier transforms

- Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*
- Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

- Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

Feedback

- Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X.*, +, *TMTT Jan. 2020 316-328*
- Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*

Feedback amplifiers

- High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Feedback oscillators

- Oscillator Stabilization Through Feedback With Slow Wave Structures. *Pon-ton, M.*, +, *TMTT June 2020 2358-2373*

Feeds

- Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis. *Nallandhigal, S.N.*, +, *TMTT Dec. 2020 5244-5258*

Ferrite circulators

Dual-Band Ferrite Circulators Operating on Weak Field Conditions: Design Methodology and Bandwidths' Improvement. *Olivier, V.*, +, *TMTT July 2020 2521-2530*

Ferrites

Nonreciprocal Isolating Bandpass Filter With Enhanced Isolation Using Metallized Ferrite. *Zhang, Y.*, +, *TMTT Dec. 2020 5307-5316*

Ferromagnetic materials

Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes. *Venu-gopal, A.*, +, *TMTT Feb. 2020 602-610*

Ferromagnetic resonance

Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes. *Venu-gopal, A.*, +, *TMTT Feb. 2020 602-610*

Field effect MIMIC

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

A 2–5.5 GHz Beamsteering Receiver IC With 4-Element Vivaldi Antenna Array. *Zahra, M.*, +, *TMTT Sept. 2020 3852-3860*

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTT June 2020 2057-2064*

A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTT Jan. 2020 252-263*

A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement. *Chen, L.*, +, *TMTT Nov. 2020 4620-4630*

A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M.*, +, *TMTT Nov. 2020 4775-4786*

A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*

A New mm-Wave Multiple-Band Single-Pole Multiple-Throw Switch With Variable Transmission Lines. *Kim, Y.*, +, *TMTT July 2020 2551-2561*

A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits. *Cilici, F.*, +, *TMTT Aug. 2020 3565-3579*

A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs. *Turkmen, E.*, +, *TMTT Jan. 2020 211-221*

Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*

High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Submicrometer Planar and FinFET Bulk CMOS. *Daneshgar, S.*, +, *TMTT June 2020 2041-2056*

SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*

Field effect MMIC

1–3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*

A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*

A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTT Nov. 2020 4728-4739*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic. *Fang, X.*, +, *TMTT July 2020 3017-3027*

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI. *El-Aassar, O.*, +, *TMTT Oct. 2020 4445-4454*

High Precision CMOS Integrated Delay Chain for X-Ku Band Applications. *Ghazizadeh, M.H.*, +, *TMTT April 2020 1553-1563*

Field effect transistors

Graphene-Based Frequency-Conversion Mixers for High-Frequency Applications. *Hamed, A.*, +, *TMTT June 2020 2090-2096*

Field programmable gate arrays

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020 288-300*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

Filled polymers

In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*

Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*

Finite difference time-domain analysis

Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*

TO-FDTD Method for Arbitrary Skewed Periodic Structures at Oblique Incidence. *Liu, Y.*, +, *TMTT Feb. 2020 564-572*

Using a Coned Cable to Simplify the Accurate Numerical Dosimetry of a Resonant Exposure Setup Operating at 1710.2–1989.8 MHz. *Zhao, J.*, +, *TMTT June 2020 2278-2288*

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020 1882-1895*

Finite element analysis

5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film. *Lu, R.*, +, *TMTT Feb. 2020 573-589*

A Subspace-Splitting Moment-Matching Model-Order Reduction Technique for Fast Wideband FEM Simulations of Microwave Structures. *Szypulski, D.*, +, *TMTT Aug. 2020 3229-3241*

Analytical Modeling of Participation Reduction in Superconducting Coplanar Resonator and Qubit Designs Through Substrate Trenching. *Murray, C.E.*, *TMTT Aug. 2020 3263-3270*

Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*

Efficient Numerical Computation of Full-Wave Partial Elements Modeling Magnetic Materials in the PEEC Method. *Lombardi, L.*, +, *TMTT March 2020 915-925*

Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Exploiting Symmetries in the Variational Meshless Method for 3-D Inhomogeneous Cavities. *Lombardi, V.*, +, *TMTT Feb. 2020 432-440*

Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*

Hybrid Analysis of Structures Composed of Axially Symmetric Objects. *Warecka, M.*, +, *TMTT Nov. 2020 4528-4535*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

- Method for Analytically Finding the Nullspace of Stiffness Matrix for Both Zeroth-Order and Higher Order Curl-Conforming Vector Bases in Unstructured Meshes. *Xue, L.*, +, *TMTT Feb. 2020 456-468*
- Microscopic Modeling of Metasurfaces by the Mixed Finite Element Numerical Mode-Matching Method. *Liu, J.*, +, *TMTT Feb. 2020 469-478*
- New Mixed SETD and FETD Methods to Overcome the Low-Frequency Breakdown Problems by Tree-Cotree Splitting. *Chen, K.*, +, *TMTT Aug. 2020 3219-3228*
- Progress in Kinetic Plasma Modeling for High-Power Microwave Devices: Analysis of Multipactor Mitigation in Coaxial Cables. *Nayak, I.*, +, *TMTT Feb. 2020 501-508*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetry Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*
- Three Numerical Eigensolvers for 3-D Cavity Resonators Filled With Anisotropic and Nonconductive Media. *Jiang, W.*, +, *TMTT Nov. 2020 4506-4514*
- Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. *Gossye, M.*, +, *TMTT July 2020 2485-2494*
- Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020 2144-2150*
- FIR filters**
- A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*
- Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. *Nopchinda, D.*, +, *TMTT Jan. 2020 222-235*
- Flash memories**
- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*
- Flexible electronics**
- A Multimodal Dielectric Waveguide-Based Monopulse Radar at 160 GHz. *Geiger, M.*, +, *TMTT Nov. 2020 4825-4834*
- Flicker noise**
- SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*
- Fluctuations**
- Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes. *Venugopal, A.*, +, *TMTT Feb. 2020 602-610*
- Fluorescence**
- Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*
- FM radar**
- A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020 2124-2133*
- Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*
- Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020 2768-2778*
- General Theory of Holographic Inversion With Linear Frequency Modulation Radar and its Application to Whole-Body Security Scanning. *Meng, Y.*, +, *TMTT Nov. 2020 4694-4705*
- Mitigation of RF Impairments of a 160-GHz MMIC FMCW Radar Using Model-Based Estimation. *Hafner, S.*, +, *TMTT March 2020 1065-1073*
- Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm. *Wang, F.*, +, *TMTT May 2020 1908-1920*
- Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity. *Scherhauf, M.*, +, *TMTT Sept. 2020 3784-3793*
- Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique. *Park, J.*, +, *TMTT May 2020 1858-1871*
- Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020 2845-2855*
- Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*
- Fourier series**
- Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*
- Fourier transforms**
- Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR. *Wang, Z.*, +, *TMTT March 2020 1185-1194*
- Fractal antennas**
- Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y.*, +, *TMTT Nov. 2020 4896-4904*
- Fractionation**
- Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*
- Frequency agility**
- Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*
- Frequency conversion**
- A Novel Design of Compact Out-of-Phase Power Divider With Arbitrary Ratio. *Xia, B.*, +, *TMTT Dec. 2020 5235-5243*
- Frequency dividers**
- Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*
- Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*
- Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*
- Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*
- Frequency division multiple access**
- A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, I.*, +, *TMTT Feb. 2020 655-665*
- Frequency division multiplexing**
- Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*
- Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020 2845-2855*
- Frequency estimation**
- Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M.*, +, *TMTT Jan. 2020 277-287*
- Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm. *Wang, F.*, +, *TMTT May 2020 1908-1920*
- Frequency hop communication**
- Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*
- Frequency measurement**
- Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. *Nopchinda, D.*, +, *TMTT Jan. 2020 222-235*
- Ultrabroadband Diplexers for Next-Generation High-Frequency Measurement Applications. *Boes, F.*, +, *TMTT June 2020 2161-2167*
- Frequency modulation**
- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*
- A Statistical Evaluation of Detection Response of an Electric Field Probe Loaded With Nonlinear Diodes for Modulated Signals. *Wu, I.*, +, *TMTT Feb. 2020 655-665*

Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*

Frequency multipliers

108–316- and 220–290-GHz Ultrabroadband Distributed Frequency Doublers. *Lee, I.*, +, *TMTT March 2020 1000-1011*

220–360-GHz Broadband Frequency Multiplier Chains (x8) in 130-nm BiCMOS Technology. *Ali, A.*, +, *TMTT July 2020 2701-2715*

A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides. *Guo, C.*, +, *TMTT March 2020 1035-1044*

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor. *Chen, Z.*, +, *TMTT May 2020 1688-1696*

A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*

Design of 94-GHz Highly Efficient Frequency Octupler Using 47-GHz Current-Reusing Class-C Frequency Quadrupler. *Chung, W.*, +, *TMTT Feb. 2020 775-784*

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTT July 2020 2876-2890*

Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

Novel Baseband Equivalent Model for Digital Predistortion of Wideband Frequency-Multiplier-Based Millimeter Wave Sources. *Jaffri, I.*, +, *TMTT Sept. 2020 3942-3957*

Frequency response

Arbitrary-Order Distributed-Element Narrowband Reflectionless Bandstop Filter With Canonical Transmission Response and Broadband Matching. *Lee, J.*, +, *TMTT Oct. 2020 4381-4389*

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Design of Waveguide Filters With Cascaded Singlets Through a Synthesis-Based Approach. *Macchiarella, G.*, +, *TMTT June 2020 2308-2319*

Determination of Characteristic Impedance of Planar Transmission Lines on Lossy/Dispersive Substrates by Using Series Resistor With Frequency-Dependent Inductance. *Huang, C.*, *TMTT Oct. 2020 4229-4235*

Exploiting Port Responses for Wideband Analysis of Multimode Lossless Devices. *Codecasa, L.*, +, *TMTT Feb. 2020 555-563*

Proposal and Design of a Power Divider With Wideband Power Division and Port-to-Port Isolation: A New Topology. *Liu, Y.*, +, *TMTT April 2020 1431-1438*

Single-Layer Mode Composite Coplanar Waveguide Dual-Band Filter With Large Frequency Ratio. *Su, Y.*, +, *TMTT June 2020 2320-2330*

Frequency selective surfaces

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

Frequency synthesizers

A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020 2768-2778*

Reduction of Phase Noise in Fractional-N Frequency Synthesizer Using Self-Injection Locking Loop. *Peng, K.*, +, *TMTT Sept. 2020 3724-3731*

Frequency-domain analysis

A Combined Broadband Model for GaN HEMTs in Admittance Domain Based on Canonical Piecewise Linear Functions. *Cai, J.*, +, *TMTT Dec. 2020 5042-5054*

Generalized PEEC Model for Conductor–Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTT Jan. 2020 27-38*

Rapid Modeling and Simulation of Integrated Circuit Layout in Both Frequency and Time Domains From the Perspective of Inverse. *Xue, L.*, +, *TMTT April 2020 1270-1283*

Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator. *Sal-ski, B.*, +, *TMTT Dec. 2020 5093-5102*

Uncertainty in Large-Signal Measurements Under Variable Load Conditions. *Lukasik, K.*, +, *TMTT Aug. 2020 3532-3546*

Frequency-domain synthesis

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Fuzzy logic

Empowering the Bandwidth of Continuous-Mode Symmetrical Doherty Amplifiers by Leveraging on Fuzzy Logic Techniques. *Naah, G.*, +, *TMTT July 2020 3134-3147*

G

Gain control

A 68.5–90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS. *Park, G.H.*, +, *TMTT Dec. 2020 5395-5407*

A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*

Gallium arsenide

A Compact Ku-Band Broadband GaAs Power Amplifier Using an Improved Darlington Power Stage. *Cai, Q.*, +, *TMTT July 2020 3068-3078*

A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*

A Review of Technologies and Design Techniques of Millimeter-Wave Power Amplifiers. *Camarchia, V.*, +, *TMTT July 2020 2957-2983*

A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*

An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier. *Martin, D.N.*, +, *TMTT July 2020 3028-3038*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z.*, +, *TMTT April 2020 1376-1389*

Nondestructive, Self-Contained Extraction Method of Parasitic Resistances in HEMT Devices. *Colangeli, S.*, +, *TMTT July 2020 2571-2578*

Gallium compounds

A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique. *Lin, Q.*, +, *TMTT July 2020 3148-3158*

A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*

A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*

A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. *Tome, P.M.*, +, *TMTT Sept. 2020 3709-3723*

A Review of Technologies and Design Techniques of Millimeter-Wave Power Amplifiers. *Camarchia, V.*, +, *TMTT July 2020 2957-2983*

Accurate and Process-Tolerant Resistive Load. *Sutbas, B.*, +, *TMTT July 2020 2495-2500*

Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. *Peng, J.*, +, *TMTT Jan. 2020 121-131*

- Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*
- ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. *Du, X.*, +, *TMTT July 2020 3090-3099*
- Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*
- Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*
- Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*
- Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*
- Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*
- Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*
- Integrated Tunable Magnetolectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*
- Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. *Dhar, S.K.*, +, *TMTT Oct. 2020 4216-4228*
- Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*
- Pseudo-Doherty Load-Modulated Balanced Amplifier With Wide Bandwidth and Extended Power Back-Off Range. *Cao, Y.*, +, *TMTT July 2020 3172-3183*
- Space Mapping Technique Using Decomposed Mappings for GaN HEMT Modeling. *Zhao, Z.*, +, *TMTT Aug. 2020 3318-3341*
- Gallium nitride**
- An SIW-Based GaN Power Amplifier Module in LTCC. *Rave, C.*, +, *TMTT Dec. 2020 5328-5334*
- Gas-discharge tubes**
- Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*
- Gaussian distribution**
- A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics. *Neumann, K.*, +, *TMTT June 2020 2151-2160*
- An Improved Surface-Potential-Based Model for MOSFETs Considering the Carrier Gaussian Distribution. *Wu, Y.*, +, *TMTT Oct. 2020 4082-4090*
- Ge-Si alloys**
- 2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A.*, +, *TMTT Sept. 2020 3872-3884*
- 220–360-GHz Broadband Frequency Multiplier Chains (x8) in 130-nm BiCMOS Technology. *Ali, A.*, +, *TMTT July 2020 2701-2715*
- A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*
- A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*
- A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A.*, +, *TMTT July 2020 3197-3205*
- A 37–42-GHz 8×8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y.*, +, *TMTT Nov. 2020 4753-4764*
- A 38-GHz Millimeter-Wave Double-Stacked HBT Class-F⁻¹ High-Gain Power Amplifier in 130-nm SiGe-BiCMOS. *Ali, S.M.A.*, +, *TMTT July 2020 3039-3044*
- A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Boroujeni, S.R.*, +, *TMTT July 2020 3159-3171*
- A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020 2124-2133*
- A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*
- A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*
- A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*
- A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs. *Turkmen, E.*, +, *TMTT Jan. 2020 211-221*
- A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*
- Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*
- Modeling and Analysis of a Broadband Schottky Diode Noise Source Up To 325 GHz Based on 55-nm SiGe BiCMOS Technology. *Ghanem, H.*, +, *TMTT June 2020 2268-2277*
- Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020 2845-2855*
- Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*
- Generators**
- Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices. *Song, S.*, +, *TMTT Dec. 2020 5423-5431*
- Geometry**
- Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*
- Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*
- Germanium compounds**
- Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*
- RF Power-Handling Performance for Direct Actuation of Germanium Telluride Switches. *Leon, A.*, +, *TMTT Jan. 2020 60-73*
- Glass**
- Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias. *Watanabe, A.O.*, +, *TMTT Dec. 2020 5082-5092*
- Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure. *Kim, Y.*, +, *TMTT Dec. 2020 5055-5064*
- Glass fiber reinforced plastics**
- Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*
- Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlof, S.*, +, *TMTT Nov. 2020 4611-4619*
- Gradient methods**
- Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*
- Parallel Gradient-Based EM Optimization for Microwave Components Using Adjoint- Sensitivity-Based Neuro-Transfer Function Surrogate. *Feng, F.*, +, *TMTT Sept. 2020 3606-3620*
- Graphene**
- A Tunable Attenuator Based on a Graphene-Loaded Coupled Microstrip Line. *Zhang, A.*, +, *TMTT March 2020 939-950*

- A Tunable Graphene Filtering Attenuator Based on Effective Spoof Surface Plasmon Polariton Waveguide. *Yi, Y.*, +, *TMTT Dec. 2020 5169-5177*
- Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*
- Dynamically Tunable Filtering Attenuator Based on Graphene Integrated Microstrip Resonators. *Wu, B.*, +, *TMTT Dec. 2020 5270-5278*
- High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors. *Deng, M.*, +, *TMTT June 2020 2116-2123*
- Multiphysics Modeling and Simulation of 3-D Cu-Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*
- Voltage-Controlled and Input-Matched Tunable Microstrip Attenuators Based on Few-Layer Graphene. *Yasir, M.*, +, *TMTT Feb. 2020 701-710*

Graphene devices

- Graphene-Based Frequency-Conversion Mixers for High-Frequency Applications. *Hamed, A.*, +, *TMTT June 2020 2090-2096*
- High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors. *Deng, M.*, +, *TMTT June 2020 2116-2123*

Green's function methods

- A Surface Integral Equation Formulation for Efficient Simulation of Finite-Sized Multilayered Parallel-Plate Structure. *Ren, Y.*, +, *TMTT July 2020 2475-2484*
- Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*
- Broadband Vector Potential Dyadic Green's Function and Normal Modes in 3-D Cavity of Irregular Shape. *Sanamzadeh, M.*, +, *TMTT Aug. 2020 3210-3218*
- Efficient Numerical Computation of Full-Wave Partial Elements Modeling Magnetic Materials in the PEEC Method. *Lombardi, L.*, +, *TMTT March 2020 915-925*
- Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*

Gyrotrons

- Analysis of the Synthesis Method for Broadband Oversized TE₀₁-to-TE₁₁ Mode Converter. *Liao, X.*, +, *TMTT Feb. 2020 620-627*
- Corrections to "Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube". *Wang, W.*, +, *TMTT Nov. 2020 4641*
- Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube. *Wang, W.*, +, *TMTT Nov. 2020 4554-4559*
- Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend. *Pu, Y.*, +, *TMTT April 2020 1284-1292*

H

HI regions

- Materials Characterization With Multiple Offset Reflects at Frequencies to 110 GHz. *Popovic, N.B.*, +, *TMTT Jan. 2020 184-195*

Harmonics suppression

- A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*
- A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters. *Chen, L.*, +, *TMTT July 2020 2796-2807*

Health care

- Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*

Heat conduction

- Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Heat pipes

- An SIW-Based GaN Power Amplifier Module in LTCC. *Rave, C.*, +, *TMTT Dec. 2020 5328-5334*

Heat transfer

- Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y.*, +, *TMTT Nov. 2020 4896-4904*

Heating systems

- Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices. *Song, S.*, +, *TMTT Dec. 2020 5423-5431*

Hemodynamics

- Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

HEMT circuits

- A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. *Tome, P.M.*, +, *TMTT Sept. 2020 3709-3723*
- Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*

HEMT integrated circuits

- A Compact Ku-Band Broadband GaAs Power Amplifier Using an Improved Darlington Power Stage. *Cai, Q.*, +, *TMTT July 2020 3068-3078*
- A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*
- An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Hessian matrices

- Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*

Heterodyne detection

- Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*

Heterojunction bipolar transistors

- A 38-GHz Millimeter-Wave Double-Stacked HBT Class-F⁻¹ High-Gain Power Amplifier in 130-nm SiGe-BiCMOS. *Ali, S.M.A.*, +, *TMTT July 2020 3039-3044*
- A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*
- A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*
- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*
- Corrections to "A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology". *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3783*
- Hardware and Software Solutions for Active Frequency Scalable (Sub) mm-Wave Load-Pull. *De Martino, C.*, +, *TMTT Sept. 2020 3769-3775*
- Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*

High electron mobility transistors

- A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*
- ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. *Du, X.*, +, *TMTT July 2020 3090-3099*
- Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*
- Nondestructive, Self-Contained Extraction Method of Parasitic Resistances in HEMT Devices. *Colangeli, S.*, +, *TMTT July 2020 2571-2578*
- Space Mapping Technique Using Decomposed Mappings for GaN HEMT Modeling. *Zhao, Z.*, +, *TMTT Aug. 2020 3318-3341*

High-frequency discharges

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*

High-pass filters

A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*

A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*

Ultrabroadband Diplexers for Next-Generation High-Frequency Measurement Applications. *Boes, F.*, +, *TMTT June 2020 2161-2167*

High-speed optical techniques

Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

Hilbert transforms

A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters. *Chen, L.*, +, *TMTT July 2020 2796-2807*

Hollow waveguides

Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A.*, +, *TMTT Dec. 2020 5132-5144*

Holography

Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*

Horn antennas

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X.*, +, *TMTT Aug. 2020 3271-3277*

I**Image filtering**

Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R.*, +, *TMTT Jan. 2020 387-397*

Spatially Variant Apodization for Grating and Sidelobe Suppression in Near-Range MIMO Array Imaging. *Zhu, R.*, +, *TMTT Nov. 2020 4662-4671*

Image motion analysis

3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

Image reconstruction

A Multiresolution Contraction Integral Equation Method for Solving Highly Nonlinear Inverse Scattering Problems. *Zhong, Y.*, +, *TMTT April 2020 1234-1247*

An Inhomogeneous Background Imaging Method Based on Generative Adversarial Network. *Ye, X.*, +, *TMTT Nov. 2020 4684-4693*

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020 1954-1963*

Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*

Experimental Demonstration and Calibration of a 16-Element Active Incoherent Millimeter-Wave Imaging Array. *Vakalis, S.*, +, *TMTT Sept. 2020 3804-3813*

General Theory of Holographic Inversion With Linear Frequency Modulation Radar and its Application to Whole-Body Security Scanning. *Meng, Y.*, +, *TMTT Nov. 2020 4694-4705*

Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R.*, +, *TMTT Jan. 2020 387-397*

Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*

Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR. *Wang, Z.*, +, *TMTT March 2020 1185-1194*

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Nondestructive Testing of Nonmetallic Pipes Using Wideband Microwave Measurements. *Amineh, R.K.*, +, *TMTT May 2020 1763-1772*

Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Image resolution

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020 1954-1963*

Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR. *Wang, Z.*, +, *TMTT March 2020 1185-1194*

Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Image sampling

Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Impedance

A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS. *Park, G.H.*, +, *TMTT Dec. 2020 5395-5407*

A Novel Design of Compact Out-of-Phase Power Divider With Arbitrary Ratio. *Xia, B.*, +, *TMTT Dec. 2020 5235-5243*

Authors' Reply. *Erdirin, I.*, +, *TMTT Feb. 2020 826*

Balanced Diplexer Based on Substrate Integrated Waveguide Dual-Mode Resonator. *Song, K.*, +, *TMTT Dec. 2020 5279-5287*

Comments on “Decoupling Capacitor Placement on Resonant Parallel-Plates Via Driving Point Impedance” [Jun 19 2162-2171]. *Park, M.*, *TMTT Feb. 2020 824-825*

Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis. *Nallandhigal, S.N.*, +, *TMTT Dec. 2020 5244-5258*

Substrate Integrated Suspended Slot Line and Its Application to Differential Coupler. *Wang, Y.*, +, *TMTT Dec. 2020 5178-5189*

Impedance converters

A Class E/F_{odd} Power Oscillator Incorporating a Distributed Active Transformer. *Apperley, T.*, +, *TMTT June 2020 2409-2418*

A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push–Pull Power Amplifier. *Maktoomi, M.H.*, +, *TMTT Nov. 2020 4560-4569*

Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*

Impedance matching

A Decoupling and Matching Network Design for Single- and Dual-Band Two-Element Antenna Arrays. *Xu, K.*, +, *TMTT Sept. 2020 3986-3999*

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

A Direct Solving Approach for High-Order Power Amplifier Matching Network Design. *Dai, Z.*, +, *TMTT Aug. 2020 3278-3286*

A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*

A Novel Miniature Dual-Band Impedance Matching Network for Frequency-Dependent Complex Impedances. *Lin, Y.*, +, *TMTT Oct. 2020 4314-4326*

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Arbitrary-Order Distributed-Element Narrowband Reflectionless Bandstop Filter With Canonical Transmission Response and Broadband Matching. *Lee, J.*, +, *TMTT Oct. 2020 4381-4389*

- BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique. *Xu, J.*, +, *TMTT April 2020 1452-1461*
- Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*
- Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A.*, +, *TMTT Oct. 2020 4188-4205*
- Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*
- Multi-port Active Load Pulling for mm-Wave 5G Power Amplifiers: Bandwidth, Back-Off Efficiency, and VSWR Tolerance. *Chappidi, C.R.*, +, *TMTT July 2020 2998-3016*
- Novel Switchable Filtering Circuit With Function Reconfigurability Between SPQT Filtering Switch and Four-Way Filtering Power Divider. *Li, H.*, +, *TMTT March 2020 867-876*
- Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*
- RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*
- RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*
- Rigorous Design Method for Symmetric Reflectionless Filters With Arbitrary Prescribed Transmission Response. *Lee, J.*, +, *TMTT June 2020 2300-2307*
- Single-Layer Mode Composite Coplanar Waveguide Dual-Band Filter With Large Frequency Ratio. *Su, Y.*, +, *TMTT June 2020 2320-2330*
- The Transition Between Reactive and Radiative Regimes for Leaky Modes in Planar Waveguides Based on Homogenized Partially Reflecting Surfaces. *Fuscaldò, W.*, +, *TMTT Dec. 2020 5259-5269*
- Impedance matrix**
- Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*
- Indium compounds**
- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*
- Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*
- Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlof, S.*, +, *TMTT Nov. 2020 4611-4619*
- Indoor radio**
- 3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*
- Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W.*, +, *TMTT Feb. 2020 636-647*
- Inductive power transmission**
- A Line-Array Technique for Wireless Power Transfer Toward a $100 \mu\text{m} \times 100 \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTT Jan. 2020 353-364*
- Digital Transmitter Coil for Wireless Power Transfer Robust Against Variation of Distance and Lateral Misalignment. *Qiu, H.*, +, *TMTT Sept. 2020 4031-4039*
- Efficient Rectifier for Wireless Power Transmission Systems. *Rotenberg, S.A.*, +, *TMTT May 2020 1921-1932*
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Improvement in Power Transmission Efficiency for Cavity Resonance-Enabled Wireless Power Transfer by Utilizing Probes With Variable Reactance. *Nimura, S.*, +, *TMTT July 2020 2734-2744*
- Load-Independent Operative Regime for an Inductive Resonant WPT Link in Parallel Configuration. *Monti, G.*, +, *TMTT May 2020 1809-1818*
- On the Design of Planar Arrays of Nonresonant Coils for Tunable Wireless Power Transfer Applications. *Brizi, D.*, +, *TMTT Sept. 2020 3814-3822*
- Optimum Temperatures for Enhanced Power Conversion Efficiency (PCE) of Zero-Bias Diode-Based Rectifiers. *Gu, X.*, +, *TMTT Sept. 2020 4040-4053*
- Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*
- Separated Circular Capacitive Coupler for Reducing Cross-Coupling Capacitance in Drone Wireless Power Transfer System. *Park, C.*, +, *TMTT Sept. 2020 3978-3985*
- Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*
- Inductors**
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- Integrated Tunable Magnetolectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*
- Infrared imaging**
- Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y.*, +, *TMTT Nov. 2020 4896-4904*
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- A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*
- A Multiport Chip-Scale Dielectric Resonator Antenna for CMOS THz Transmitters. *Buadana, N.*, +, *TMTT Sept. 2020 3621-3632*
- Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*
- Reduction of Phase Noise in Fractional- N Frequency Synthesizer Using Self-Injection Locking Loop. *Peng, K.*, +, *TMTT Sept. 2020 3724-3731*
- Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*
- Ink jet printing**
- In Situ* Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*
- A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing. *Craton, M.T.*, +, *TMTT Aug. 2020 3418-3427*
- Additively Manufactured mm-Wave Multichip Modules With Fully Printed "Smart" Encapsulation Structures. *He, X.*, +, *TMTT July 2020 2716-2724*
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- A Surface Integral Equation Formulation for Efficient Simulation of Finite-Sized Multilayered Parallel-Plate Structure. *Ren, Y.*, +, *TMTT July 2020 2475-2484*
- Accuracy Controlled Structure-Preserving \mathcal{H}^2 -Matrix-Matrix Product in Linear Complexity With Change of Cluster Bases. *Ma, M.*, +, *TMTT Feb. 2020 441-455*
- Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*

VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxalized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*

Integrated circuit design

108–316- and 220–290-GHz Ultrabroadband Distributed Frequency Doublers. *Lee, I.*, +, *TMTT March 2020 1000-1011*

A –197.3-dBc/Hz FoM_T Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI. *Fang, M.*, +, *TMTT Oct. 2020 4116-4121*

A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor. *Chen, Z.*, +, *TMTT May 2020 1688-1696*

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended Marchand-Balun Power Combiner. *Martelius, M.*, +, *TMTT March 2020 1022-1034*

A Compact Ku-Band Broadband GaAs Power Amplifier Using an Improved Darlington Power Stage. *Cai, Q.*, +, *TMTT July 2020 3068-3078*

A Dual-Mode Nested Rectifier for Ambient Wireless Powering in CMOS Technology. *Almansouri, A.S.*, +, *TMTT May 2020 1754-1762*

A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*

A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*

A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits. *Cilici, F.*, +, *TMTT Aug. 2020 3565-3579*

A Novel Circuit Architecture of Bidirectional Common-Mode Noise Absorption Circuit. *Li, P.*, +, *TMTT April 2020 1476-1486*

A Series-Connected-Load Doherty Power Amplifier With Push–Pull Main and Auxiliary Amplifiers for Base Station Applications. *Jundi, A.*, +, *TMTT Feb. 2020 796-807*

A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs. *Turkmen, E.*, +, *TMTT Jan. 2020 211-221*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*

Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*

Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*

Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI. *El-Aassar, O.*, +, *TMTT Oct. 2020 4445-4454*

Integrated Tunable Magnetolectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*

Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*

Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*

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Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*

Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias. *Watanabe, A.O.*, +, *TMTT Dec. 2020 5082-5092*

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Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*

Integrated circuit modeling

A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-/PI-Based CDR. *Xia, Y.*, +, *TMTT Dec. 2020 5432-5442*

A Combined Broadband Model for GaN HEMTs in Admittance Domain Based on Canonical Piecewise Linear Functions. *Cai, J.*, +, *TMTT Dec. 2020 5042-5054*

Design of mm-Wave Slow-Wave-Coupled Coplanar Waveguides. *Margalef-Rovira, M.*, +, *TMTT Dec. 2020 5014-5028*

Half-Air-Filled Ball-Grid-Array-Based Substrate-Integrated Groove-Gap Waveguide and its Transition to Microstrip at W-Band. *Shi, Y.*, +, *TMTT Dec. 2020 5145-5153*

Lookup-Table-Based Automated Rectifier Synthesis. *Gao, S.*, +, *TMTT Dec. 2020 5200-5210*

Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis. *Nallandhigal, S.N.*, +, *TMTT Dec. 2020 5244-5258*

Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*

Rapid Modeling and Simulation of Integrated Circuit Layout in Both Frequency and Time Domains From the Perspective of Inverse. *Xue, L.*, +, *TMTT April 2020 1270-1283*

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Integrated circuit packaging

A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*

Additively Manufactured mm-Wave Multichip Modules With Fully Printed “Smart” Encapsulation Structures. *He, X.*, +, *TMTT July 2020 2716-2724*

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Integrated circuit synthesis

Comments on “Analytical Formulas for the Coverage of Tunable Matching Networks for Reconfigurable Applications”. *Wu, J.*, +, *TMTT Feb. 2020 827*

Integrated circuit testing

A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits. *Cilici, F.*, +, *TMTT Aug. 2020 3565-3579*

Accurate and Process-Tolerant Resistive Load. *Sutbas, B.*, +, *TMTT July 2020 2495-2500*

Integrated circuits

Guest Editorial. *Eliezer, O.*, *TMTT June 2020 1981-1982*

Integrated optics

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S.*, +, *TMTT Nov. 2020 4611-4619*

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Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S.*, +, *TMTT Nov. 2020 4611-4619*

Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

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Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

Interference filters

Lossy Signal-Interference Filters and Applications. *Gomez-Garcia, R.*, +, *TMTT Feb. 2020 516-529*

Interference suppression

A 0.096-mm² 1 –20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*

A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTT June 2020 1995-2010*

A Six-Phase Two-Stage Blocker-Tolerant Harmonic-Rejection Receiver. *Ul Haq, F.*, +, *TMTT May 2020 1964-1976*

A Survey of Self-Interference in LTE-Advanced and 5G New Radio Wireless Transceivers. *Sadjina, S.*, +, *TMTT March 2020 1118-1131*

Four-Element Wide Modulated Bandwidth MIMO Receiver With >35-dB Interference Cancellation. *Ghaderi, E.*, +, *TMTT Sept. 2020 3930-3941*

Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method. *Miura, T.*, +, *TMTT May 2020 1773-1782*

Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R.*, +, *TMTT Jan. 2020 387-397*

Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

Intermediate-frequency amplifiers

A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*

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Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

Intermodulation distortion

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{ dB}}/IP3/RR3$ Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C.*, +, *TMTT July 2020 2779-2795*

A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*

Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*

Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*

Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020 1304-1311*

Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N.*, +, *TMTT June 2020 2030-2040*

Internet of Things

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*

Interpolation

1–3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*

Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*

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A Multiresolution Contraction Integral Equation Method for Solving Highly Nonlinear Inverse Scattering Problems. *Zhong, Y.*, +, *TMTT April 2020 1234-1247*

A Phaseless Inverse Source Method (PISM) Based on Near-Field Scanning for Radiation Diagnosis and Prediction of PCBs. *Wang, L.*, +, *TMTT Oct. 2020 4151-4160*

An Inhomogeneous Background Imaging Method Based on Generative Adversarial Network. *Ye, X.*, +, *TMTT Nov. 2020 4684-4693*

Design Procedure of Continuous Profile Stopband Filters Implemented With Empty Substrate Integrated Coaxial Lines. *Borja, A.L.*, +, *TMTT April 2020 1520-1528*

Fast Multiparametric Electromagnetic Full-Wave Inversion via Solving Contracting Scattering Data Equations Optimized by the 3-D MRF Model. *Chen, Y.*, +, *TMTT Nov. 2020 4515-4527*

Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*

On Postprocessing Reduction of Phase Noise in FMCW Radars. *Rezaei, M.*, +, *TMTT Dec. 2020 5103-5114*

Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

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Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*

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Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

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Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S.*, +, *TMTT May 2020 1621-1626*

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Integrated Tunable Magnetoelectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*

Iterative learning control

Augmented Iterative Learning Control for Neural-Network-Based Joint Crest Factor Reduction and Digital Predistortion of Power Amplifiers. *Wang, S.*, +, *TMTT Nov. 2020 4835-4845*

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A Multiresolution Contraction Integral Equation Method for Solving Highly Nonlinear Inverse Scattering Problems. *Zhong, Y.*, +, *TMTT April 2020 1234-1247*

A Novel High-Efficiency Segmented Design Method for High-Power Serpentine Shaped Mode Converter. *Cui, X.*, +, *TMTT Feb. 2020 628-635*

A Phaseless Inverse Source Method (PISM) Based on Near-Field Scanning for Radiation Diagnosis and Prediction of PCBs. *Wang, L.*, +, *TMTT Oct. 2020 4151-4160*

A Position-Independent Approach to Accurate Measurement of Broadband Electromagnetic Constitutive Parameters of Magnetodielectric Materials. *Li, Q.*, +, *TMTT Nov. 2020 4940-4950*

Analysis of the Synthesis Method for Broadband Oversized TE₀₁-to-TE₁₁ Mode Converter. *Liao, X.*, +, *TMTT Feb. 2020 620-627*

Authors' Reply. *Erdirin, I.*, +, *TMTT Feb. 2020 826*

Comments on "Decoupling Capacitor Placement on Resonant Parallel-Plates Via Driving Point Impedance" [Jun 19 2162-2171]. *Park, M.*, *TMTT Feb. 2020 824-825*

- Direct Synthesis and Design of Dispersive Waveguide Bandpass Filters. *Zhang, Y.*, +, *TMTT May 2020 1678-1687*
- EM-Centric Multiphysics Optimization of Microwave Components Using Parallel Computational Approach. *Zhang, W.*, +, *TMTT Feb. 2020 479-489*
- Fast Multiparametric Electromagnetic Full-Wave Inversion via Solving Contracting Scattering Data Equations Optimized by the 3-D MRF Model. *Chen, Y.*, +, *TMTT Nov. 2020 4515-4527*
- Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*
- Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm. *Wang, F.*, +, *TMTT May 2020 1908-1920*
- Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*
- Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. *Becerra, J.A.*, +, *TMTT Nov. 2020 4570-4578*
- TO-FDTD Method for Arbitrary Skewed Periodic Structures at Oblique Incidence. *Liu, Y.*, +, *TMTT Feb. 2020 564-572*

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- Comments on "Decoupling Capacitor Placement on Resonant Parallel-Plates Via Driving Point Impedance" [Jun 19 2162-2171]. *Park, M.*, *TMTT Feb. 2020 824-825*

Jacobian methods

- Authors' Reply. *Erdin, I.*, +, *TMTT Feb. 2020 826*

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- A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

Junctions

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- Multimode Equivalent Networks for Shielded Microwave Circuits With Thick Metallizations. *Molina, C.G.*, +, *TMTT Dec. 2020 5004-5013*

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Karhunen-Loeve transforms

- Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. *Gossye, M.*, +, *TMTT July 2020 2485-2494*

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- Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

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- Stochastic EMI Noise Model of PCB Layout for Circuit-Level Analysis of System in IoT Applications. *Mehri, M.*, +, *TMTT Dec. 2020 5072-5081*

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- A Three-Dimensional Design of Ultra-Wideband Microwave Absorbers. *Luo, G.Q.*, +, *TMTT Oct. 2020 4206-4215*
- Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*

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Sampling Rate Reduction for Digital Predistortion of Broadband RF Power Amplifiers. *Li, Y.*, +, *TMTT March 2020* 1054-1064

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A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020* 144-159

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Low-power electronics

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- A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*
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- A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*
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Erratum to “On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment”. *Wang, Z.*, +, *TMTT June 2020 2469*

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High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X., +, TMTT June 2020 2080-2089*

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Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nallandhigal, S.N., +, TMTT Oct. 2020 4405-4423*

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Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L., +, TMTT Nov. 2020 4846-4854*

Mesh-Network Equivalent Model for Unified Rectangular Microstrip Antenna Analysis. *Nallandhigal, S.N., +, TMTT Dec. 2020 5244-5258*

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Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits. *Gomez Molina, C., +, TMTT July 2020 2501-2514*

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Compact Single- and Dual-Band Filtering 180° Hybrid Couplers on Circular Patch Resonator. *Zhang, G., +, TMTT Sept. 2020 3675-3685*

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Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E., +, TMTT Sept. 2020 3756-3768*

High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X., +, TMTT April 2020 1462-1475*

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Novel Tunable Isolation Network Used in Ring-Type Single-to-Balanced, Power-Dividing, and Single-Ended Filter With Arbitrary Power-Division Ratios. *Zhu, X., +, TMTT Feb. 2020 666-680*

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A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C., +, TMTT May 2020 1933-1942*

A Tunable Attenuator Based on a Graphene-Loaded Coupled Microstrip Line. *Zhang, A., +, TMTT March 2020 939-950*

A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push-Pull Power Amplifier. *Maktoomi, M.H., +, TMTT Nov. 2020 4560-4569*

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z., +, TMTT April 2020 1376-1389*

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Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter. *Deng, J., +, TMTT July 2020 2625-2632*

Dual-Mode Filtering Baluns Based on Hybrid Cavity-Microstrip Structures. *Fang, X., +, TMTT May 2020 1637-1645*

Enhancing the Sensitivity of Dielectric Sensors With Multiple Coupled Complementary Split-Ring Resonators. *Albishi, A.M., +, TMTT Oct. 2020 4340-4347*

High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X., +, TMTT April 2020 1462-1475*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X., +, TMTT June 2020 2080-2089*

Multilayered Reflectionless Wideband Bandpass Filters With Shunt/In-Series Resistively Terminated Microstrip Lines. *Yang, L., +, TMTT March 2020 877-893*

Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance. *Teran-Bahena, E.Y., +, TMTT June 2020 2428-2434*

Proposal and Design of a Power Divider With Wideband Power Division and Port-to-Port Isolation: A New Topology. *Liu, Y., +, TMTT April 2020 1431-1438*

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Compact Single- and Dual-Band Filtering 180° Hybrid Couplers on Circular Patch Resonator. *Zhang, G., +, TMTT Sept. 2020 3675-3685*

Coupling Coefficients Between Resonators in Stripline Combline and Pseudocombine Bandpass Filters. *Zakharov, A.*, +, *TMTT July 2020 2679-2690*

Dielectric Anisotropy Sensor Using Coupled Resonators. *Morales-Lovera, H.*, +, *TMTT April 2020 1610-1616*

Dynamically Tunable Filtering Attenuator Based on Graphene Integrated Microstrip Resonators. *Wu, B.*, +, *TMTT Dec. 2020 5270-5278*

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Single-Ended-to-Balanced Power Divider With Extended Common-Mode Suppression and Its Application to Differential 2×4 Butler Matrices. *Zhu, H.*, +, *TMTT April 2020 1510-1519*

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A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer. *Yang, B.*, +, *TMTT Nov. 2020 4951-4959*

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Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*

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High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020 2856-2866*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

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Erratum to "On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment". *Wang, Z.*, +, *TMTT June 2020 2469*

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A New Modeling Technique for Microwave Multicell Transistors Based on EM Simulations. *Raffo, A.*, +, *TMTT July 2020 3100-3110*

High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors. *Deng, M.*, +, *TMTT June 2020 2116-2123*

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Ku-Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

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A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*

A Six-Phase Two-Stage Blocker-Tolerant Harmonic-Rejection Receiver. *Ul Haq, F.*, +, *TMTT May 2020 1964-1976*

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. *Miek, D.*, +, *TMTT June 2020 2097-2107*

Compact Mechanically Tunable Microstrip Bandstop Filter With Constant Absolute Bandwidth Using an Embedded Metamaterial-Based EBG. *Brown, J.A.*, +, *TMTT Oct. 2020 4369-4380*

Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

Design and Optimization of Bidirectional Tunable MEMS All-Silicon Evanescent-Mode Cavity Filter. *Yang, Z.*, +, *TMTT June 2020 2398-2408*

Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators. *San-Blas, A.A.*, +, *TMTT Oct. 2020 4390-4404*

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Dual-Band Coaxial Filter and Diplexer Using Stub-Loaded Resonators. *Xie, Y.*, +, *TMTT July 2020 2691-2700*

EM-Centric Multiphysics Optimization of Microwave Components Using Parallel Computational Approach. *Zhang, W.*, +, *TMTT Feb. 2020 479-489*

Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E.*, +, *TMTT Sept. 2020 3756-3768*

Improvement of Passband Flatness for a Compact, Narrowband, and Highly Selective TM Dual-Mode Filter. *Eskandari, A.R.*, +, *TMTT April 2020 1591-1597*

Multifeature-Assisted Neuro-transfer Function Surrogate-Based EM Optimization Exploiting Trust-Region Algorithms for Microwave Filter Design. *Feng, F.*, +, *TMTT Feb. 2020 531-542*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiorder Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X.*, +, *TMTT April 2020 1496-1509*

Proposal of Coplanar Stripline Series Stub Structure for Wideband Bandpass Filters. *Ouyang, Z.*, +, *TMTT Aug. 2020 3397-3407*

Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*

Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators. *Xu, J.*, +, *TMTT Feb. 2020 741-749*

Substrate Integrated Waveguide Filter-Amplifier Design Using Active Coupling Matrix Technique. *Gao, Y.*, +, *TMTT May 2020 1706-1716*

Supercompact and Ultrawideband Surface Plasmonic Bandpass Filter. *Wang, M.*, +, *TMTT Feb. 2020 732-740*

Surface Acoustic Wave Devices Using Lithium Niobate on Silicon Carbide. *Zhang, S.*, +, *TMTT Sept. 2020 3653-3666*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth. *Li, Z.*, +, *TMTT Feb. 2020 721-731*

Vector-Sum Phase Shifter Using a Tunable Active g_m -C Polyphase Filter. *Hirai, A.*, +, *TMTT Oct. 2020 4091-4102*

Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*

Microwave generation

1–3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*

Microwave heating

Design of Microwave Directional Heating System Based on Phased-Array Antenna. *Yang, Y.*, +, *TMTT Nov. 2020 4896-4904*

Kilowatt-Level Power-Controlled Microwave Applicator With Multiple Slotted Waveguides for Improving Heating Uniformity. *Ahn, S.*, +, *TMTT July 2020 2867-2875*

Microwave holography

Nondestructive Testing of Nonmetallic Pipes Using Wideband Microwave Measurements. *Amineh, R.K.*, +, *TMTT May 2020 1763-1772*

Microwave imaging

A Multiresolution Contraction Integral Equation Method for Solving Highly Nonlinear Inverse Scattering Problems. *Zhong, Y.*, +, *TMTT April 2020 1234-1247*

Nondestructive Testing of Nonmetallic Pipes Using Wideband Microwave Measurements. *Amineh, R.K.*, +, *TMTT May 2020 1763-1772*

Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, L.*, +, *TMTT May 2020 1882-1895*

Microwave integrated circuits

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*

Accurate and Process-Tolerant Resistive Load. *Subas, B.*, +, *TMTT July 2020 2495-2500*

Analytical Approach to Microwave Orientations Based on a Strongly Coupled Array. *Wang, H.*, +, *TMTT Sept. 2020 3898-3907*

Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*

Multimode Equivalent Networks for Shielded Microwave Circuits With Thick Metallizations. *Molina, C.G.*, +, *TMTT Dec. 2020 5004-5013*

Novel Trombone Topology for Wideband True-Time-Delay Implementation. *Ghazizadeh, M.H.*, +, *TMTT April 2020 1542-1552*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*

Microwave isolators

A High-Isolation Eight-Way Power Combiner. *Guo, L.*, +, *TMTT March 2020 854-866*

Microwave limiters

Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Microwave materials

A Three-Dimensional Design of Ultra-Wideband Microwave Absorbers. *Luo, G.Q.*, +, *TMTT Oct. 2020 4206-4215*

Microwave measurement

A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*

A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*

Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020 2808-2822*

Corrections to “Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube”. *Wang, W.*, +, *TMTT Nov. 2020 4641*

Differential-Mode to Common-Mode Conversion Detector Based on Rat-Race Hybrid Couplers: Analysis and Application to Differential Sensors and Comparators. *Munoz-Enano, J.*, +, *TMTT April 2020 1312-1325*

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Nondestructive Testing of Nonmetallic Pipes Using Wideband Microwave Measurements. *Amineh, R.K.*, +, *TMTT May 2020 1763-1772*

On the Determination of Device Noise Parameters Versus Size. *Boglione, L.*, *TMTT Oct. 2020 4169-4176*

Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W.*, +, *TMTT Feb. 2020 636-647*

Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

Tamm Resonances in the Structure 1-D Microwave Photonic Crystal/Conducting Nanometer Layer. *Skripal, A.V.*, +, *TMTT Dec. 2020 5115-5122*

Uncertainty in Large-Signal Measurements Under Variable Load Conditions. *Lukasik, K.*, +, *TMTT Aug. 2020 3532-3546*

Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020 2144-2150*

Microwave metamaterials

Analysis and Design Guidelines for Wideband CRLH SRR-loaded Coplanar Waveguide. *Elsheikh, M.A.G.*, +, *TMTT July 2020 2562-2570*

Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*

Compact Mechanically Tunable Microstrip Bandstop Filter With Constant Absolute Bandwidth Using an Embedded Metamaterial-Based EBG. *Brown, J.A.*, +, *TMTT Oct. 2020 4369-4380*

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*

The Complex Permeability of Split-Ring Resonator Arrays Measured at Microwave Frequencies. *Madsen, S.L.*, +, *TMTT Aug. 2020 3547-3557*

Microwave mixers

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTT June 2020 1995-2010*

Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*

Microwave oscillators

1–3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*

A Six-Phase Two-Stage Blocker-Tolerant Harmonic-Rejection Receiver. *Ul-Haq, F.*, +, *TMTT May 2020 1964-1976*

A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Microwave parametric devices

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. *Zhang, J.*, +, *TMTT June 2020 2215-2233*

Microwave phase shifters

Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*

Miniaturized 4 \times 4 Butler Matrix and Tunable Phase Shifter Using Ridged Half-Mode Substrate Integrated Waveguide. *Der, E.T.*, +, *TMTT Aug. 2020 3379-3388*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

Vector-Sum Phase Shifter Using a Tunable Active g_m -C Polyphase Filter. *Hirai, A.*, +, *TMTT Oct. 2020 4091-4102*

Microwave photonics

Design of a Ku/Ka-Band Oversized Waveguide Bend for High-Power Transmission Line. *Liao, X.*, +, *TMTT April 2020 1355-1364*

Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K.*, +, *TMTT May 2020 1851-1857*

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*

Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S.*, +, *TMTT May 2020 1621-1626*

Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E.*, +, *TMTT Sept. 2020 3756-3768*

Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M.*, +, *TMTT July 2020 2601-2609*

Linearized Photonic Microwave and mm-Wave Mixer With Dispersion-Induced Power Fading Compensation. *Zhai, W.*, +, *TMTT Dec. 2020 5335-5346*

Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T.*, +, *TMTT Dec. 2020 5317-5327*

Tamm Resonances in the Structure 1-D Microwave Photonic Crystal/Conducting Nanometer Layer. *Skripal, A.V.*, +, *TMTT Dec. 2020 5115-5122*

Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend. *Pu, Y.*, +, *TMTT April 2020 1284-1292*

Microwave power amplifiers

- A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*
- A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5 dBm Peak Output Power and Over 4.5-THz GBW. *El-Aassar, O.*, +, *TMTT July 2020 3111-3119*
- A Direct Solving Approach for High-Order Power Amplifier Matching Network Design. *Dai, Z.*, +, *TMTT Aug. 2020 3278-3286*
- A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*
- A High-Isolation Eight-Way Power Combiner. *Guo, L.*, +, *TMTT March 2020 854-866*
- Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*
- Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*
- Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*
- Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*
- Linear-Decomposition Digital Predistortion of Power Amplifiers for 5G Ultrabroadband Applications. *Yu, C.*, +, *TMTT July 2020 2833-2844*
- Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*
- Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range. *Liu, H.-Y.*, +, *TMTT March 2020 1012-1021*

Microwave power transistors

- A New Modeling Technique for Microwave Multicell Transistors Based on EM Simulations. *Raffo, A.*, +, *TMTT July 2020 3100-3110*

Microwave power transmission

- A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer. *Yang, B.*, +, *TMTT Nov. 2020 4951-4959*
- Efficient Rectifier for Wireless Power Transmission Systems. *Rotenberg, S.A.*, +, *TMTT May 2020 1921-1932*
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays. *Takabayashi, N.*, +, *TMTT March 2020 1151-1163*
- RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*

Microwave receivers

- 2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*
- A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A.*, +, *TMTT July 2020 3197-3205*
- A Six-Phase Two-Stage Blocker-Tolerant Harmonic-Rejection Receiver. *Ul Haq, F.*, +, *TMTT May 2020 1964-1976*

Microwave resonators

- A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*
- Artificially Engineered Capacitors for Discrete High-Frequency Electronic Circuitry. *Whittaker, T.W.*, +, *TMTT Jan. 2020 74-86*
- Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020 2808-2822*
- Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S.*, +, *TMTT March 2020 844-853*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020 2856-2866*

Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

Wide-Locking Range RLC-Tank Balanced-Injection Divide-by-5 Injection-Locked Frequency Dividers Based on Harmonic Mixing. *Jang, S.*, +, *TMTT March 2020 894-903*

Microwave switches

A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A.*, +, *TMTT July 2020 3197-3205*

A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTT June 2020 2057-2064*

A Compact, High-Gain, High-Power, Ultrawideband Microwave Pulse Compressor Using Time-Reversal Techniques. *Drikas, Z.B.*, +, *TMTT Aug. 2020 3355-3367*

A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M.*, +, *TMTT Nov. 2020 4775-4786*

A Hybrid RF MEMS Switch Actuated by the Combination of Bidirectional Thermal Actuators and Electrostatic Holding. *Chae, U.*, +, *TMTT Aug. 2020 3461-3470*

A New mm-Wave Multiple-Band Single-Pole Multiple-Throw Switch With Variable Transmission Lines. *Kim, Y.*, +, *TMTT July 2020 2551-2561*

Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O.*, +, *TMTT Oct. 2020 4122-4130*

Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J.*, +, *TMTT May 2020 1872-1881*

Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*

Novel Switchable Filtering Circuit With Function Reconfigurability Between SPQT Filtering Switch and Four-Way Filtering Power Divider. *Li, H.*, +, *TMTT March 2020 867-876*

Progress in Kinetic Plasma Modeling for High-Power Microwave Devices: Analysis of Multipactor Mitigation in Coaxial Cables. *Nayak, I.*, +, *TMTT Feb. 2020 501-508*

Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators. *Xu, J.*, +, *TMTT Feb. 2020 741-749*

Microwave technology

Corrections to “A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology”. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3783*

Guest Editorial. *Chen, X.*, +, *TMTT Oct. 2020 4081*

Microwave theory and techniques

Balanced Diplexer Based on Substrate Integrated Waveguide Dual-Mode Resonator. *Song, K.*, +, *TMTT Dec. 2020 5279-5287*

Microwave transistors

Uncertainty in Large-Signal Measurements Under Variable Load Conditions. *Lukasik, K.*, +, *TMTT Aug. 2020 3532-3546*

Millimeter wave amplifiers

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A 22–44-GHz Phased-Array Receive Beamformer in 45-nm CMOS SOI for 5G Applications With 3–3.6-dB NF. *Gao, L.*, +, *TMTT Nov. 2020 4765-4774*

A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A.*, +, *TMTT July 2020 3197-3205*

- A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5-dBm Peak Output Power and Over 4.5-THz GBW. *El-Aassar, O.*, +, *TMTT July 2020 3111-3119*
- A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*
- A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*
- A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*
- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*
- Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*
- Millimeter wave antenna arrays**
- 2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A.*, +, *TMTT Sept. 2020 3872-3884*
- 60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*
- A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*
- A 22–44-GHz Phased-Array Receive Beamformer in 45-nm CMOS SOI for 5G Applications With 3–3.6-dB NF. *Gao, L.*, +, *TMTT Nov. 2020 4765-4774*
- A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTT June 2020 2057-2064*
- A 37–42-GHz 8×8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y.*, +, *TMTT Nov. 2020 4753-4764*
- A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M.*, +, *TMTT Nov. 2020 4775-4786*
- A Reconfigurable Planar Fresnel Lens for Millimeter-Wave 5G Frontends. *Xi, Q.*, +, *TMTT Nov. 2020 4579-4588*
- Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*
- Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nal-landhigal, S.N.*, +, *TMTT Oct. 2020 4405-4423*
- Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*
- Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*
- Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W.*, +, *TMTT Feb. 2020 636-647*
- Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A.*, +, *TMTT Sept. 2020 4000-4017*
- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P.*, +, *TMTT Nov. 2020 4805-4813*
- Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond. *Ma, J.*, *TMTT Nov. 2020 4505*
- Millimeter wave antennas**
- 3-D-Printed Modified Butler Matrix Based on Gap Waveguide at W-Band for Monopulse Radar. *Tamayo-Dominguez, A.*, +, *TMTT March 2020 926-938*
- Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*
- Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J.*, +, *TMTT May 2020 1872-1881*
- Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X.*, +, *TMTT Aug. 2020 3271-3277*
- Millimeter wave bipolar transistors**
- Hardware and Software Solutions for Active Frequency Scalable (Sub) mm-Wave Load–Pull. *De Martino, C.*, +, *TMTT Sept. 2020 3769-3775*
- Millimeter wave circuits**
- Characterization and Production of PCB Structures With Increased Ratio of Electromagnetic Field in Air. *Sepaintner, F.*, +, *TMTT June 2020 2134-2143*
- Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A.*, +, *TMTT Oct. 2020 4188-4205*
- Substrate Integrated Waveguide Equalizers and Attenuators With Surface Resistance. *Peng, H.*, +, *TMTT April 2020 1487-1495*
- Millimeter wave communication**
- A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
- A 37–42-GHz 8×8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y.*, +, *TMTT Nov. 2020 4753-4764*
- A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Borou-jeni, S.R.*, +, *TMTT July 2020 3159-3171*
- A Reconfigurable Planar Fresnel Lens for Millimeter-Wave 5G Frontends. *Xi, Q.*, +, *TMTT Nov. 2020 4579-4588*
- Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *An, S.*, +, *TMTT Nov. 2020 4719-4727*
- Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H.*, +, *TMTT July 2020 2920-2929*
- Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*
- Multimode Equivalent Networks for Shielded Microwave Circuits With Thick Metallizations. *Molina, C.G.*, +, *TMTT Dec. 2020 5004-5013*
- Novel Baseband Equivalent Model for Digital Predistortion of Wideband Frequency-Multiplier-Based Millimeter Wave Sources. *Jaffri, I.*, +, *TMTT Sept. 2020 3942-3957*
- Precision Millimeter-Wave-Modulated Wideband Source at 92.4 GHz as a Step Toward an Over-the-Air Reference. *Manurkar, P.*, +, *TMTT July 2020 2644-2654*
- Millimeter wave couplers**
- Study of H -Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices. *Shu, G.*, +, *TMTT June 2020 2251-2258*
- Millimeter wave devices**
- A New Compact CMOS Distributed Digital Attenuator. *Park, K.*, +, *TMTT Nov. 2020 4631-4640*
- Millimeter wave field effect transistors**
- SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*
- Millimeter wave filters**
- A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
- A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities. *Wu, Y.*, +, *TMTT June 2020 2331-2342*
- Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M.*, +, *TMTT July 2020 2601-2609*
- Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*
- Ultrabroadband Diplexers for Next-Generation High-Frequency Measurement Applications. *Boes, F.*, +, *TMTT June 2020 2161-2167*
- Millimeter wave frequency converters**
- A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides. *Guo, C.*, +, *TMTT March 2020 1035-1044*
- A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B.*, +, *TMTT May 2020 1697-1705*
 Graphene-Based Frequency-Conversion Mixers for High-Frequency Applications. *Hamed, A.*, +, *TMTT June 2020 2090-2096*

Millimeter wave imaging

Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*
 Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*
 Experimental Demonstration and Calibration of a 16-Element Active Incoherent Millimeter-Wave Imaging Array. *Vakalis, S.*, +, *TMTT Sept. 2020 3804-3813*
 Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*
 Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*
 Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

Millimeter wave integrated circuits

108–316- and 220–290-GHz Ultrabroadband Distributed Frequency Doublers. *Lee, I.*, +, *TMTT March 2020 1000-1011*
 A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*
 Design of 94-GHz Highly Efficient Frequency Octupler Using 47-GHz Current-Reusing Class-C Frequency Quadrupler. *Chung, W.*, +, *TMTT Feb. 2020 775-784*
 Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*
 Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Millimeter wave measurement

Calibration on the Fly—A Novel Two-Port S-Parameter Measurement Method for On-Wafer Leaky Systems. *Wu, A.*, +, *TMTT Aug. 2020 3558-3564*
 Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*
 Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X.*, +, *TMTT Aug. 2020 3271-3277*
 Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020 2144-2150*

Millimeter wave measurements

Guest Editorial. *Camarchia, V.*, +, *TMTT July 2020 2955-2956*

Millimeter wave mixers

A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
 A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*
 Graphene-Based Frequency-Conversion Mixers for High-Frequency Applications. *Hamed, A.*, +, *TMTT June 2020 2090-2096*
 Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Millimeter wave oscillators

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*
 A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*
 A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTT July 2020 2876-2890*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Millimeter wave phase shifters

220–360-GHz Broadband Frequency Multiplier Chains (x8) in 130-nm BiCMOS Technology. *Ali, A.*, +, *TMTT July 2020 2701-2715*
 A 14–50-GHz Phase Shifter With All-Pass Networks for 5G Mobile Applications. *Anjos, E.V.P.*, +, *TMTT Feb. 2020 762-774*
 A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTT July 2020 3056-3067*
 A 22–44-GHz Phased-Array Receive Beamformer in 45-nm CMOS SOI for 5G Applications With 3–3.6-dB NF. *Gao, L.*, +, *TMTT Nov. 2020 4765-4774*
 A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTT Jan. 2020 252-263*
 A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Boroujeni, S.R.*, +, *TMTT July 2020 3159-3171*
 A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement. *Chen, L.*, +, *TMTT Nov. 2020 4620-4630*
 A High-Power 24–40-GHz Transmit–Receive Front End for Phased Arrays in 45-nm CMOS SOI. *Lokhandwala, M.*, +, *TMTT Nov. 2020 4775-4786*
 A Review of Technologies and Design Techniques of Millimeter-Wave Power Amplifiers. *Camarchia, V.*, +, *TMTT July 2020 2957-2983*
 An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z.*, +, *TMTT April 2020 1376-1389*
 Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H.*, +, *TMTT July 2020 2920-2929*
 Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*
 Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*
 Hardware and Software Solutions for Active Frequency Scalable (Sub) mm-Wave Load–Pull. *De Martino, C.*, +, *TMTT Sept. 2020 3769-3775*
 High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Submicrometer Planar and FinFET Bulk CMOS. *Daneshgar, S.*, +, *TMTT June 2020 2041-2056*
 Linear-Decomposition Digital Predistortion of Power Amplifiers for 5G Ultrabroadband Applications. *Yu, C.*, +, *TMTT July 2020 2833-2844*
 Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*
 Multi-port Active Load Pulling for mm-Wave 5G Power Amplifiers: Bandwidth, Back-Off Efficiency, and VSWR Tolerance. *Chappidi, C.R.*, +, *TMTT July 2020 2998-3016*
 Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A.*, +, *TMTT Sept. 2020 4000-4017*
 Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V.P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*
 Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Millimeter wave radar

- 3-D-Printed Modified Butler Matrix Based on Gap Waveguide at W-Band for Monopulse Radar. *Tamayo-Dominguez, A., +, TMTT March 2020 926-938*
- Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A., +, TMTT July 2020 2768-2778*
- Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X., +, TMTT July 2020 2876-2890*
- Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M., +, TMTT Nov. 2020 4652-4661*
- Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H., +, TMTT July 2020 2845-2855*
- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P., +, TMTT Nov. 2020 4805-4813*
- Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B., +, TMTT March 2020 1195-1211*

Millimeter wave receivers

- 38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{ dB}}/IP3/RR3$ Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C., +, TMTT July 2020 2779-2795*
- A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L., +, TMTT July 2020 2823-2832*
- A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A., +, TMTT July 2020 3197-3205*
- A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R., +, TMTT Sept. 2020 3794-3803*
- A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P., +, TMTT Sept. 2020 3834-3851*
- Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *An, S., +, TMTT Nov. 2020 4719-4727*

Millimeter wave resonators

- A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R., +, TMTT Sept. 2020 3794-3803*

Millimeter wave technology

- Guest Editorial. *Camarchia, V., +, TMTT July 2020 2955-2956*
- Half-Air-Filled Ball-Grid-Array-Based Substrate-Integrated Groove-Gap Waveguide and its Transition to Microstrip at W-Band. *Shi, Y., +, TMTT Dec. 2020 5145-5153*

MIM devices

- Divide-by-2 Injection-Locked Frequency Dividers Using the Electric-Field Coupling Dual-Resonance Resonator. *Jang, S., +, TMTT March 2020 844-853*

MIMIC

- A Milliwatt-Level 70–110 GHz Frequency Quadrupler With >30 dBc Harmonic Rejection. *Ku, B., +, TMTT May 2020 1697-1705*
- Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P., +, TMTT July 2020 3045-3055*

MIMO communication

- 2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A., +, TMTT Sept. 2020 3872-3884*
- A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J., +, TMTT Jan. 2020 252-263*
- A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P., +, TMTT Sept. 2020 3834-3851*
- A Reconfigurable Planar Fresnel Lens for Millimeter-Wave 5G Frontends. *Xi, Q., +, TMTT Nov. 2020 4579-4588*
- Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H., +, TMTT July 2020 2920-2929*

- Corrections to “A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology”. *Rodriguez-Vazquez, P., +, TMTT Sept. 2020 3783*
- Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X., +, TMTT Jan. 2020 316-328*
- Four-Element Wide Modulated Bandwidth MIMO Receiver With >35-dB Interference Cancellation. *Ghaderi, E., +, TMTT Sept. 2020 3930-3941*
- High-Performance Synthesizer Design for 5G and Beyond. *Ma, J., TMTT April 2020 1216*
- Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond. *Ma, J., TMTT Oct. 2020 4150*
- Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications. *Taghikhani, P., +, TMTT Nov. 2020 4740-4752*
- Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q., +, TMTT March 2020 1164-1174*
- Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q., +, TMTT Jan. 2020 301-315*
- Spatially Variant Apodization for Grating and Sidelobe Suppression in Near-Range MIMO Array Imaging. *Zhu, R., +, TMTT Nov. 2020 4662-4671*
- Ultra-Broadband Phase Shifters for 5G Mobile Applications. *Ma, J., TMTT Feb. 2020 530*
- Wideband 22–44-GHz Phased-Array Beamformers for 5G and Beyond. *Ma, J., TMTT Nov. 2020 4505*
- Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S., +, TMTT Nov. 2020 4787-4804*

MIMO radar

- 3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y., +, TMTT Nov. 2020 4642-4651*
- A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S., +, TMTT June 2020 2124-2133*
- Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A., +, TMTT July 2020 2768-2778*
- Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K., +, TMTT Sept. 2020 3885-3897*
- Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R., +, TMTT Jan. 2020 387-397*
- Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H., +, TMTT July 2020 2845-2855*
- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P., +, TMTT Nov. 2020 4805-4813*
- Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S., +, TMTT Nov. 2020 4787-4804*

Minimization

- Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O., +, TMTT Oct. 2020 4122-4130*

Mirrors

- Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A., +, TMTT Dec. 2020 5132-5144*
- Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator. *Sal-ski, B., +, TMTT Dec. 2020 5093-5102*

Mixers

- An Innovative Joint-Injection Mixer With Broadband IF and RF for Advanced Heterodyne Receivers of Millimeter-Wave Astronomy. *Wu, Y., +, TMTT Dec. 2020 5408-5422*
- Linearized Photonic Microwave and mm-Wave Mixer With Dispersion-Induced Power Fading Compensation. *Zhai, W., +, TMTT Dec. 2020 5335-5346*
- Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T., +, TMTT Dec. 2020 5317-5327*

Mixers (circuits)

38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{ dB}}$ /IP3/RR3 Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C., +, TMTT July 2020 2779-2795*

Mixing

In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T., +, TMTT May 2020 1646-1659*

MMIC

A Multimodal Dielectric Waveguide-Based Monopulse Radar at 160 GHz. *Geiger, M., +, TMTT Nov. 2020 4825-4834*

A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H., +, TMTT May 2020 1794-1808*

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A., +, TMTT July 2020 2768-2778*

Mitigation of RF Impairments of a 160-GHz MMIC FMCW Radar Using Model-Based Estimation. *Hafner, S., +, TMTT March 2020 1065-1073*

Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P., +, TMTT Nov. 2020 4805-4813*

MMIC amplifiers

A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H., +, TMTT Jan. 2020 144-159*

A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R., +, TMTT Sept. 2020 3794-3803*

A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P., +, TMTT July 2020 2984-2997*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K., +, TMTT Jan. 2020 398-404*

Design of Low-Power Sub-2.4 dB Mean NF 5G LNAs Using Forward Body Bias in 22 nm FDSOI. *El-Aassar, O., +, TMTT Oct. 2020 4445-4454*

Mmic frequency converters

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J., +, TMTT Jan. 2020 170-183*

A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor. *Chen, Z., +, TMTT May 2020 1688-1696*

MMIC mixers

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K., +, TMTT Jan. 2020 398-404*

Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X., +, TMTT Oct. 2020 4479-4490*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B., +, TMTT March 2020 1195-1211*

MMIC oscillators

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J., +, TMTT Jan. 2020 170-183*

A Compact 24 × 24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S., +, TMTT June 2020 2124-2133*

A High Fundamental Frequency Sub-THz CMOS Oscillator With a Capacitive Load Reduction Circuit. *Nguyen, T.D., +, TMTT July 2020 2655-2667*

A Multiport Chip-Scale Dielectric Resonator Antenna for CMOS THz Transmitters. *Buadana, N., +, TMTT Sept. 2020 3621-3632*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K., +, TMTT Jan. 2020 398-404*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B., +, TMTT March 2020 1195-1211*

MMIC power amplifiers

A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique. *Lin, Q., +, TMTT July 2020 3148-3158*

A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic. *Fang, X., +, TMTT July 2020 3017-3027*

A 38-GHz Millimeter-Wave Double-Stacked HBT Class-F⁻¹ High-Gain Power Amplifier in 130-nm SiGe-BiCMOS. *Ali, S.M.A., +, TMTT July 2020 3039-3044*

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B., +, TMTT Jan. 2020 264-276*

A Compact Ku-Band Broadband GaAs Power Amplifier Using an Improved Darlington Power Stage. *Cai, Q., +, TMTT July 2020 3068-3078*

A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J., +, TMTT May 2020 1729-1740*

A Nonintrusive Machine Learning-Based Test Methodology for Millimeter-Wave Integrated Circuits. *Cilici, F., +, TMTT Aug. 2020 3565-3579*

An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier. *Martin, D.N., +, TMTT July 2020 3028-3038*

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z., +, TMTT April 2020 1376-1389*

Leveraging Programmable Capacitor Arrays for Frequency-Tunable Digital Power Amplifiers. *Azam, A., +, TMTT June 2020 1983-1994*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B., +, TMTT March 2020 1195-1211*

Mobile antennas

Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O., +, TMTT Oct. 2020 4122-4130*

Radiation-Pattern Reconfigurable Phased Array With p-i-n Diodes Controlled for 5G Mobile Terminals. *Zhang, J., +, TMTT March 2020 1103-1117*

Mobile handsets

A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y., +, TMTT Aug. 2020 3519-3531*

Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method. *Miura, T., +, TMTT May 2020 1773-1782*

Mobile radio

Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M., +, TMTT Jan. 2020 277-287*

Mobile satellite communication

A Broadband High-Efficiency Continuous Class-AB Power Amplifier for Millimeter-Wave 5G and SATCOM Phased-Array Transmitters. *Boroujeni, S.R., +, TMTT July 2020 3159-3171*

Mode matching

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Modulation

High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P., +, TMTT Dec. 2020 5029-5041*

Linearized Photonic Microwave and mm-Wave Mixer With Dispersion-Induced Power Fading Compensation. *Zhai, W., +, TMTT Dec. 2020 5335-5346*

Microwave Modulated Scatter Active Array Distortion Sidelobes. *Alkhafaji, N., +, TMTT Jan. 2020 329-339*

Using Pulsed-RF Signals as Phase Standards for Millimeter-Wave Modulated Measurement and Calibration in Frequency Domain. *Zhang, Y., TMTT July 2020 2930-2943*

Modulators

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W., +, TMTT July 2020 2902-2910*

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A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C., +, TMTT Jan. 2020 288-300*

Monopole antennas

Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L., +, TMTT Nov. 2020 4846-4854*

Monte Carlo methods

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- Evaluating Uncertainty of Microwave Calibration Models With Regression Residuals. *Williams, D.F.*, +, *TMTT June 2020 2454-2467*
- Precision Millimeter-Wave-Modulated Wideband Source at 92.4 GHz as a Step Toward an Over-the-Air Reference. *Manurkar, P.*, +, *TMTT July 2020 2644-2654*
- Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. *Gossye, M.*, +, *TMTT July 2020 2485-2494*

MOS capacitors

- Exploiting MOS Parametric Amplification to Suppress Noise in Switched-Capacitor RF Receivers. *Badiyari, K.*, +, *TMTT Dec. 2020 5347-5358*

MOSFET

- A Dual-Mode Nested Rectifier for Ambient Wireless Powering in CMOS Technology. *Almansouri, A.S.*, +, *TMTT May 2020 1754-1762*
- An Improved Surface-Potential-Based Model for MOSFETs Considering the Carrier Gaussian Distribution. *Wu, Y.*, +, *TMTT Oct. 2020 4082-4090*
- High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Submicrometer Planar and FinFET Bulk CMOS. *Daneshgar, S.*, +, *TMTT June 2020 2041-2056*
- SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*

Motion control

- 3-D-Printed High Data-Density Electromagnetic Encoders Based on Permittivity Contrast for Motion Control and Chipless-RFID. *Herrojo, C.*, +, *TMTT May 2020 1839-1850*

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- Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

Multibeam antennas

- Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*

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- A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*
- Additively Manufactured mm-Wave Multichip Modules With Fully Printed "Smart" Encapsulation Structures. *He, X.*, +, *TMTT July 2020 2716-2724*

Multiconductor transmission lines

- An Uncoated RF Heating Applicator With Reduced Environmental Sensitivity Using Two Coaxial Discontinuities. *Apperley, T.*, +, *TMTT July 2020 2911-2919*

Multifrequency antennas

- A Decoupling and Matching Network Design for Single- and Dual-Band Two-Element Antenna Arrays. *Xu, K.*, +, *TMTT Sept. 2020 3986-3999*
- Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*
- Frequency-Selective Surface-Based Compact Single Substrate Layer Dual-Band Transmission-Type Linear-to-Circular Polarization Converter. *Sofi, M.A.*, +, *TMTT Oct. 2020 4138-4149*

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- A Surface Integral Equation Formulation for Efficient Simulation of Finite-Sized Multilayered Parallel-Plate Structure. *Ren, Y.*, +, *TMTT July 2020 2475-2484*
- Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Multipath channels

- 3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

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- Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*

Multiplexing equipment

- 220-to-330-GHz Manifold Triplexer With Wide Stopband Utilizing Ridged Substrate Integrated Waveguides. *Holloway, J.W.*, +, *TMTT Aug. 2020 3428-3438*
- A Fully Integrated Multiplexer Using Unified Extracted Pole Technique. *Yang, Y.*, +, *TMTT Aug. 2020 3439-3447*
- A General Coupling Matrix Synthesis Method for All-Resonator Diplexers and Multiplexers. *Yu, Y.*, +, *TMTT March 2020 987-999*
- An Efficient Technique for Tuning and Design of Filters and Diplexers. *Jia, H.*, +, *TMTT July 2020 2610-2624*
- Dual-Band Coaxial Filter and Diplexer Using Stub-Loaded Resonators. *Xie, Y.*, +, *TMTT July 2020 2691-2700*
- Miniaturized Single-Ended and Balanced Dual-Band Diplexers Using Dielectric Resonators. *Li, Y.C.*, +, *TMTT Oct. 2020 4257-4266*
- Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*
- Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth. *Li, Z.*, +, *TMTT Feb. 2020 721-731*
- Ultrabroadband Diplexers for Next-Generation High-Frequency Measurement Applications. *Boes, F.*, +, *TMTT June 2020 2161-2167*

Multipoint networks

- Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

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- In Situ* Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*
- A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing. *Craton, M.T.*, +, *TMTT Aug. 2020 3418-3427*
- Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*

Nanofabrication

- In Situ* Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*

Nanoparticles

- A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics. *Neumann, K.*, +, *TMTT June 2020 2151-2160*

Narrowband

- Analysis and Design of *N*-Path True-Time-Delay Circuit. *Zolkov, E.*, +, *TMTT Dec. 2020 5381-5394*

Network analysis

- Accelerated *N*-Path Network Analysis Using the Floquet Scattering Matrix Method. *Scarborough, C.*, +, *TMTT April 2020 1248-1259*
- Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*

Network analyzers

- A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*
- A SiGe BiCMOS W-Band Single-Chip Frequency Extension Module for VNAs. *Turkmen, E.*, +, *TMTT Jan. 2020 211-221*
- Broadband Determination of the Even- and Odd-Mode Propagation Constants of Coupled Lines Based on Two-Port Measurements. *Hernandez-Escobar, A.*, +, *TMTT Feb. 2020 648-654*
- Influence of Noise on Scattering-Parameter Measurements. *Gu, D.*, +, *TMTT Nov. 2020 4925-4939*
- Materials Characterization With Multiple Offset Reflects at Frequencies to 110 GHz. *Popovic, N.B.*, +, *TMTT Jan. 2020 184-195*
- Measurement of Reflection and Transmission Coefficients Using Finite Impulse Response Least-Squares Estimation. *Nopchinda, D.*, +, *TMTT Jan. 2020 222-235*
- Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S.*, +, *TMTT Nov. 2020 4611-4619*

Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W.*, +, *TMTT Feb. 2020 636-647*

Study of *H*-Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices. *Shu, G.*, +, *TMTT June 2020 2251-2258*

Using Pulsed-RF Signals as Phase Standards for Millimeter-Wave Modulated Measurement and Calibration in Frequency Domain. *Zhang, Y.*, *TMTT July 2020 2930-2943*

Network synthesis

A Direct Solving Approach for High-Order Power Amplifier Matching Network Design. *Dai, Z.*, +, *TMTT Aug. 2020 3278-3286*

A New Family of Multiband Waveguide Filters Based on a Folded Topology. *Melgarejo, J.C.*, +, *TMTT July 2020 2590-2600*

Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*

Rigorous Design Method for Symmetric Reflectionless Filters With Arbitrary Prescribed Transmission Response. *Lee, J.*, +, *TMTT June 2020 2300-2307*

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

Network topology

A New Family of Multiband Waveguide Filters Based on a Folded Topology. *Melgarejo, J.C.*, +, *TMTT July 2020 2590-2600*

Rigorous Design Method for Symmetric Reflectionless Filters With Arbitrary Prescribed Transmission Response. *Lee, J.*, +, *TMTT June 2020 2300-2307*

Neural networks

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. *Zhang, J.*, +, *TMTT June 2020 2215-2233*

Augmented Iterative Learning Control for Neural-Network-Based Joint Crest Factor Reduction and Digital Predistortion of Power Amplifiers. *Wang, S.*, +, *TMTT Nov. 2020 4835-4845*

Causal and Passive Parameterization of S-Parameters Using Neural Networks. *Torun, H.M.*, +, *TMTT Oct. 2020 4290-4304*

Homotopy Optimization of Microwave and Millimeter-Wave Filters Based on Neural Network Model. *Zhao, P.*, +, *TMTT April 2020 1390-1400*

Parallel Decomposition Approach to Wide-Range Parametric Modeling With Applications to Microwave Filters. *Zhang, W.*, +, *TMTT Dec. 2020 5288-5306*

Space Mapping Technique Using Decomposed Mappings for GaN HEMT Modeling. *Zhao, Z.*, +, *TMTT Aug. 2020 3318-3341*

Newton method

Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*

Fourier Bases-Expansion Contraction Integral Equation for Inversion Highly Nonlinear Inverse Scattering Problem. *Xu, K.*, +, *TMTT June 2020 2206-2214*

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020 1882-1895*

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Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

Noise measurement

Blind Measurement of Receiver System Noise. *Kuester, D.G.*, +, *TMTT June 2020 2435-2453*

Nondestructive testing

Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Nondestructive Testing of Nonmetallic Pipes Using Wideband Microwave Measurements. *Amineh, R.K.*, +, *TMTT May 2020 1763-1772*

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Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. *Peng, J.*, +, *TMTT Jan. 2020 121-131*

Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

Novel Baseband Equivalent Model for Digital Predistortion of Wideband Frequency-Multiplier-Based Millimeter Wave Sources. *Jaffri, I.*, +, *TMTT Sept. 2020 3942-3957*

Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

Nonlinear network analysis

Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*

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A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. *You, F.*, +, *TMTT Oct. 2020 4433-4444*

Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*

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On the Design of Planar Arrays of Nonresonant Coils for Tunable Wireless Power Transfer Applications. *Brizi, D.*, +, *TMTT Sept. 2020 3814-3822*

On the Effect of Field Spatial Separation on Slow Wave Propagation. *Bertrand, M.*, +, *TMTT Dec. 2020 4978-4983*

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Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

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2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic. *Fang, X.*, +, *TMTT July 2020 3017-3027*

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*

Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*

Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*

Frequency Comb OFDM Radar System With High Range Resolution and Low Sampling Rate. *Nuss, B.*, +, *TMTT Sept. 2020 3861-3871*

High-Power Generation for mm-Wave 5G Power Amplifiers in Deep Submicrometer Planar and FinFET Bulk CMOS. *Daneshgar, S.*, +, *TMTT June 2020 2041-2056*

Highly Efficient Wideband RF Power Amplifier Design for 5G and Beyond. *Ma, J.*, *TMTT May 2020 1620*

Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond. *Ma, J.*, *TMTT Oct. 2020 4150*

Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*

Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range. *Liu, H.-Y., +, TMTT March 2020 1012-1021*

Passive Intermodulation in Simultaneous Transmit-Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z., +, TMTT Sept. 2020 3633-3652*

Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A., +, TMTT Sept. 2020 4000-4017*

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Novel Switchable Filtering Circuit With Function Reconfigurability Between SPQT Filtering Switch and Four-Way Filtering Power Divider. *Li, H., +, TMTT March 2020 867-876*

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2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S., +, TMTT Nov. 2020 4589-4598*

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Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M., +, TMTT July 2020 2601-2609*

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Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X., +, TMTT Aug. 2020 3448-3460*

Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend. *Pu, Y., +, TMTT April 2020 1284-1292*

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Entire Domain Basis Function Expansion of the Differential Surface Admittance for Efficient Broadband Characterization of Lossy Interconnects. *Huynen, M., +, TMTT April 2020 1217-1233*

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Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S., +, TMTT May 2020 1621-1626*

Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M., +, TMTT July 2020 2601-2609*

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S., +, TMTT Nov. 2020 4611-4619*

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Efficient Photonic Beamforming System Incorporating a Unique Featured Tunable Chirped Fiber Bragg Grating for Application Extended to the Ku-Band. *Srivastava, N.K., +, TMTT May 2020 1851-1857*

Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T., +, TMTT Dec. 2020 5317-5327*

Optical multilayers

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S., +, TMTT Nov. 2020 4611-4619*

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Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T., +, TMTT Dec. 2020 5317-5327*

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Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M., +, TMTT July 2020 2601-2609*

Optical tomography

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R., +, TMTT May 2020 1954-1963*

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Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E., +, TMTT Sept. 2020 3756-3768*

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Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M., +, TMTT July 2020 2601-2609*

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Analysis and Design of Broadband Ridge-Gap-Waveguide Tight and Loose Hybrid Couplers. *Nasr, M.A., +, TMTT Aug. 2020 3368-3378*

Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C., +, TMTT Aug. 2020 3255-3262*

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P., +, TMTT June 2020 2374-2381*

Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S., +, TMTT May 2020 1621-1626*

Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M., +, TMTT July 2020 2601-2609*

Kilowatt-Level Power-Controlled Microwave Applicator With Multiple Slotted Waveguides for Improving Heating Uniformity. *Ahn, S., +, TMTT July 2020 2867-2875*

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S., +, TMTT Nov. 2020 4611-4619*

Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend. *Pu, Y., +, TMTT April 2020 1284-1292*

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A General Coupling Matrix Synthesis Method for All-Resonator Diplexers and Multiplexers. *Yu, Y., +, TMTT March 2020 987-999*

A Phaseless Inverse Source Method (PISM) Based on Near-Field Scanning for Radiation Diagnosis and Prediction of PCBs. *Wang, L., +, TMTT Oct. 2020 4151-4160*

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. *You, F.*, +, *TMTT Oct. 2020 4433-4444*

Differential-Mode to Common-Mode Conversion Detector Based on Race Hybrid Couplers: Analysis and Application to Differential Sensors and Comparators. *Munoz-Enano, J.*, +, *TMTT April 2020 1312-1325*

Efficient FEM-Based EM Optimization Technique Using Combined Lagrangian Method With Newton's Method. *Feng, F.*, +, *TMTT June 2020 2194-2205*

EM-Centric Multiphysics Optimization of Microwave Components Using Parallel Computational Approach. *Zhang, W.*, +, *TMTT Feb. 2020 479-489*

Experiments on the Pulse Repetition Frequency Optimization of 1.3-GHz, 100-kW Microwave Pulse Compressor. *Savaidis, S.P.*, +, *TMTT June 2020 2374-2381*

Homotopy Optimization of Microwave and Millimeter-Wave Filters Based on Neural Network Model. *Zhao, P.*, +, *TMTT April 2020 1390-1400*

Integration of Interdigitated Electrodes in Split-Ring Resonator for Detecting Liquid Mixtures. *Bao, X.*, +, *TMTT June 2020 2080-2089*

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Multifeature-Assisted Neuro-transfer Function Surrogate-Based EM Optimization Exploiting Trust-Region Algorithms for Microwave Filter Design. *Feng, F.*, +, *TMTT Feb. 2020 531-542*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

On the Design of Planar Arrays of Nonresonant Coils for Tunable Wireless Power Transfer Applications. *Brizi, D.*, +, *TMTT Sept. 2020 3814-3822*

Parallel Gradient-Based EM Optimization for Microwave Components Using Adjoint- Sensitivity-Based Neuro-Transfer Function Surrogate. *Feng, F.*, +, *TMTT Sept. 2020 3606-3620*

Organic compounds

Selective Volume Fraction Sensing Using Resonant- Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

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38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{ dB}}/IP3/RR3$ Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C.*, +, *TMTT July 2020 2779-2795*

Oxygen

The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*

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P-i-n diodes

An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier. *Martin, D.N.*, +, *TMTT July 2020 3028-3038*

Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Radiation-Pattern Reconfigurable Phased Array With p-i-n Diodes Controlled for 5G Mobile Terminals. *Zhang, J.*, +, *TMTT March 2020 1103-1117*

Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators. *Xu, J.*, +, *TMTT Feb. 2020 741-749*

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Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits. *Gomez Molina, C.*, +, *TMTT July 2020 2501-2514*

Ultrathin Antenna-Integrated Glass-Based Millimeter-Wave Package With Through-Glass Vias. *Watanabe, A.O.*, +, *TMTT Dec. 2020 5082-5092*

Parallel processing

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

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Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTT Sept. 2020 3633-3652*

Parametric oscillators

Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*

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Parallel Decomposition Approach to Wide-Range Parametric Modeling With Applications to Microwave Filters. *Zhang, W.*, +, *TMTT Dec. 2020 5288-5306*

Partial differential equations

Accuracy Controlled Structure-Preserving \mathcal{H}^2 -Matrix-Matrix Product in Linear Complexity With Change of Cluster Bases. *Ma, M.*, +, *TMTT Feb. 2020 441-455*

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Retrieval of Composite Model Parameters for 3-D Microwave Imaging of Biaxial Objects by BCGS-FFT and PSO. *Li, J.*, +, *TMTT May 2020 1896-1907*

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Nested Fast Adaptive Cross Approximation Algorithm for Solving Electromagnetic Scattering Problems. *Fang, X.*, +, *TMTT Dec. 2020 4995-5003*

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A Novel Circuit Architecture of Bidirectional Common-Mode Noise Absorption Circuit. *Li, P.*, +, *TMTT April 2020 1476-1486*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Passive networks

Characterization and Production of PCB Structures With Increased Ratio of Electromagnetic Field in Air. *Sepaintner, F.*, +, *TMTT June 2020 2134-2143*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Patient diagnosis

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Patient monitoring

A Novel Active/Passive Dual-Mode Sensing Technique for Detecting Vital Signs. *Peng, K.*, +, *TMTT Jan. 2020 414-424*

A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020 1933-1942*

A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H.*, +, *TMTT Nov. 2020 4886-4895*

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020 4865-4874*

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020 1882-1895*

Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*

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Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*

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Accurate Characterization and Design Guidelines of Glide-Symmetric Holey EBG. *Chen, Q.*, +, *TMTT Dec. 2020 4984-4994*

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A.*, +, *TMTT Dec. 2020 5132-5144*

On the Effect of Field Spatial Separation on Slow Wave Propagation. *Bertrand, M.*, +, *TMTT Dec. 2020 4978-4983*

On the Increment of the Bandwidth of Mushroom-Type EBG Structures With Glide Symmetry. *Mouris, B.A.*, +, *TMTT April 2020 1365-1375*

TO-FDTD Method for Arbitrary Skewed Periodic Structures at Oblique Incidence. *Liu, Y.*, +, *TMTT Feb. 2020 564-572*

Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure. *Kim, Y.*, +, *TMTT Dec. 2020 5055-5064*

Permeability

Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method. *Miura, T.*, +, *TMTT May 2020 1773-1782*

The Complex Permeability of Split-Ring Resonator Arrays Measured at Microwave Frequencies. *Madsen, S.L.*, +, *TMTT Aug. 2020 3547-3557*

Permittivity

3-D Printed Microfluidic Sensor in SIW Technology for Liquids' Characterization. *Rocco, G.M.*, +, *TMTT March 2020 1175-1184*

3-D-Printed High Data-Density Electromagnetic Encoders Based on Permittivity Contrast for Motion Control and Chipless-RFID. *Herrojo, C.*, +, *TMTT May 2020 1839-1850*

In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. *Craton, M.T.*, +, *TMTT May 2020 1646-1659*

A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing. *Craton, M.T.*, +, *TMTT Aug. 2020 3418-3427*

An Effective Mixed Extracting Method for Electromagnetic Parameters of Periodically Loaded Substrate Integrated Waveguide Units and Its Applications. *Zhou, Y.*, +, *TMTT Feb. 2020 543-554*

Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020 2808-2822*

Compact Mechanically Tunable Microstrip Bandstop Filter With Constant Absolute Bandwidth Using an Embedded Metamaterial-Based EBG. *Brown, J.A.*, +, *TMTT Oct. 2020 4369-4380*

Coupling Coefficients Between Resonators in Stripline Compline and Pseudocompline Bandpass Filters. *Zakharov, A.*, +, *TMTT July 2020 2679-2690*

Enhancing the Sensitivity of Dielectric Sensors With Multiple Coupled Complementary Split-Ring Resonators. *Albishi, A.M.*, +, *TMTT Oct. 2020 4340-4347*

Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*

Materials Characterization With Multiple Offset Reflects at Frequencies to 110 GHz. *Popovic, N.B.*, +, *TMTT Jan. 2020 184-195*

Probing the Theoretical Ultimate Limit of Coaxial Cable Sensing: Measuring Nanometer-Scale Displacements. *Zhu, C.*, +, *TMTT Feb. 2020 816-823*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Permittivity measurement

A Position-Independent Approach to Accurate Measurement of Broadband Electromagnetic Constitutive Parameters of Magnetodielectric Materials. *Li, Q.*, +, *TMTT Nov. 2020 4940-4950*

Broadband Microwave Microfluidic Coupled-Line Sensor With 3-D-Printed Channel for Industrial Applications. *Sorocki, J.*, +, *TMTT July 2020 2808-2822*

Calibrated Broadband Measurement Technique for Complex Permittivity and Permeability. *Hossain, M.I.*, +, *TMTT Aug. 2020 3580-3591*

Convenient Waveguide Technique for Determining Permittivity and Permeability of Materials. *Wu, C.*, +, *TMTT Nov. 2020 4905-4912*

Dielectric Anisotropy Sensor Using Coupled Resonators. *Morales-Lovera, H.*, +, *TMTT April 2020 1610-1616*

Equivalent Circuit Modeling of a Single-Ended Patch Sensing Element in Integrated Technology. *Shivamurthy, H.T.*, +, *TMTT Jan. 2020 17-26*

Error Tolerant Method of Dielectric Permittivity Determination Using a TE₀₁ Mode in a Circular Waveguide at the W-Band. *Choi, H.E.*, +, *TMTT Feb. 2020 808-815*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance. *Teran-Bahena, E.Y.*, +, *TMTT June 2020 2428-2434*

Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N.*, +, *TMTT Sept. 2020 3958-3968*

Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. *Cresson, P.*, +, *TMTT June 2020 2144-2150*

Phantoms

Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices. *Song, S.*, +, *TMTT Dec. 2020 5423-5431*

Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*

RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*

Variable-Exponent Lebesgue-Space Inversion for Brain Stroke Microwave Imaging. *Bisio, I.*, +, *TMTT May 2020 1882-1895*

Phase change materials

Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A.*, +, *TMTT Oct. 2020 4188-4205*

Loss Compensated PCM GeTe-Based Latching Wideband 3-bit Switched True-Time-Delay Phase Shifters for mmWave Phased Arrays. *Singh, T.*, +, *TMTT Sept. 2020 3745-3755*

RF Power-Handling Performance for Direct Actuation of Germanium Telluride Switches. *Leon, A.*, +, *TMTT Jan. 2020 60-73*

Phase locked loops

A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-PI-Based CDR. *Xia, Y.*, +, *TMTT Dec. 2020 5432-5442*

A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*

A 32-Step Phase-Compensated Spread-Spectrum RF-PLL With 19.44-dB EMI Reduction and 10-fs Extra RMS Jitter. *Tang, F.*, +, *TMTT April 2020 1564-1575*

A 5.8-GHz Phased Array System Using Power-Variable Phase-Controlled Magnetrons for Wireless Power Transfer. *Yang, B.*, +, *TMTT Nov. 2020 4951-4959*

A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020 1933-1942*

A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

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A Highly Sensitive Planar Microwave Sensor for Detecting Direction and Angle of Rotation. *Jha, A.K.*, +, *TMTT April 2020 1598-1609*

Phase modulation

A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS. *Park, G.H.*, +, *TMTT Dec. 2020 5395-5407*

Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. *Jung, K.P.*, +, *TMTT July 2020 3045-3055*

Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X.*, +, *TMTT Aug. 2020 3271-3277*

Phase noise

1–3-GHz Self-Aligned Open-Loop Local Quadrature Phase Generator With Phase Error Below 0.4°. *Kalcher, M.*, +, *TMTT Aug. 2020 3510-3518*

- A -197.3-dBc/Hz FoM_T Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI. *Fang, M.*, +, *TMTT Oct. 2020 4116-4121*
- A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X.*, +, *TMTT July 2020 2668-2678*
- A 21.7-to-41.7-GHz Injection-Locked LO Generation With a Narrowband Low-Frequency Input for Multiband 5G Communications. *Zhang, J.*, +, *TMTT Jan. 2020 170-183*
- A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*
- Oscillator Stabilization Through Feedback With Slow Wave Structures. *Ponton, M.*, +, *TMTT June 2020 2358-2373*
- Reduction of Phase Noise in Fractional- N Frequency Synthesizer Using Self-Injection Locking Loop. *Peng, K.*, +, *TMTT Sept. 2020 3724-3731*
- Phase shift keying**
- Corrections to "A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology". *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3783*
- Phase shifters**
- A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS. *Park, G.H.*, +, *TMTT Dec. 2020 5395-5407*
- BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique. *Xu, J.*, +, *TMTT April 2020 1452-1461*
- Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A.*, +, *TMTT Dec. 2020 5132-5144*
- Schiffman Phase Shifters With Wide Phase Shift Range Under Operation of First and Second Phase Periods in a Coupled Line. *Qiu, L.*, +, *TMTT April 2020 1423-1430*
- Ultra-Broadband Phase Shifters for 5G Mobile Applications. *Ma, J.*, *TMTT Feb. 2020 530*
- Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*
- Wideband Phase Shifters With Miniaturized Size on Multiple Series and Shunt Resonators: Proposal and Synthetic Design. *Lyu, Y.*, +, *TMTT Dec. 2020 5221-5234*
- Phased array radar**
- Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*
- Phased arrays**
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- Photonic band gap**
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- Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter. *Deng, J.*, +, *TMTT July 2020 2625-2632*
- Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*
- Enhanced Wireless Interchip Communication Performance Using Symmetrical Layers and Soft/Hard Surface Concepts. *Al-Alem, Y.*, +, *TMTT Jan. 2020 39-50*
- Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S.*, +, *TMTT May 2020 1621-1626*
- On the Increment of the Bandwidth of Mushroom-Type EBG Structures With Glide Symmetry. *Mouris, B.A.*, +, *TMTT April 2020 1365-1375*
- Photonic crystals**
- Fabrication and Characterization of Woodpile Waveguides for Microwave Injection in Ion Sources. *Mauro, G.S.*, +, *TMTT May 2020 1621-1626*
- Tamm Resonances in the Structure 1-D Microwave Photonic Crystal/Conducting Nanometer Layer. *Skripal, A.V.*, +, *TMTT Dec. 2020 5115-5122*
- Photoplethysmography**
- A Novel Microwave Phased- and Perturbation-Injection-Locked Sensor With Self-Oscillating Complementary Split-Ring Resonator for Finger and Wrist Pulse Detection. *Tseng, C.*, +, *TMTT May 2020 1933-1942*
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- Planar antenna arrays**
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- Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. *Nal-landhigal, S.N.*, +, *TMTT Oct. 2020 4405-4423*
- Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*
- Planar antennas**
- Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J.*, +, *TMTT May 2020 1872-1881*
- Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*
- Planar inverted-F antennas**
- Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O.*, +, *TMTT Oct. 2020 4122-4130*
- Planar waveguides**
- Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*
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- Plasma deposition**
- The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*
- Plasma devices**
- The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*
- Plasma probes**
- The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*
- Plates (structures)**
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A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. Gao, L., +, *TMTT July 2020* 2823-2832

A High-Selectivity D-Band Mixed-Mode Filter Based on the Coupled Overmode Cavities. Wu, Y., +, *TMTT June 2020* 2331-2342

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. Zhang, J., +, *TMTT June 2020* 2215-2233

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. Miek, D., +, *TMTT June 2020* 2097-2107

Design of Waveguide Filters With Cascaded Singlets Through a Synthesis-Based Approach. Macchiarella, G., +, *TMTT June 2020* 2308-2319

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In Situ Nanocomposite Fabrication for RF Electronics Applications With Additive Manufacturing. Craton, M.T., +, *TMTT May 2020* 1646-1659

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Wideband (10–67 GHz) Dielectric Properties of Biosourced Cellulose Ester Flexible Films. Cresson, P., +, *TMTT June 2020* 2144-2150

Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure. Kim, Y., +, *TMTT Dec. 2020* 5055-5064

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A Test for Unconditional Stability Based on Polynomial Convexification. Colangeli, S., +, *TMTT Oct. 2020* 4177-4187

Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. Cai, J., +, *TMTT April 2020* 1409-1422

Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. Brihuega, A., +, *TMTT Sept. 2020* 4000-4017

Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. Gossye, M., +, *TMTT July 2020* 2485-2494

Portable instruments

Doppler Cardiogram: A Remote Detection of Human Heart Activities. Dong, S., +, *TMTT March 2020* 1132-1141

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A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. Kim, N., *TMTT June 2020* 2020-2029

A Joint Crest Factor Reduction and Digital Predistortion for Power Amplifiers Linearization Based on Clipping-and-Bank-Filtering. Wang, S., +, *TMTT July 2020* 2725-2733

A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. Tome, P.M., +, *TMTT Sept. 2020* 3709-3723

A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters. Chen, L., +, *TMTT July 2020* 2796-2807

A Series-Connected-Load Doherty Power Amplifier With Push–Pull Main and Auxiliary Amplifiers for Base Station Applications. Jundi, A., +, *TMTT Feb. 2020* 796-807

Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. Peng, J., +, *TMTT Jan. 2020* 121-131

Augmented Iterative Learning Control for Neural-Network-Based Joint Crest Factor Reduction and Digital Predistortion of Power Amplifiers. Wang, S., +, *TMTT Nov. 2020* 4835-4845

Comments on “Analytical Formulas for the Coverage of Tunable Matching Networks for Reconfigurable Applications”. Wu, J., +, *TMTT Feb. 2020* 827

Deep Integration and Topological Cohabitation of Active Circuits and Antennas for Power Amplification and Radiation in Standard CMOS. Nal-landhigal, S.N., +, *TMTT Oct. 2020* 4405-4423

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. You, F., +, *TMTT Oct. 2020* 4433-4444

Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. Wang, X., +, *TMTT Jan. 2020* 316-328

Digital Transmitter Coil for Wireless Power Transfer Robust Against Variation of Distance and Lateral Misalignment. Qiu, H., +, *TMTT Sept. 2020* 4031-4039

Efficient 60-GHz Power Amplifier With Adaptive AM-AM and AM-PM Distortions Compensation in 65-nm CMOS Process. Jung, K.P., +, *TMTT July 2020* 3045-3055

Empowering the Bandwidth of Continuous-Mode Symmetrical Doherty Amplifiers by Leveraging on Fuzzy Logic Techniques. Naah, G., +, *TMTT July 2020* 3134-3147

Guest Editorial. Camarchia, V., +, *TMTT July 2020* 2955-2956

Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. Dhar, S.K., +, *TMTT Oct. 2020* 4216-4228

Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. Becerra, J.A., +, *TMTT Nov. 2020* 4570-4578

Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. Ginzberg, N., +, *TMTT June 2020* 2030-2040

Power combiners

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. Kodak, U., +, *TMTT July 2020* 2745-2767

A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. Zhou, P., +, *TMTT July 2020* 3056-3067

A Class E/F_{odd} Power Oscillator Incorporating a Distributed Active Transformer. Apperley, T., +, *TMTT June 2020* 2409-2418

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended March-and-Balun Power Combiner. Martelius, M., +, *TMTT March 2020* 1022-1034

A Fully Isolated N-Way Radial Power Combiner. du Toit, H.J., +, *TMTT July 2020* 2531-2538

A High-Isolation Eight-Way Power Combiner. Guo, L., +, *TMTT March 2020* 854-866

A Series-Connected-Load Doherty Power Amplifier With Push–Pull Main and Auxiliary Amplifiers for Base Station Applications. Jundi, A., +, *TMTT Feb. 2020* 796-807

An 18–38-GHz K-/Ka-Band Reconfigurable Chireix Outphasing GaAs MMIC Power Amplifier. Martin, D.N., +, *TMTT July 2020* 3028-3038

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. Chen, K., +, *TMTT Jan. 2020* 398-404

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. Dang, Z., +, *TMTT April 2020* 1376-1389

Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. Rashidzadeh, H., +, *TMTT July 2020* 2920-2929

Highly Efficient Microwave Power System of Magnetrons Utilizing Frequency-Searching Injection-Locking Technique With No Phase Shifter. *Lai, C.*, +, *TMTT Oct. 2020 4424-4432*

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlof, S.*, +, *TMTT Nov. 2020 4611-4619*

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A K-Band Frequency Tripler Using Transformer-Based Self-Mixing Topology With Peaking Inductor. *Chen, Z.*, +, *TMTT May 2020 1688-1696*

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A Novel High-Efficiency Segmented Design Method for High-Power Serpentine Shaped Mode Converter. *Cui, X.*, +, *TMTT Feb. 2020 628-635*

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A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-PI-Based CDR. *Xia, Y.*, +, *TMTT Dec. 2020 5432-5442*

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A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTT June 2020 2057-2064*

A New Compact Power Divider Based on Capacitor Central Loaded Coupled Microstrip Line. *Xia, B.*, +, *TMTT Oct. 2020 4249-4256*

A Novel Design of Compact Out-of-Phase Power Divider With Arbitrary Ratio. *Xia, B.*, +, *TMTT Dec. 2020 5235-5243*

A Wideband Filtering Antenna Array With Harmonic Suppression. *Zhang, Y.*, +, *TMTT Oct. 2020 4327-4339*

Compact Phase-Reconfigurable Couplers With Wide Tuning Range. *Pan, Y.F.*, +, *TMTT Feb. 2020 681-692*

Design of Broadband Doubly Asymmetrical Branch-Line Directional Couplers. *Buesa-Zubiria, A.*, +, *TMTT April 2020 1439-1451*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiover Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X.*, +, *TMTT April 2020 1496-1509*

Novel Square-Waveguide Dual-Mode Two-Way Reactive Power Divider. *Cano, J.L.*, +, *TMTT March 2020 980-986*

Novel Switchable Filtering Circuit With Function Reconfigurability Between SPQT Filtering Switch and Four-Way Filtering Power Divider. *Li, H.*, +, *TMTT March 2020 867-876*

Novel Tunable Isolation Network Used in Ring-Type Single-to-Balanced, Power-Dividing, and Single-Ended Filter With Arbitrary Power-Division Ratios. *Zhu, X.*, +, *TMTT Feb. 2020 666-680*

Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

Proposal and Design of a Power Divider With Wideband Power Division and Port-to-Port Isolation: A New Topology. *Liu, Y.*, +, *TMTT April 2020 1431-1438*

Single-Ended-to-Balanced Power Divider With Extended Common-Mode Suppression and Its Application to Differential 2×4 Butler Matrices. *Zhu, H.*, +, *TMTT April 2020 1510-1519*

Power generation

A 68.5–90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

Power HEMT

A New Modeling Technique for Microwave Multicell Transistors Based on EM Simulations. *Raffo, A.*, +, *TMTT July 2020 3100-3110*

Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*

Power semiconductor devices

Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. *Dhar, S.K.*, +, *TMTT Oct. 2020 4216-4228*

Power transformer insulation

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

Power transistors

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. *You, F.*, +, *TMTT Oct. 2020 4433-4444*

Power transmission lines

Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C.*, +, *TMTT Aug. 2020 3255-3262*

Erratum to "A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices". *Liu, J.*, +, *TMTT June 2020 2468*

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Pressure sensors

Cuffless Blood Pressure Measurement Using a Microwave Near-Field Self-Injection-Locked Wrist Pulse Sensor. *Tseng, C.*, +, *TMTT Nov. 2020 4865-4874*

Printed circuit design

An EM Imaging Method Based on Plane-Wave Spectrum and Transmission Line Model. *Zhang, J.*, +, *TMTT Oct. 2020 4161-4168*

Model-Based Microwave Dielectroscopy of Fluids With Impedance Sensors. *Savic, A.*, +, *TMTT March 2020 1086-1094*

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Printed circuit manufacture

A Novel Circuit Architecture of Bidirectional Common-Mode Noise Absorption Circuit. *Li, P.*, +, *TMTT April 2020 1476-1486*

Half-Mode Substrate Integrated Waveguide Dispersion Tailoring Using 2.5-D Spoof Surface Plasmon Polaritons Structure. *Ji, L.*, +, *TMTT July 2020 2539-2550*

Printed circuits

2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A.*, +, *TMTT Sept. 2020 3872-3884*

A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTT Nov. 2020 4728-4739*

A Chip-First Microwave Package Using Multimaterial Aerosol Jet Printing. *Craton, M.T.*, +, *TMTT Aug. 2020 3418-3427*

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended March-and-Balun Power Combiner. *Martelius, M.*, +, *TMTT March 2020 1022-1034*

A Line-Array Technique for Wireless Power Transfer Toward a $100 \mu\text{m} \times 100 \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTT Jan. 2020 353-364*

A New Compact Power Divider Based on Capacitor Central Loaded Coupled Microstrip Line. *Xia, B.*, +, *TMTT Oct. 2020 4249-4256*

A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*

A Phaseless Inverse Source Method (PISM) Based on Near-Field Scanning for Radiation Diagnosis and Prediction of PCBs. *Wang, L.*, +, *TMTT Oct. 2020 4151-4160*

Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits. *Gomez Molina, C.*, +, *TMTT July 2020 2501-2514*

Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance. *Teran-Bahena, E.Y.*, +, *TMTT June 2020 2428-2434*

Versatile, Error-Tolerant, and Easy to Manufacture Through-Wire Microstrip-to-ESIW Transition. *Belenguer, A.*, +, *TMTT June 2020 2243-2250*

Probes

Micromachined Silicon-Core Substrate-Integrated Waveguides at 220–330 GHz. *Krivovitca, A.*, +, *TMTT Dec. 2020 5123-5131*

Process monitoring

The Planar Multipole Resonance Probe: A Minimally Invasive Monitoring Concept for Plasma-Assisted Dielectric Deposition Processes. *Pohle, D.*, +, *TMTT June 2020 2067-2079*

Programmable circuits

Leveraging Programmable Capacitor Arrays for Frequency-Tunable Digital Power Amplifiers. *Azam, A.*, +, *TMTT June 2020 1983-1994*

Prosthetic power supplies

An Ultralow-Power Crystal-Free Batteryless TDD Radio for Medical Implantable Applications. *Cai, M.*, +, *TMTT Nov. 2020 4875-4885*

Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Prosthetics

Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*

On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. *Wang, Z.*, +, *TMTT June 2020 2234-2242*

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Protocols

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S.*, +, *TMTT Nov. 2020 4787-4804*

Prototypes

Ridged Waveguide Magic Tees Based on 3-D Printing Technology. *Wu, J.*, +, *TMTT Oct. 2020 4267-4275*

Pulse compression

A Compact, High-Gain, High-Power, Ultrawideband Microwave Pulse Compressor Using Time-Reversal Techniques. *Drikas, Z.B.*, +, *TMTT Aug. 2020 3355-3367*

Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C.*, +, *TMTT Aug. 2020 3255-3262*

Pulse generators

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Tunable Subnanosecond Gaussian Pulse Radar Transmitter: Theory and Analysis. *Fegghi, R.*, +, *TMTT Sept. 2020 3823-3833*

Pulsed power supplies

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Pumps

Wireless Powering of Next-Generation Left Ventricular Assist Devices (LVADs) Without Percutaneous Cable Driveline. *Campi, T.*, +, *TMTT Sept. 2020 3969-3977*

Q**Q factor**

3-D Printed Microfluidic Sensor in SIW Technology for Liquids' Characterization. *Rocco, G.M.*, +, *TMTT March 2020 1175-1184*

Ku -Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement. *Chen, L.*, +, *TMTT Nov. 2020 4620-4630*

A Millimeter-Wave Receiver Using a Wideband Low-Noise Amplifier With One-Port Coupled Resonator Loads. *Singh, R.*, +, *TMTT Sept. 2020 3794-3803*

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. *Miek, D.*, +, *TMTT June 2020 2097-2107*

Analytical Modeling and Experimental Studies on Tapered Post Re-Entrant Cavity Resonator. *Sinha, P.*, +, *TMTT Dec. 2020 5190-5199*

Design and Optimization of Bidirectional Tunable MEMS All-Silicon Evanescent-Mode Cavity Filter. *Yang, Z.*, +, *TMTT June 2020 2398-2408*

Dual-Band Coaxial Filter and Diplexer Using Stub-Loaded Resonators. *Xie, Y.*, +, *TMTT July 2020 2691-2700*

Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E.*, +, *TMTT Sept. 2020 3756-3768*

General Conditions to Realize Exceptional Points of Degeneracy in Two Uniform Coupled Transmission Lines. *Mealy, T.*, +, *TMTT Aug. 2020 3342-3354*

Integrated Tunable Magnetolectric RF Inductors. *Chen, H.*, +, *TMTT March 2020 951-963*

Modular Synthesis of Waveguide Bandpass Filters Using Dual-Mode Resonators. *Guo, Z.*, +, *TMTT May 2020 1660-1667*

Silicon Micromachined D-Band Diplexer Using Releasable Filling Structure Technique. *Zhao, X.*, +, *TMTT Aug. 2020 3448-3460*

Surface Acoustic Wave Devices Using Lithium Niobate on Silicon Carbide. *Zhang, S.*, +, *TMTT Sept. 2020 3653-3666*

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Versatile, Error-Tolerant, and Easy to Manufacture Through-Wire Microstrip-to-ESIW Transition. *Belenguer, A.*, +, *TMTT June 2020 2243-2250*

Wideband Dielectric Substrate-Loaded Cavity Filter. *Jiang, J.*, +, *TMTT Jan. 2020 111-120*

Q factor measurement

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

Quadrature amplitude modulation

2×64 -Element Dual-Polarized Dual-Beam Single-Aperture 28-GHz Phased Array With 2×30 Gb/s Links for 5G Polarization MIMO. *Nafe, A.*, +, *TMTT Sept. 2020 3872-3884*

38-GHz CMOS Linearized Receiver With IM3 Suppression, $P_{1\text{ dB}}/IP3/RR3$ Enhancements, and Mitigation of QAM Constellation Diagram Distortion in 5G MMW Systems. *Chen, C.*, +, *TMTT July 2020 2779-2795*

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticle-to-Reticle Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTT June 2020 1995-2010*

A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*

A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTT Jan. 2020 252-263*

A 37–42-GHz 8×8 Phased-Array With 48–51-dBm EIRP, 64-QAM 30-Gb/s Data Rates, and EVM Analysis Versus Channel RMS Errors. *Yin, Y.*, +, *TMTT Nov. 2020 4753-4764*

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*

A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5 dBm Peak Output Power and Over 4.5-THz GBW. *El-Aassar, O.*, +, *TMTT July 2020 3111-3119*

A Compact E-Band Power Amplifier With Gain-Boosting and Efficiency Enhancement. *Chen, L.*, +, *TMTT Nov. 2020 4620-4630*

ACPR Improvement in Large Phased Arrays With Complex Modulated Waveforms. *Rupakula, B.*, +, *TMTT March 2020 1045-1053*

Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*

Coded Pilot Assisted Baseband Receiver for High Data Rate Millimeter-Wave Communications. *An, S.*, +, *TMTT Nov. 2020 4719-4727*

Compensation of Transmitter *I/Q* Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H.*, +, *TMTT July 2020 2920-2929*

Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*

Frequency Multiplier-Based Millimeter-Wave Vector Signal Transmitter Using Digital Predistortion With Constrained Feedback Bandwidth. *Cao, T.*, +, *TMTT May 2020 1819-1829*

Highly Efficient Wideband RF Power Amplifier Design for 5G and Beyond. *Ma, J.*, *TMTT May 2020 1620*

Highly Integrated Design of Antenna-Filter Synthesis Approach for 5G and Beyond. *Ma, J.*, *TMTT Oct. 2020 4150*

Leveraging Programmable Capacitor Arrays for Frequency-Tunable Digital Power Amplifiers. *Azam, A.*, +, *TMTT June 2020 1983-1994*

Precision Millimeter-Wave-Modulated Wideband Source at 92.4 GHz as a Step Toward an Over-the-Air Reference. *Manurkar, P.*, +, *TMTT July 2020 2644-2654*

Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Sept. 2020 4018-4030*

Temperature-Dependent *I/Q* Imbalance Compensation in Ultra-Wideband Millimeter-Wave Multi-Gigabit Transmitters. *Rezola, A.*, +, *TMTT Jan. 2020 340-352*

Quadrature phase shift keying

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

A 180-GHz Super-Regenerative Oscillator With up to 58 dB Gain for Efficient Phase and Amplitude Recovery. *Ghaleb, H.*, +, *TMTT June 2020 2011-2019*

A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3834-3851*

Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTT Jan. 2020 239-251*

Quantization (signal)

A 10-GHz Low-Power Serial Digital Majority Voter Based on Moving Accumulative Sign Filter in a PS-/PI-Based CDR. *Xia, Y.*, +, *TMTT Dec. 2020 5432-5442*

Quantum noise

Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*

Quartz

60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTT July 2020 2745-2767*

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Radar absorbing materials

Broadband Electromagnetic Absorbing Structures Made of Graphene/Glass-Fiber/Epoxy Composite. *Marra, F.*, +, *TMTT Feb. 2020 590-601*

Radar antennas

3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

3-D-Printed Modified Butler Matrix Based on Gap Waveguide at W-Band for Monopulse Radar. *Tamayo-Dominguez, A.*, +, *TMTT March 2020 926-938*

A Multimodal Dielectric Waveguide-Based Monopulse Radar at 160 GHz. *Geiger, M.*, +, *TMTT Nov. 2020 4825-4834*

Tunable Subnanosecond Gaussian Pulse Radar Transmitter: Theory and Analysis. *Feghhi, R.*, +, *TMTT Sept. 2020 3823-3833*

Ultra-compact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P.*, +, *TMTT Nov. 2020 4805-4813*

Radar cross-sections

Fast Exponentially Convergent Solution of Electromagnetic Scattering From Multilayer Concentric Magnetodielectric Cylinders by the Spectral Integral Method. *Guan, Z.*, +, *TMTT June 2020 2183-2193*

Radar detection

On Postprocessing Reduction of Phase Noise in FMCW Radars. *Rezaei, M.*, +, *TMTT Dec. 2020 5103-5114*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Radar imaging

3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020 2124-2133*

Broadband Millimeter-Wave Imaging Radar-Based 3-D Holographic Reconstruction for Nondestructive Testing. *Zhang, X.*, +, *TMTT March 2020 1074-1085*

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020 2768-2778*

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020 1954-1963*

Efficient Frequency Scaling Algorithm for Short-Range 3-D Holographic Imaging Based on a Scanning MIMO Array. *Tan, K.*, +, *TMTT Sept. 2020 3885-3897*

General Theory of Holographic Inversion With Linear Frequency Modulation Radar and its Application to Whole-Body Security Scanning. *Meng, Y.*, +, *TMTT Nov. 2020 4694-4705*

Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R.*, +, *TMTT Jan. 2020 387-397*

Guest Editorial. *Camarchia, V.*, +, *TMTT July 2020 2955-2956*

Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR. *Wang, Z.*, +, *TMTT March 2020 1185-1194*

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S.*, +, *TMTT Nov. 2020 4787-4804*

Radar receivers

3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020 2124-2133*

Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTT July 2020 2845-2855*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B.*, +, *TMTT March 2020 1195-1211*

Wide Field-of-View Locating and Multimodal Vital Sign Monitoring Based on X-Band CMOS-Integrated Phased-Array Radar Sensor. *Fang, Z.*, +, *TMTT Sept. 2020 4054-4065*

Radar resolution

Frequency Comb OFDM Radar System With High Range Resolution and Low Sampling Rate. *Nuss, B.*, +, *TMTT Sept. 2020 3861-3871*

Radar signal processing

Frequency Comb OFDM Radar System With High Range Resolution and Low Sampling Rate. *Nuss, B.*, +, *TMTT Sept. 2020 3861-3871*

Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTC July 2020 3184-3196*

Mitigation of RF Impairments of a 160-GHz MMIC FMCW Radar Using Model-Based Estimation. *Hafner, S.*, +, *TMTC March 2020 1065-1073*

Multiple Range and Vital Sign Detection Based on Single-Conversion Self-Injection-Locked Hybrid Mode Radar With a Novel Frequency Estimation Algorithm. *Wang, F.*, +, *TMTC May 2020 1908-1920*

Multitarget Respiration Detection With Adaptive Digital Beamforming Technique Based on SIMO Radar. *Xiong, J.*, +, *TMTC Nov. 2020 4814-4824*

Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity. *Scherhauff, M.*, +, *TMTC Sept. 2020 3784-3793*

Range-Doppler Map Improvement in FMCW Radar for Small Moving Drone Detection Using the Stationary Point Concentration Technique. *Park, J.*, +, *TMTC May 2020 1858-1871*

Radar transmitters

A Compact 24×24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTC June 2020 2124-2133*

Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. *Forsten, H.*, +, *TMTC July 2020 2845-2855*

Tunable Subnanosecond Gaussian Pulse Radar Transmitter: Theory and Analysis. *Fegghi, R.*, +, *TMTC Sept. 2020 3823-3833*

Radial basis function networks

Exploiting Symmetries in the Variational Meshless Method for 3-D Inhomogeneous Cavities. *Lombardi, V.*, +, *TMTC Feb. 2020 432-440*

Semisupervised Radial Basis Function Neural Network With an Effective Sampling Strategy. *Xiao, L.*, +, *TMTC April 2020 1260-1269*

Radiation effects

Generalized PEEC Model for Conductor–Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTC Jan. 2020 27-38*

Radio frequency

An Innovative Joint-Injection Mixer With Broadband IF and RF for Advanced Heterodyne Receivers of Millimeter-Wave Astronomy. *Wu, Y.*, +, *TMTC Dec. 2020 5408-5422*

Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices. *Song, S.*, +, *TMTC Dec. 2020 5423-5431*

Guest Editorial. *Eliezer, O.*, *TMTC June 2020 1981-1982*

Reconfigurable Photonic Microwave Mixer With Mixing Spurs Suppressed and Dispersion Immune for Radio-Over-Fiber System. *Lin, T.*, +, *TMTC Dec. 2020 5317-5327*

Radio receivers

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTC Nov. 2020 4589-4598*

A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTC June 2020 1995-2010*

A 2–5.5 GHz Beamsteering Receiver IC With 4-Element Vivaldi Antenna Array. *Zahra, M.*, +, *TMTC Sept. 2020 3852-3860*

A Compact Q -Band Rectangular Waveguide Thermal Isolator. *Montisci, G.*, +, *TMTC Feb. 2020 611-619*

A Line-Array Technique for Wireless Power Transfer Toward a $100 \mu\text{m} \times 100 \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTC Jan. 2020 353-364*

Blind Measurement of Receiver System Noise. *Kuester, D.G.*, +, *TMTC June 2020 2435-2453*

Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H.*, +, *TMTC July 2020 2920-2929*

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTC July 2020 2876-2890*

Design of an S-Band Nanowatt-Level Wakeup Receiver With Envelope Detector-First Architecture. *Bassirian, P.*, +, *TMTC Sept. 2020 3920-3929*

Four-Element Wide Modulated Bandwidth MIMO Receiver With >35 -dB Interference Cancellation. *Ghaderi, E.*, +, *TMTC Sept. 2020 3930-3941*

Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTC Jan. 2020 239-251*

Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q.*, +, *TMTC Jan. 2020 301-315*

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60-GHz 64- and 256-Element Dual-Polarized Dual-Beam Wafer-Scale Phased-Array Transceivers With Reticule-to-Reticule Stitching. *Kodak, U.*, +, *TMTC July 2020 2745-2767*

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTC July 2020 2902-2910*

A 28-/60-GHz Band-Switchable Bidirectional Amplifier for Reconfigurable mm-Wave Transceivers. *Nawaz, A.A.*, +, *TMTC July 2020 3197-3205*

A 28-GHz Reconfigurable SP4T Switch Network for a Switched Beam System in 65-nm CMOS. *Suh, B.*, +, *TMTC June 2020 2057-2064*

A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTC Jan. 2020 252-263*

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTC June 2020 2020-2029*

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTC Jan. 2020 288-300*

A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology. *Rodriguez-Vazquez, P.*, +, *TMTC Sept. 2020 3834-3851*

A Survey of Self-Interference in LTE-Advanced and 5G New Radio Wireless Transceivers. *Sadjina, S.*, +, *TMTC March 2020 1118-1131*

Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M.*, +, *TMTC Jan. 2020 277-287*

Passive Intermodulation in Simultaneous Transmit–Receive Systems: Modeling and Digital Cancellation Methods. *Waheed, M.Z.*, +, *TMTC Sept. 2020 3633-3652*

Temperature-Dependent I/Q Imbalance Compensation in Ultra-Wideband Millimeter-Wave Multi-Gigabit Transmitters. *Rezola, A.*, +, *TMTC Jan. 2020 340-352*

Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond. *Ma, J.*, *TMTC July 2020 2473-2474*

Radio transmitters

A 1.5–5-GHz Integrated RF Transmitter Front End for Active Matching of an Antenna Cluster. *Saleem, A.R.*, +, *TMTC Nov. 2020 4728-4739*

A 150-GHz Transmitter With 12-dBm Peak Output Power Using 130-nm SiGe:C BiCMOS Process. *Zhou, P.*, +, *TMTC July 2020 3056-3067*

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTC Jan. 2020 264-276*

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended Marchand-Balun Power Combiner. *Martelius, M.*, +, *TMTC March 2020 1022-1034*

A Robust and Scalable Harmonic Cancellation Digital Predistortion Technique for HF Transmitters. *Chen, L.*, +, *TMTC July 2020 2796-2807*

Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. *Rashidzadeh, H.*, +, *TMTC July 2020 2920-2929*

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X.*, +, *TMTC July 2020 2876-2890*

Digital Predistortion of 5G Massive MIMO Wireless Transmitters Based on Indirect Identification of Power Amplifier Behavior With OTA Tests. *Wang, X.*, +, *TMTC Jan. 2020 316-328*

Digital Transmitter Coil for Wireless Power Transfer Robust Against Variation of Distance and Lateral Misalignment. *Qiu, H.*, +, *TMTC Sept. 2020 4031-4039*

Frequency Interleaving IF Transmitter and Receiver for 240-GHz Communication in SiGe:C BiCMOS. *Eissa, M.H.*, +, *TMTC Jan. 2020 239-251*

Hybrid Beamforming Transmitter Modeling for Millimeter-Wave MIMO Applications. *Taghikhani, P.*, +, *TMTC Nov. 2020 4740-4752*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTC Sept. 2020 4066-4076*

- Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. *Brihuega, A., +, TMTT Sept. 2020 4000-4017*
- Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B., +, TMTT Sept. 2020 4018-4030*
- Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q., +, TMTT Jan. 2020 301-315*
- Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N., +, TMTT June 2020 2030-2040*
- Radio-over-fiber**
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- Sampling Rate Reduction for Digital Predistortion of Broadband RF Power Amplifiers. *Li, Y., +, TMTT March 2020 1054-1064*
- Radiofrequency heating**
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- Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M., +, TMTT Feb. 2020 509-515*
- Radiofrequency identification**
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- A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H., +, TMTT Nov. 2020 4886-4895*
- Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L., +, TMTT Nov. 2020 4846-4854*
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- Radiofrequency integrated circuits**
- Considerations for Harmonics Distribution in Aperture-Tuned Inverted-F Antenna for Cellular Handheld Devices. *Oezdamar, O., +, TMTT Oct. 2020 4122-4130*
- Integrated Tunable Magnetolectric RF Inductors. *Chen, H., +, TMTT March 2020 951-963*
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- Design Procedure for Bandpass Filters Based on Integrated Coaxial and Rectangular Waveguide Resonators. *San-Blas, A.A., +, TMTT Oct. 2020 4390-4404*

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Groove Gap Waveguide Filter Based on Horizontally Polarized Resonators for V-Band Applications. *Rezaee, M.*, +, *TMTT July 2020 2601-2609*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S.*, +, *TMTT Nov. 2020 4611-4619*

On the Design of Broadband Rectangular Waveguide Pressure Windows. *Ali, M.M.M.*, +, *TMTT Sept. 2020 3667-3674*

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A Line-Array Technique for Wireless Power Transfer Toward a $100 \mu\text{m} \times 100 \mu\text{m}$ Coil Antenna. *Zhao, B.*, +, *TMTT Jan. 2020 353-364*

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A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics. *Neumann, K.*, +, *TMTT June 2020 2151-2160*

Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*

Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*

Design of a Self-Driving Transistor-Based RF-DC Converter Based on Optimized Harmonic-Tuned Rectification Waveforms. *You, F.*, +, *TMTT Oct. 2020 4433-4444*

Digital Transmitter Coil for Wireless Power Transfer Robust Against Variation of Distance and Lateral Misalignment. *Qiu, H.*, +, *TMTT Sept. 2020 4031-4039*

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Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

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BPF-Integrated SPDT Switches With Improved Performance Using Frequency Selective Star-Junction Matching Circuit and Switched Magnetic Coupling Technique. *Xu, J.*, +, *TMTT April 2020 1452-1461*

Compact Single- and Dual-Band Filtering 180° Hybrid Couplers on Circular Patch Resonator. *Zhang, G.*, +, *TMTT Sept. 2020 3675-3685*

Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

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Dual-Mode Filtering Baluns Based on Hybrid Cavity-Microstrip Structures. *Fang, X.*, +, *TMTT May 2020 1637-1645*

Multilayered Reflectionless Wideband Bandpass Filters With Shunt/In-Series Resistively Terminated Microstrip Lines. *Yang, L.*, +, *TMTT March 2020 877-893*

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Long Array of Microwave Sensors for Real-Time Coating Defect Detection. *Deif, S.*, +, *TMTT July 2020 2856-2866*

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A Cascaded Multi-Drive Stacked-SOI Distributed Power Amplifier With 23.5 dBm Peak Output Power and Over 4.5-THz GBW. *El-Aassar, O.*, +, *TMTT July 2020 3111-3119*

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- A Compact 24 × 24 Channel MIMO FMCW Radar System Using a Substrate Integrated Waveguide-Based Reference Distribution Backplane. *Kueppers, S.*, +, *TMTT June 2020 2124-2133*
- An Effective Mixed Extracting Method for Electromagnetic Parameters of Periodically Loaded Substrate Integrated Waveguide Units and Its Applications. *Zhou, Y.*, +, *TMTT Feb. 2020 543-554*
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- Millimeter-Wave 3-D Imaging Testbed With MIMO Array. *Guo, Q.*, +, *TMTT March 2020 1164-1174*
- Miniaturized 4 × 4 Butler Matrix and Tunable Phase Shifter Using Ridged Half-Mode Substrate Integrated Waveguide. *Der, E.T.*, +, *TMTT Aug. 2020 3379-3388*
- Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*
- Substrate Integrated Waveguide Equalizers and Attenuators With Surface Resistance. *Peng, H.*, +, *TMTT April 2020 1487-1495*
- Substrate Integrated Waveguide Filter–Amplifier Design Using Active Coupling Matrix Technique. *Gao, Y.*, +, *TMTT May 2020 1706-1716*
- Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*
- Versatile, Error-Tolerant, and Easy to Manufacture Through-Wire Microstrip-to-ESIW Transition. *Belenguer, A.*, +, *TMTT June 2020 2243-2250*
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- Half-Air-Filled Ball-Grid-Array-Based Substrate-Integrated Groove-Gap Waveguide and its Transition to Microstrip at W-Band. *Shi, Y.*, +, *TMTT Dec. 2020 5145-5153*
- Substrate Integrated Suspended Slot Line and Its Application to Differential Coupler. *Wang, Y.*, +, *TMTT Dec. 2020 5178-5189*
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Permittivity Determination Considering the Metal Surface Roughness Effect on the Microstrip Line Series Inductance and Shunt Capacitance. *Teran-Bahena, E.Y.*, +, *TMTT June 2020 2428-2434*

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Switched capacitor networks

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Switches

A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems. *Jung, M.*, +, *TMTT Dec. 2020 5371-5380*

Exploiting MOS Parametric Amplification to Suppress Noise in Switched-Capacitor RF Receivers. *Badiyari, K.*, +, *TMTT Dec. 2020 5347-5358*

High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P.*, +, *TMTT Dec. 2020 5029-5041*

RF Power-Handling Performance for Direct Actuation of Germanium Telluride Switches. *Leon, A.*, +, *TMTT Jan. 2020 60-73*

Switching circuits

A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems. *Jung, M.*, +, *TMTT Dec. 2020 5371-5380*

Synchronization

A Ka-Band Scalable Hybrid Phased Array Based on Four-Element ICs. *Chu, C.*, +, *TMTT Jan. 2020 288-300*

Calibration-Based Phase Coherence of Incoherent and Quasi-Coherent 160-GHz MIMO Radars. *Durr, A.*, +, *TMTT July 2020 2768-2778*

Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S.*, +, *TMTT Nov. 2020 4787-4804*

Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

Synthetic aperture radar

Millimeter-Wave Image Reconstruction Algorithm for One-Stationary Bistatic SAR. *Wang, Z.*, +, *TMTT March 2020 1185-1194*

Millimeter-Wave SAR Sparse Imaging With 2-D Spatially Pseudorandom Spiral-Sampling Pattern. *Wu, S.*, +, *TMTT Nov. 2020 4672-4683*

Millimeter-Wave SAR-Imaging With Radar Networks Based on Radar Self-Localization. *Steiner, M.*, +, *TMTT Nov. 2020 4652-4661*

System-on-chip

A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

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Telecommunication control

A Microcontroller Unit-Based Electromagnetic Bandgap Control Scheme: Application for Enhancing Isolation in an Antenna Array and the EMI Scanner System Speed Thereof. *Jeong, J.*, +, *TMTT Nov. 2020 4536-4553*

Telecommunication equipment

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Ridged Waveguide Magic Tees Based on 3-D Printing Technology. *Wu, J.*, +, *TMTT Oct. 2020 4267-4275*

Telecommunication network topology

Frequency-Adjustable Planar Folded Slot Antenna Using Fully Integrated Multithrow Function for 5G Mobile Devices at Millimeter-Wave Spectrum. *Choi, J.*, +, *TMTT May 2020 1872-1881*

Telecommunications

Wideband Phase Shifters With Miniaturized Size on Multiple Series and Shunt Resonators: Proposal and Synthetic Design. *Lyu, Y.*, +, *TMTT Dec. 2020 5221-5234*

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Temperature measurement

Microdosimetry Using Rhodamine B Within Macro- and Microsystems for Radiofrequency Signals Exposures of Biological Samples. *Nefzi, A.*, +, *TMTT March 2020 1142-1150*

Stochastic EMI Noise Model of PCB Layout for Circuit-Level Analysis of System in IoT Applications. *Mehri, M.*, +, *TMTT Dec. 2020 5072-5081*

Tensile stress

VoxCap: FFT-Accelerated and Tucker-Enhanced Capacitance Extraction Simulator for Voxelized Structures. *Wang, M.*, +, *TMTT Dec. 2020 5154-5168*

Tensors

Uncertainty Quantification of Waveguide Dispersion Using Sparse Grid Stochastic Testing. *Gossye, M.*, +, *TMTT July 2020 2485-2494*

Terahertz wave devices

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlof, S.*, +, *TMTT Nov. 2020 4611-4619*

Thermal conductivity

A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides. *Guo, C.*, +, *TMTT March 2020 1035-1044*

An SiW-Based GaN Power Amplifier Module in LTCC. *Rave, C.*, +, *TMTT Dec. 2020 5328-5334*

Microwave Measurements for Conductive Anisotropic Materials. *Popovic, N.B.*, +, *TMTT Nov. 2020 4913-4924*

Thermal noise

A 0.096-mm² 1–20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*

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Thermionic emission

A Stochastic Large-Signal Model for Printed High-Frequency Rectifiers Used for Efficient Generation of Higher Harmonics. *Neumann, K.*, +, *TMTT June 2020 2151-2160*

Thermoacoustics

Three-Dimensional Microwave-Induced Thermoacoustic Imaging Based on Compressive Sensing Using an Analytically Constructed Dictionary. *Wang, B.*, +, *TMTT Jan. 2020 377-386*

Thin film circuits

Characterization and Production of PCB Structures With Increased Ratio of Electromagnetic Field in Air. *Sepaintner, F.*, +, *TMTT June 2020 2134-2143*

Thin film devices

5-GHz Antisymmetric Mode Acoustic Delay Lines in Lithium Niobate Thin Film. *Lu, R.*, +, *TMTT Feb. 2020 573-589*

Three-dimensional integrated circuits

Multiphysics Modeling and Simulation of 3-D Cu–Graphene Hybrid Nanointerconnects. *Sun, S.*, +, *TMTT Feb. 2020 490-500*

Three-dimensional printing

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. *Miek, D.*, +, *TMTT June 2020 2097-2107*

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Design and Fabrication of 3-D Printed Inline Coaxial Filters With Improved Stopband. *Venanzoni, G.*, +, *TMTT July 2020 2633-2643*

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Ridged Waveguide Magic Tees Based on 3-D Printing Technology. *Wu, J.*, +, *TMTT Oct. 2020 4267-4275*

Time division multiplexing

3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*

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Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Generalized PEEC Model for Conductor–Dielectric Problems With Radiation Effect. *Jiang, Y.*, +, *TMTT Jan. 2020 27-38*

Lookup-Table-Based Automated Rectifier Synthesis. *Gao, S.*, +, *TMTT Dec. 2020 5200-5210*

Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. *Dhar, S.K.*, +, *TMTT Oct. 2020 4216-4228*

New Mixed SETD and FETD Methods to Overcome the Low-Frequency Breakdown Problems by Tree-Cotree Splitting. *Chen, K.*, +, *TMTT Aug. 2020 3219-3228*

Rapid Modeling and Simulation of Integrated Circuit Layout in Both Frequency and Time Domains From the Perspective of Inverse. *Xue, L.*, +, *TMTT April 2020 1270-1283*

Time-domain synthesis

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E.*, +, *TMTT Aug. 2020 3497-3509*

Time-frequency analysis

Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. *Becerra, J.A.*, +, *TMTT Nov. 2020 4570-4578*

Time-varying systems

Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*

Timing jitter

Wireless Time Transfer With Subpicosecond Accuracy Based on a Fully Integrated Injection-Locked Picosecond Pulse Detector. *Jamali, B.*, +, *TMTT Jan. 2020 160-169*

Tomography

Depth Perception in Wideband Coherent Doppler Tomography Using the Dual-Layer Peak Matching Technique. *Crawley, B.R.*, +, *TMTT May 2020 1954-1963*

Topology

A 68.5–90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

A Compact 3–30-GHz 68.5-ps CMOS True-Time Delay for Wideband Phased Array Systems. *Jung, M.*, +, *TMTT Dec. 2020 5371-5380*

Analysis and Design of N -Path True-Time-Delay Circuit. *Zolkov, E.*, +, *TMTT Dec. 2020 5381-5394*

Design of mm-Wave Slow-Wave-Coupled Coplanar Waveguides. *Margalef-Rovira, M.*, +, *TMTT Dec. 2020 5014-5028*

On the Effect of Field Spatial Separation on Slow Wave Propagation. *Bertrand, M.*, +, *TMTT Dec. 2020 4978-4983*

Training data

Parallel Decomposition Approach to Wide-Range Parametric Modeling With Applications to Microwave Filters. *Zhang, W.*, +, *TMTT Dec. 2020 5288-5306*

Transceivers

Grating Lobe Suppression in Near Range MIMO Array Imaging Using Zero Migration. *Zhu, R.*, +, *TMTT Jan. 2020 387-397*

Transducers

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Transfer functions

A Low-Power, High-Linearity Wideband 3.25 GS/s Fourth-Order Programmable Analog FIR Filter Using Split-CDAC Coefficient Multipliers. *Park, S.*, +, *TMTT April 2020 1576-1590*

A Novel Training Approach for Parametric Modeling of Microwave Passive Components Using Padé via Lanczos and EM Sensitivities. *Zhang, J.*, +, *TMTT June 2020 2215-2233*

A Subspace-Splitting Moment-Matching Model-Order Reduction Technique for Fast Wideband FEM Simulations of Microwave Structures. *Szypulski, D.*, +, *TMTT Aug. 2020 3229-3241*

Efficient Calculation of Stabilization Parameters in RF Power Amplifiers. *Mori, L.*, +, *TMTT Sept. 2020 3686-3696*

EM-Centric Multiphysics Optimization of Microwave Components Using Parallel Computational Approach. *Zhang, W.*, +, *TMTT Feb. 2020 479-489*

Multifeature-Assisted Neuro-transfer Function Surrogate-Based EM Optimization Exploiting Trust-Region Algorithms for Microwave Filter Design. *Feng, F.*, +, *TMTT Feb. 2020 531-542*

Parallel Gradient-Based EM Optimization for Microwave Components Using Adjoint- Sensitivity-Based Neuro-Transfer Function Surrogate. *Feng, F.*, +, *TMTT Sept. 2020 3606-3620*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Variable-Phase All-Pass Network Synthesis and Its Application to a 14–54 GHz Multiband Continuous-Tune Phase Shifter in Silicon. *V. P. Anjos, E.*, +, *TMTT Aug. 2020 3480-3496*

Transformer oil

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

Transformer windings

A Class E/ F_{odd} Power Oscillator Incorporating a Distributed Active Transformer. *Apperley, T.*, +, *TMTT June 2020 2409-2418*

Transformers

A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E.*, +, *TMTT April 2020 1529-1541*

Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*

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Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*

Transient response

Electro-Thermal Analysis of Microwave Limiter Based on the Time-Domain Impulse Response Method Combined With Physical-Model-Based Semiconductor Solver. *Chen, S.*, +, *TMTT July 2020 2579-2589*

Switched Oscillator With Quarter-Wave, Open-Circuited Stub for Generating Mesoband High-Power Microwave Pulses. *Ryu, J.*, +, *TMTT Aug. 2020 3471-3479*

Transistor circuits

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*

Transistors

A 60-GHz Low-Power Active Phase Shifter With Impedance-Invariant Vector Modulation in 65-nm CMOS. *Park, G.H.*, +, *TMTT Dec. 2020 5395-5407*

A 68.5–90 GHz High-Gain Power Amplifier With Capacitive Stability Enhancement Technique in 0.13 μm SiGe BiCMOS. *Yu, Y.*, +, *TMTT Dec. 2020 5359-5370*

A Combined Broadband Model for GaN HEMTs in Admittance Domain Based on Canonical Piecewise Linear Functions. *Cai, J.*, +, *TMTT Dec. 2020 5042-5054*

High Efficiency Bandwidth VHF Electrically Small Antennas Through Direct Antenna Modulation. *Dytioco Santos, J.P.*, +, *TMTT Dec. 2020 5029-5041*

Transmission line matrix methods

A Novel Design of Compact Out-of-Phase Power Divider With Arbitrary Ratio. *Xia, B.*, +, *TMTT Dec. 2020 5235-5243*

Accurate Characterization and Design Guidelines of Glide-Symmetric Holey EBG. *Chen, Q.*, +, *TMTT Dec. 2020 4984-4994*

Rigorous Scattering Matrix Analysis of a Fabry–Perot Open Resonator. *Sal-ski, B.*, +, *TMTT Dec. 2020 5093-5102*

Transmission line theory

Equivalent Circuit Modeling of a Single-Ended Patch Sensing Element in Integrated Technology. *Shivamurthy, H.T.*, +, *TMTT Jan. 2020 17-26*

Two-Way Tunable Phase Shifter With Arbitrary Phase Shift Ratio at Two Different Frequencies. *Rahimian Omam, Z.*, +, *TMTT Feb. 2020 711-720*

Transmission lines

108–316- and 220–290-GHz Ultrabroadband Distributed Frequency Doublers. *Lee, I.*, +, *TMTT March 2020 1000-1011*

A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*

A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*

A New mm-Wave Multiple-Band Single-Pole Multiple-Throw Switch With Variable Transmission Lines. *Kim, Y.*, +, *TMTT July 2020 2551-2561*

A Single-Layer Balanced Directional Coupler Design Based on Crossover Structures. *Amini, A.*, +, *TMTT Aug. 2020 3298-3307*

A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push–Pull Power Amplifier. *Maktoomi, M.H.*, +, *TMTT Nov. 2020 4560-4569*

Determination of Characteristic Impedance of Planar Transmission Lines on Lossy/Dispersive Substrates by Using Series Resistor With Frequency-Dependent Inductance. *Huang, C.*, *TMTT Oct. 2020 4229-4235*

Frequency-Dependent Permeability Evaluation by Harmonic Resonance Cavity Perturbation Method. *Miura, T.*, +, *TMTT May 2020 1773-1782*

Monolithically Integrated Parametric Mixers With Time-Varying Transmission Lines (TVTLs). *Zou, X.*, +, *TMTT Oct. 2020 4479-4490*

Schiffman Phase Shifters With Wide Phase Shift Range Under Operation of First and Second Phase Periods in a Coupled Line. *Qiu, L.*, +, *TMTT April 2020 1423-1430*

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Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays. *Takabayashi, N.*, +, *TMTT March 2020 1151-1163*

Single-Receiver Over-the-Air Digital Predistortion for Massive MIMO Transmitters With Antenna Crosstalk. *Luo, Q.*, +, *TMTT Jan. 2020 301-315*

Transponders

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Transversal filters

A Hybrid Low-Cost Bandpass Filter With SAW Resonators and External Lumped Inductors Using a Dual-Coupling Scheme. *Zhang, R.*, +, *TMTT June 2020 2289-2299*

Lossy Signal-Interference Filters and Applications. *Gomez-Garcia, R.*, +, *TMTT Feb. 2020 516-529*

Traveling wave tubes

Corrections to “Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube”. *Wang, W.*, +, *TMTT Nov. 2020 4641*

Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube. *Wang, W.*, +, *TMTT Nov. 2020 4554-4559*

Theoretical and Experimental Investigations on a Compact and Broadband TE₀₁ Oversized Deformed Waveguide Bend. *Pu, Y.*, +, *TMTT April 2020 1284-1292*

Trees (mathematics)

New Mixed SETD and FETD Methods to Overcome the Low-Frequency Breakdown Problems by Tree-Cotree Splitting. *Chen, K.*, +, *TMTT Aug. 2020 3219-3228*

Tuning

RF Impedance Sensor for Antenna-Tuning Front Ends. *Solomko, V.*, +, *TMTT March 2020 1095-1102*

Two-port networks

A High-Isolation Eight-Way Power Combiner. *Guo, L.*, +, *TMTT March 2020 854-866*

Broadband Determination of the Even- and Odd-Mode Propagation Constants of Coupled Lines Based on Two-Port Measurements. *Hernandez-Escobar, A.*, +, *TMTT Feb. 2020 648-654*

Calibration on the Fly—A Novel Two-Port S-Parameter Measurement Method for On-Wafer Leaky Systems. *Wu, A.*, +, *TMTT Aug. 2020 3558-3564*

On the Determination of Device Noise Parameters Versus Size. *Boglione, L.*, *TMTT Oct. 2020 4169-4176*

Oscillator Stabilization Through Feedback With Slow Wave Structures. *Ponton, M.*, +, *TMTT June 2020 2358-2373*

Synthesis of Wideband High-Quality Factor Delay-Tunable Fully Differential All-Pass Filters. *Elamien, M.B.*, +, *TMTT Oct. 2020 4348-4360*

Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*

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UHF amplifiers

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

LTCC-Based Fluidic Tuners for Low Microwave Frequency Reconfigurable Circuits. *Bahloul, D.*, +, *TMTT Aug. 2020 3308-3317*

UHF antennas

A Decoupling and Matching Network Design for Single- and Dual-Band Two-Element Antenna Arrays. *Xu, K.*, +, *TMTT Sept. 2020 3986-3999*

Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*

Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Low-Profile Broadband Absorber Based on Multimode Resistor-Embedded Metallic Strips. *Zhang, B.*, +, *TMTT March 2020 835-843*

Radiative Near-Field Wireless Power Transfer to Scalp-Implantable Biotelemetric Device. *Shah, S.A.A.*, +, *TMTT July 2020 2944-2953*

Rectification Improvement With Flat-Topped Beams on 2.45-GHz Rectenna Arrays. *Takabayashi, N.*, +, *TMTT March 2020 1151-1163*

RF-Harvesting Tightly Coupled Rectenna Array Tee-Shirt With Greater Than Octave Bandwidth. *Antonio Estrada, J.*, +, *TMTT Sept. 2020 3908-3919*

UHF bipolar transistors

A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*

UHF circuits

LTCC-Based Fluidic Tuners for Low Microwave Frequency Reconfigurable Circuits. *Bahloul, D.*, +, *TMTT Aug. 2020 3308-3317*

UHF couplers

Compact Phase-Reconfigurable Couplers With Wide Tuning Range. *Pan, Y.F.*, +, *TMTT Feb. 2020 681-692*

Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiorder Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X.*, +, *TMTT April 2020 1496-1509*

UHF detectors

Design of an S-Band Nanowatt-Level Wakeup Receiver With Envelope Detector-First Architecture. *Bassirian, P.*, +, *TMTT Sept. 2020 3920-3929*

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

UHF filters

A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*

A Hybrid Low-Cost Bandpass Filter With SAW Resonators and External Lumped Inductors Using a Dual-Coupling Scheme. *Zhang, R.*, +, *TMTT June 2020 2289-2299*

Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

Frequency and Bandwidth Tunable mm-Wave Hairpin Bandpass Filters Using Microfluidic Reconfiguration With Integrated Actuation. *Gonzalez-Carvajal, E.*, +, *TMTT Sept. 2020 3756-3768*

High-Order Dual-Port Quasi-Absorptive Microstrip Coupled-Line Bandpass Filters. *Wu, X.*, +, *TMTT April 2020 1462-1475*

Lossy Signal-Interference Filters and Applications. *Gomez-Garcia, R.*, +, *TMTT Feb. 2020 516-529*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiover Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X.*, +, *TMTT April 2020 1496-1509*

Novel Tunable Isolation Network Used in Ring-Type Single-to-Balanced, Power-Dividing, and Single-Ended Filter With Arbitrary Power-Division Ratios. *Zhu, X.*, +, *TMTT Feb. 2020 666-680*

Single-/Dual-Band Bandpass Filter-Integrated Single-Pole Double-Throw Switch Using Distributed Coupling Tri-Mode Resonators. *Xu, J.*, +, *TMTT Feb. 2020 741-749*

Supercompact and Ultrawideband Surface Plasmonic Bandpass Filter. *Wang, M.*, +, *TMTT Feb. 2020 732-740*

Tunable 0.7–2.8-GHz Reflection-Mode N-Path Filters in 45-nm SOI CMOS. *Bonner-Stewart, J.*, +, *TMTT June 2020 2343-2357*

Tunable Diplexer With Identical Passband and Constant Absolute Bandwidth. *Li, Z.*, +, *TMTT Feb. 2020 721-731*

Vector-Sum Phase Shifter Using a Tunable Active g_m -C Polyphase Filter. *Hirai, A.*, +, *TMTT Oct. 2020 4091-4102*

UHF integrated circuits

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

A Packaged 0.01–26-GHz Single-Chip SiGe Reflectometer for Two-Port Vector Network Analyzers. *Chung, H.*, +, *TMTT May 2020 1794-1808*

An Ultralow-Power Crystal-Free Batteryless TDD Radio for Medical Implantable Applications. *Cai, M.*, +, *TMTT Nov. 2020 4875-4885*

Codesign of Differential-Drive CMOS Rectifier and Inductively Coupled Antenna for RF Harvesting. *Grasso, L.*, +, *TMTT Jan. 2020 365-376*

Design of an S-Band Nanowatt-Level Wakeup Receiver With Envelope Detector-First Architecture. *Bassirian, P.*, +, *TMTT Sept. 2020 3920-3929*

Efficient Wireless Power Transfer System With a Miniaturized Quad-Band Implantable Antenna for Deep-Body Multitasking Implants. *Basir, A.*, +, *TMTT May 2020 1943-1953*

Leveraging Programmable Capacitor Arrays for Frequency-Tunable Digital Power Amplifiers. *Azam, A.*, +, *TMTT June 2020 1983-1994*

Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Sept. 2020 4018-4030*

UHF measurement

High Q Microwave Microfluidic Sensor Using a Central Gap Ring Resonator. *Hamzah, H.*, +, *TMTT May 2020 1830-1838*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

UHF mixers

2.4-GHz CMOS Bluetooth RF Receiver With Improved IM2 Distortion Tolerance. *Chang, S.*, +, *TMTT Nov. 2020 4589-4598*

A 0.5-to-3.5-GHz Full-Duplex Mixer-First Receiver With Cartesian Synthesized Self-Interference Suppression Interface in 65-nm CMOS. *Ershadi, A.*, +, *TMTT June 2020 1995-2010*

Tunable 0.7–2.8-GHz Reflection-Mode N-Path Filters in 45-nm SOI CMOS. *Bonner-Stewart, J.*, +, *TMTT June 2020 2343-2357*

UHF oscillators

An S-Band GaAs Multifunction Chip for Transmit/Receive Modules. *Chen, K.*, +, *TMTT Jan. 2020 398-404*

Oscillator Stabilization Through Feedback With Slow Wave Structures. *Pon-ton, M.*, +, *TMTT June 2020 2358-2373*

Reduction of Phase Noise in Fractional- N Frequency Synthesizer Using Self-Injection Locking Loop. *Peng, K.*, +, *TMTT Sept. 2020 3724-3731*

UHF phase shifters

Vector-Sum Phase Shifter Using a Tunable Active g_m -C Polyphase Filter. *Hirai, A.*, +, *TMTT Oct. 2020 4091-4102*

UHF power amplifiers

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*

A Class-D Tri-Phasing CMOS Power Amplifier With an Extended March-and-Balun Power Combiner. *Martelius, M.*, +, *TMTT March 2020 1022-1034*

A Direct Solving Approach for High-Order Power Amplifier Matching Network Design. *Dai, Z.*, +, *TMTT Aug. 2020 3278-3286*

A Generalized High-Efficiency Broadband Class-E/F₃ Power Amplifier Based on Design Space Expanding of Load Network. *Yang, Z.*, +, *TMTT Sept. 2020 3732-3744*

A Highly Efficient Linear Multimode Multiband Class-J Power Amplifier Utilizing GaAs HBT for Handset Modules. *Refai, W.Y.*, +, *TMTT Aug. 2020 3519-3531*

A Wideband Isolated Real-to-Complex Impedance Transforming Uiplanar Microstrip Line Balun for Push-Pull Power Amplifier. *Maktoomi, M.H.*, +, *TMTT Nov. 2020 4560-4569*

Analysis and Design of a Polar Digitally Modulated CMOS PA Based on Switched Constant-Current. *Gomes, R.*, +, *TMTT Feb. 2020 785-795*

Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*

Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*

Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*

Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*

Leveraging Programmable Capacitor Arrays for Frequency-Tunable Digital Power Amplifiers. *Azam, A.*, +, *TMTT June 2020 1983-1994*

Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*

Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range. *Liu, H.-Y.*, +, *TMTT March 2020 1012-1021*

Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. *Huang, H.*, +, *TMTT Sept. 2020 4066-4076*

Pseudo-Doherty Load-Modulated Balanced Amplifier With Wide Bandwidth and Extended Power Back-Off Range. *Cao, Y.*, +, *TMTT July 2020 3172-3183*

Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Sept. 2020 4018-4030*

UHF radio propagation

Impedance-Matching Technique of Metasurfaces Generating Evanescent Fields for Subwavelength Focusing. *Kato, Y.*, +, *TMTT April 2020 1401-1408*

UHF resonators

A Hybrid Film-Bulk-Acoustic-Resonator/Coupled-Line/Transmission-Line High Selectivity Wideband Bandpass FBAR Filter. *Wu, H.*, +, *TMTT Aug. 2020 3389-3396*

A Hybrid Low-Cost Bandpass Filter With SAW Resonators and External Lumped Inductors Using a Dual-Coupling Scheme. *Zhang, R.*, +, *TMTT June 2020 2289-2299*

Compact Stripline Dual-Band Bandpass Filters With Controllable Frequency Ratio and High Selectivity Based on Self-Coupled Resonator. *Wang, X.*, +, *TMTT Jan. 2020 102-110*

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiorder Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X., +, TMTT April 2020 1496-1509*

Ultra wideband communication

A Compact, High-Gain, High-Power, Ultrawideband Microwave Pulse Compressor Using Time-Reversal Techniques. *Drikas, Z.B., +, TMTT Aug. 2020 3355-3367*

A UHF/UWB Hybrid RFID Tag With a 51-m Energy-Harvesting Sensitivity for Remote Vital-Sign Monitoring. *Lyu, H., +, TMTT Nov. 2020 4886-4895*
Phase-Compensated Optical Fiber-Based Ultrawideband Channel Sounder. *Mbugua, A.W., +, TMTT Feb. 2020 636-647*

Supercompact and Ultrawideband Surface Plasmonic Bandpass Filter. *Wang, M., +, TMTT Feb. 2020 732-740*

Temperature-Dependent I/Q Imbalance Compensation in Ultra-Wideband Millimeter-Wave Multi-Gigabit Transmitters. *Rezola, A., +, TMTT Jan. 2020 340-352*

Ultra wideband radar

Tunable Subnanosecond Gaussian Pulse Radar Transmitter: Theory and Analysis. *Feghhi, R., +, TMTT Sept. 2020 3823-3833*

Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S., +, TMTT Nov. 2020 4787-4804*

Ultra wideband technology

A Three-Dimensional Design of Ultra-Wideband Microwave Absorbers. *Luo, G.Q., +, TMTT Oct. 2020 4206-4215*

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z., +, TMTT April 2020 1376-1389*

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Empowering the Bandwidth of Continuous-Mode Symmetrical Doherty Amplifiers by Leveraging on Fuzzy Logic Techniques. *Naah, G., +, TMTT July 2020 3134-3147*

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Dynamically Reconfigurable Microwave Circuits Leveraging Abrupt Phase-Change Material. *Connelly, D.A., +, TMTT Oct. 2020 4188-4205*

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A -197.3-dBc/Hz FoM_T Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI. *Fang, M., +, TMTT Oct. 2020 4116-4121*

A Microcontroller Unit-Based Electromagnetic Bandgap Control Scheme: Application for Enhancing Isolation in an Antenna Array and the EMI Scanner System Speed Thereof. *Jeong, J., +, TMTT Nov. 2020 4536-4553*

Novel Reconfigurable Filtering Rat-Race Coupler, Branch-Line Coupler, and Multiorder Bandpass Filter With Frequency, Bandwidth, and Power Division Ratio Control. *Zhu, X., +, TMTT April 2020 1496-1509*

Novel Reconfigurable Negative Group Delay Circuits With Independent Group Delay and Transmission Loss/Gain Control. *Zhang, T., +, TMTT April 2020 1293-1303*

Novel Tunable Isolation Network Used in Ring-Type Single-to-Balanced, Power-Dividing, and Single-Ended Filter With Arbitrary Power-Division Ratios. *Zhu, X., +, TMTT Feb. 2020 666-680*

Systematic Synthesis and Design of Ultralow Threshold 2:1 Parametric Frequency Dividers. *Hussein, H.M.E., +, TMTT Aug. 2020 3497-3509*

Variational techniques

Exploiting Symmetries in the Variational Meshless Method for 3-D Inhomogeneous Cavities. *Lombardi, V., +, TMTT Feb. 2020 432-440*

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Compact Dual-Band Inverted-Microstrip Ridge Gap Waveguide Bandpass Filter. *Deng, J., +, TMTT July 2020 2625-2632*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E., +, TMTT April 2020 1326-1339*

Vibrations

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X., +, TMTT July 2020 2876-2890*

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Radar Distance Measurement With Viterbi Algorithm to Resolve Phase Ambiguity. *Scherhauffl, M., +, TMTT Sept. 2020 3784-3793*

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A -197.3-dBc/Hz FoM_T Wideband LC-VCO IC With a Single Voltage-Controlled IMOS-Based Novel Varactor in 40-nm CMOS SOI. *Fang, M., +, TMTT Oct. 2020 4116-4121*

A 170-GHz 23.7% Tuning-Range CMOS Injection-Locked LO Generator With Third-Harmonic Enhancement. *Liu, X., +, TMTT July 2020 2668-2678*

A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W., +, TMTT July 2020 2902-2910*

A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B., +, TMTT Jan. 2020 264-276*

A Multiport Chip-Scale Dielectric Resonator Antenna for CMOS THz Transmitters. *Buadana, N., +, TMTT Sept. 2020 3621-3632*

A Very Low Phase-Noise Transformer-Coupled Oscillator and PLL for 5G Communications in 0.12 μm SiGe BiCMOS. *Wagner, E., +, TMTT April 2020 1529-1541*

Design of a 100-GHz Double-Sideband Low-IF CW Doppler Radar Transceiver for Micrometer Mechanical Vibration and Vital Sign Detection. *Ma, X., +, TMTT July 2020 2876-2890*

Versatile Dual-Receiver 94-GHz FMCW Radar System With High Output Power and 26-GHz Tuning Range for High Distance Applications. *Welp, B., +, TMTT March 2020 1195-1211*

Volterra series

Sparse Identification of Volterra Models for Power Amplifiers Without Pseudoinverse Computation. *Becerra, J.A., +, TMTT Nov. 2020 4570-4578*

Volume measurement

High-Resolution Chipless Tag RF Sensor. *Abbasi, Z., +, TMTT Nov. 2020 4855-4864*

Selective Volume Fraction Sensing Using Resonant-Based Microwave Sensor and its Harmonics. *Hosseini, N., +, TMTT Sept. 2020 3958-3968*

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Wafer bonding

Novel 3-D Multilayer Terahertz Packaging Technology for Integrating Photodiodes Arrays and Rectangular Waveguide-Power Combiners. *Makhlouf, S., +, TMTT Nov. 2020 4611-4619*

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Synthesis of Broadband Oversized Smooth-Walled Horn for High-Power Millimeter Wave. *Liao, X., +, TMTT Aug. 2020 3271-3277*

Waveguide attenuators

A Tunable Attenuator Based on a Graphene-Loaded Coupled Microstrip Line. *Zhang, A., +, TMTT March 2020 939-950*

Substrate Integrated Waveguide Equalizers and Attenuators With Surface Resistance. *Peng, H., +, TMTT April 2020 1487-1495*

Voltage-Controlled and Input-Matched Tunable Microstrip Attenuators Based on Few-Layer Graphene. *Yasir, M., +, TMTT Feb. 2020 701-710*

Waveguide components

A Compact, High-Gain, High-Power, Ultrawideband Microwave Pulse Compressor Using Time-Reversal Techniques. *Drikas, Z.B., +, TMTT Aug. 2020 3355-3367*

Study of H-Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices. *Shu, G., +, TMTT June 2020 2251-2258*

The Transition Between Reactive and Radiative Regimes for Leaky Modes in Planar Waveguides Based on Homogenized Partially Reflecting Surfaces. *Fuscaldo, W., +, TMTT Dec. 2020 5259-5269*

Waveguide couplers

Design and Measurement of a Broadband Compact TE₁₁ Mode Input Coupler for an X-Band Gyrotron Traveling Wave Tube. *Wang, W., +, TMTT Nov. 2020 4554-4559*

Direct Synthesis and Design of Dispersive Waveguide Bandpass Filters. *Zhang, Y., +, TMTT May 2020 1678-1687*

Planar Reconfigurable Balanced Rat-Race Coupler With Improved Amplitude Imbalance Performance and Common-Mode Noise Absorption. *Tan, X.*, +, *TMTT Oct. 2020 4276-4289*

Study of *H*-Band High-Order Overmoded Power Couplers for Sheet Electron Beam Devices. *Shu, G.*, +, *TMTT June 2020 2251-2258*

Uniplanar Beam-Forming Network Employing Eight-Port Hybrid Couplers and Crossovers for 2-D Multibeam Array Antennas. *Lian, J.*, +, *TMTT Nov. 2020 4706-4718*

Waveguide discontinuities

Accurate Characterization and Design Guidelines of Glide-Symmetric Holey EBG. *Chen, Q.*, +, *TMTT Dec. 2020 4984-4994*

Dispersion and Filtering Properties of Rectangular Waveguides Loaded With Holey Structures. *Palomares-Caballero, A.*, +, *TMTT Dec. 2020 5132-5144*

Waveguide filters

220-to-330-GHz Manifold Triplexer With Wide Stopband Utilizing Ridged Substrate Integrated Waveguides. *Holloway, J.W.*, +, *TMTT Aug. 2020 3428-3438*

Ku-Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*

A 135–150-GHz Frequency Tripler Using SU-8 Micromachined WR-5 Waveguides. *Guo, C.*, +, *TMTT March 2020 1035-1044*

A Fully Integrated Multiplexer Using Unified Extracted Pole Technique. *Yang, Y.*, +, *TMTT Aug. 2020 3439-3447*

A New Family of Multiband Waveguide Filters Based on a Folded Topology. *Melgarejo, J.C.*, +, *TMTT July 2020 2590-2600*

Additive Manufacturing of E-Plane Cut Dual-Mode X-Band Waveguide Filters With Mixed Topologies. *Miek, D.*, +, *TMTT June 2020 2097-2107*

An Effective Mixed Extracting Method for Electromagnetic Parameters of Periodically Loaded Substrate Integrated Waveguide Units and Its Applications. *Zhou, Y.*, +, *TMTT Feb. 2020 543-554*

Compact Wideband Hybrid Filters in Rectangular Waveguide With Enhanced Out-of-Band Response. *Valencia, J.*, +, *TMTT Jan. 2020 87-101*

Design and Fabrication of a Band-Pass Filter With EBG Single-Ridge Waveguide Using Additive Manufacturing Techniques. *Garcia-Martinez, H.*, +, *TMTT Oct. 2020 4361-4368*

Design of Waveguide Filters With Cascaded Singlets Through a Synthesis-Based Approach. *Macchiarella, G.*, +, *TMTT June 2020 2308-2319*

Direct Synthesis and Design of Dispersive Waveguide Bandpass Filters. *Zhang, Y.*, +, *TMTT May 2020 1678-1687*

Modular Synthesis of Waveguide Bandpass Filters Using Dual-Mode Resonators. *Guo, Z.*, +, *TMTT May 2020 1660-1667*

Single-Layer Mode Composite Coplanar Waveguide Dual-Band Filter With Large Frequency Ratio. *Su, Y.*, +, *TMTT June 2020 2320-2330*

Substrate Integrated Waveguide Filter–Amplifier Design Using Active Coupling Matrix Technique. *Gao, Y.*, +, *TMTT May 2020 1706-1716*

Surrogate Model-Based Space Mapping in Postfabrication Bandpass Filters' Tuning. *Li, S.*, +, *TMTT June 2020 2172-2182*

Versatile, Error-Tolerant, and Easy to Manufacture Through-Wire Microstrip-to-ESIW Transition. *Belenguer, A.*, +, *TMTT June 2020 2243-2250*

Wide Stopband Substrate Integrated Waveguide Filter Implemented by Orthogonal Ports' Offset. *Chu, P.*, +, *TMTT March 2020 964-970*

Waveguide junctions

Compact W-Band “Swan Neck” Turnstile Junction Orthomode Transducer Implemented by 3-D Printing. *Shen, J.*, +, *TMTT Aug. 2020 3408-3417*

Exploiting Port Responses for Wideband Analysis of Multimode Lossless Devices. *Codecasa, L.*, +, *TMTT Feb. 2020 555-563*

Waveguide polarisers

Broadband Septum Polarizer With Triangular Common Port. *Deutschmann, B.*, +, *TMTT Feb. 2020 693-700*

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Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Waveguide transitions

A Single-Layer Balanced Directional Coupler Design Based on Crossover Structures. *Amini, A.*, +, *TMTT Aug. 2020 3298-3307*

An Ultra-Wideband Power Combining in Ridge Waveguide for Millimeter Wave. *Dang, Z.*, +, *TMTT April 2020 1376-1389*

Micromachined Silicon-Core Substrate-Integrated Waveguides at 220–330 GHz. *Krivovitca, A.*, +, *TMTT Dec. 2020 5123-5131*

Multilayer Topology Optimization of Wideband SIW-to-Waveguide Transitions. *Hassan, E.*, +, *TMTT April 2020 1326-1339*

Versatile, Error-Tolerant, and Easy to Manufacture Through-Wire Microstrip-to-ESIW Transition. *Belenguer, A.*, +, *TMTT June 2020 2243-2250*

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Convenient Waveguide Technique for Determining Permittivity and Permeability of Materials. *Wu, C.*, +, *TMTT Nov. 2020 4905-4912*

Design of Microwave Pulse Compressors Using Small Form-Factor Waveguide Cavities. *Ioannidis, Z.C.*, +, *TMTT Aug. 2020 3255-3262*

Hardware and Software Solutions for Active Frequency Scalable (Sub) mm-Wave Load–Pull. *De Martino, C.*, +, *TMTT Sept. 2020 3769-3775*

Multimode Equivalent Network for Boxed Multilayer Arbitrary Planar Circuits. *Gomez Molina, C.*, +, *TMTT July 2020 2501-2514*

Using a Coned Cable to Simplify the Accurate Numerical Dosimetry of a Resonant Exposure Setup Operating at 1710.2–1989.8 MHz. *Zhao, J.*, +, *TMTT June 2020 2278-2288*

Waves

Full-Wave Computation of the Electric Field in the Partial Element Equivalent Circuit Method Using Taylor Series Expansion of the Retarded Green's Function. *Kovacevic-Badstuebner, I.*, +, *TMTT Aug. 2020 3242-3254*

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Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. *Wagih, M.*, +, *TMTT Nov. 2020 4960-4972*

Wide band gap semiconductors

A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique. *Lin, Q.*, +, *TMTT July 2020 3148-3158*

A Dual-Band Outphasing Power Amplifier Based on Noncommensurate Transmission Line Concept. *Wang, W.*, +, *TMTT July 2020 3079-3089*

A High-Performance GaN-Modified Nonuniform Distributed Power Amplifier. *Kim, J.*, +, *TMTT May 2020 1729-1740*

A Multiple-Time-Scale Analog Circuit for the Compensation of Long-Term Memory Effects in GaN HEMT-Based Power Amplifiers. *Tome, P.M.*, +, *TMTT Sept. 2020 3709-3723*

Accurate and Process-Tolerant Resistive Load. *Sutbas, B.*, +, *TMTT July 2020 2495-2500*

Adaptive Signal Separation for Dual-Input Doherty Power Amplifier. *Peng, J.*, +, *TMTT Jan. 2020 121-131*

Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*

ANN-Based Large-Signal Model of AlGaIn/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. *Du, X.*, +, *TMTT July 2020 3090-3099*

Automatic Extraction of Measurement-Based Large-Signal FET Models by Nonlinear Function Sampling. *Martin-Guerrero, T.M.*, +, *TMTT May 2020 1627-1636*

Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*

Behavioral Model for RF Power Transistors Based on Canonical Section-Wise Piecewise Linear Functions. *Cai, J.*, +, *TMTT April 2020 1409-1422*

Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*

Broadband RF-Input Continuous-Mode Load-Modulated Balanced Power Amplifier With Input Phase Adjustment. *Pang, J.*, +, *TMTT Oct. 2020 4466-4478*

High-Frequency Noise Characterization and Modeling of Graphene Field-Effect Transistors. *Deng, M.*, +, *TMTT June 2020 2116-2123*

Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*

- Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. *Dhar, S.K.*, +, *TMTT Oct. 2020 4216-4228*
- Multiband Dual-Mode Doherty Power Amplifier Employing Phase Periodic Matching Network and Reciprocal Gate Bias for 5G Applications. *Pang, J.*, +, *TMTT June 2020 2382-2397*
- Nondestructive, Self-Contained Extraction Method of Parasitic Resistances in HEMT Devices. *Colangeli, S.*, +, *TMTT July 2020 2571-2578*
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- SiC Strained nMOSFETs With Enhanced High-Frequency Performance and Impact on Flicker Noise and Random Telegraph Noise. *Guo, J.*, +, *TMTT June 2020 2259-2267*
- Space Mapping Technique Using Decomposed Mappings for GaN HEMT Modeling. *Zhao, Z.*, +, *TMTT Aug. 2020 3318-3341*
- Surface Acoustic Wave Devices Using Lithium Niobate on Silicon Carbide. *Zhang, S.*, +, *TMTT Sept. 2020 3653-3666*
- Third-Harmonic and Intermodulation Distortion in Bulk Acoustic-Wave Resonators. *Garcia-Pastor, D.*, +, *TMTT April 2020 1304-1311*

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- Wideband Phase Shifters With Miniaturized Size on Multiple Series and Shunt Resonators: Proposal and Synthetic Design. *Lyu, Y.*, +, *TMTT Dec. 2020 5221-5234*
- Wideband Power/Ground Noise Suppression in Low-Loss Glass Interposers Using a Double-Sided Electromagnetic Bandgap Structure. *Kim, Y.*, +, *TMTT Dec. 2020 5055-5064*

Wideband amplifiers

- A 0.096-mm² 1 –20-GHz Triple-Path Noise-Canceling Common-Gate Common-Source LNA With Dual Complementary pMOS–nMOS Configuration. *Yu, H.*, +, *TMTT Jan. 2020 144-159*
- A 2–20-GHz 10-W High-Efficiency GaN Power Amplifier Using Reactive Matching Technique. *Lin, Q.*, +, *TMTT July 2020 3148-3158*
- A 20–44-GHz Image-Rejection Receiver With >75-dB Image-Rejection Ratio in 22-nm CMOS FD-SOI for 5G Applications. *Gao, L.*, +, *TMTT July 2020 2823-2832*
- A Compact Ku-Band Broadband GaAs Power Amplifier Using an Improved Darlington Power Stage. *Cai, Q.*, +, *TMTT July 2020 3068-3078*
- A Generalized High-Efficiency Broadband Class-E/F₃ Power Amplifier Based on Design Space Expanding of Load Network. *Yang, Z.*, +, *TMTT Sept. 2020 3732-3744*
- A Wideband 120-GHz Variable Gain Amplifier With Multistage Phase Compensation. *Kim, S.H.*, +, *TMTT June 2020 2419-2427*
- A Wideband Gain-Enhancement Technique for Distributed Amplifiers. *Nguyen, N.L.K.*, +, *TMTT Sept. 2020 3697-3708*
- A Wideband Highly Linear Distributed Amplifier Using Intermodulation Cancellation Technique for Stacked-HBT Cell. *Nguyen, D.P.*, +, *TMTT July 2020 2984-2997*
- A Wideband Isolated Real-to-Complex Impedance Transforming Uniplanar Microstrip Line Balun for Push–Pull Power Amplifier. *Maktoomi, M.H.*, +, *TMTT Nov. 2020 4560-4569*
- Analysis and Design of Highly Efficient Wideband RF-Input Sequential Load Modulated Balanced Power Amplifier. *Pang, J.*, +, *TMTT May 2020 1741-1753*
- Balanced-to-Doherty Mode-Reconfigurable Power Amplifier With High Efficiency and Linearity Against Load Mismatch. *Lyu, H.*, +, *TMTT May 2020 1717-1728*
- Broadband Doherty-Like Power Amplifier Using Paralleled Right- and Left-Handed Impedance Transformers. *Zhou, X.Y.*, +, *TMTT Nov. 2020 4599-4610*
- Design of E- and W-Band Low-Noise Amplifiers in 22-nm CMOS FD-SOI. *Gao, L.*, +, *TMTT Jan. 2020 132-143*
- Frequency-Agile Class-J Power Amplifier With Clockwise Fundamental- and Second-Harmonic Loads. *Chang, H.*, +, *TMTT July 2020 3184-3196*
- Input-Harmonic-Controlled Broadband Continuous Class-F Power Amplifiers for Sub-6-GHz 5G Applications. *Dhar, S.K.*, +, *TMTT July 2020 3120-3133*
- Linear-Decomposition Digital Predistortion of Power Amplifiers for 5G Ultrabroadband Applications. *Yu, C.*, +, *TMTT July 2020 2833-2844*
- Novel Dual-Band Equal-Cell Doherty Amplifier Design With Extended Power Back-Off Range. *Liu, H.-Y.*, +, *TMTT March 2020 1012-1021*
- On-Demand Real-Time Optimizable Dynamic Model Sizing for Digital Predistortion of Broadband RF Power Amplifiers. *Li, Y.*, +, *TMTT July 2020 2891-2901*
- Pseudo-Doherty Load-Modulated Balanced Amplifier With Wide Bandwidth and Extended Power Back-Off Range. *Cao, Y.*, +, *TMTT July 2020 3172-3183*

- Sampling Rate Reduction for Digital Predistortion of Broadband RF Power Amplifiers. *Li, Y.*, +, *TMTT March 2020 1054-1064*

Wireless channels

- 3-D Motion Imaging in a Multipath Coordinate Space Based on a TDM-MIMO Radar Sensor. *Zhang, Y.*, +, *TMTT Nov. 2020 4642-4651*
- Ku-Band Channel Aggregation Waveguide Filters by RF MEMS-Based Detuning. *Chan, K.Y.*, +, *TMTT Feb. 2020 750-761*
- ACPR Improvement in Large Phased Arrays With Complex Modulated Waveforms. *Rupakula, B.*, +, *TMTT March 2020 1045-1053*
- Ultracompact Monostatic MIMO Radar With Nonredundant Aperture. *Gruner, P.*, +, *TMTT Nov. 2020 4805-4813*
- Wafer-Scale All-RF Beamforming Phased-Array Transceivers for 5G and Beyond. *Ma, J.*, *TMTT July 2020 2473-2474*

Wireless communication

- Corrections to “A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link With a 220–255 GHz Tunable LO in a SiGe HBT Technology”. *Rodriguez-Vazquez, P.*, +, *TMTT Sept. 2020 3783*
- Guest Editorial. *Chiao, J.-.*, +, *TMTT March 2020 833-834*

Wireless LAN

- A 28.16-Gb/s Area-Efficient 60-GHz CMOS Bidirectional Transceiver for IEEE 802.11ay. *Pang, J.*, +, *TMTT Jan. 2020 252-263*
- A Carrier Aggregation Transmitter Front End for 5-GHz WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Jan. 2020 264-276*
- Analysis, Design, and Implementation of a New Extremely Ultrathin 2-D-Isotropic Flexible Energy Harvester Using Symmetric Patch FSS. *Ghaneizadeh, A.*, +, *TMTT June 2020 2108-2115*
- Combined Wireless Ranging and Frequency Transfer for Internode Coordination in Open-Loop Coherent Distributed Antenna Arrays. *Ellison, S.M.*, +, *TMTT Jan. 2020 277-287*
- Reconfigurable 2.4-/5-GHz Dual-Band Transmitter Front-End Supporting 1024-QAM for WLAN 802.11ax Application in 40-nm CMOS. *Liu, B.*, +, *TMTT Sept. 2020 4018-4030*
- Wideband Linearization of a Carrier Aggregation Transmitter Using Analog Signal Injection and 2-D Digital Predistortion. *Ginzberg, N.*, +, *TMTT June 2020 2030-2040*

Wireless mesh networks

- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*

Wireless sensor networks

- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*
- Compact, Flexible Harmonic Transponder Sensor With Multiplexed Sensing Capabilities for Rapid, Contactless Microfluidic Diagnosis. *Zhu, L.*, +, *TMTT Nov. 2020 4846-4854*
- High-Resolution Chipless Tag RF Sensor. *Abbasi, Z.*, +, *TMTT Nov. 2020 4855-4864*
- Improvement in Power Transmission Efficiency for Cavity Resonance-Enabled Wireless Power Transfer by Utilizing Probes With Variable Reactance. *Nimura, S.*, +, *TMTT July 2020 2734-2744*
- Low-Weight Wireless Sensor Node With Sensor-Data-Enhanced Dual-Frequency RSSI-Based Distance Estimation. *Duda, N.*, +, *TMTT Oct. 2020 4131-4137*
- Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. *Prager, S.*, +, *TMTT Nov. 2020 4787-4804*

Wires

- Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. *Kozlov, M.*, +, *TMTT Feb. 2020 509-515*

Y

Yagi antenna arrays

- A 2.65-pJ/Bit 12.5-Gb/s 60-GHz OOK CMOS Transmitter and Receiver for Proximity Communications. *Byeon, C.W.*, +, *TMTT July 2020 2902-2910*

Z

Zigbee

- A Digital-Intensive Extended-Range Dual-Mode BLE5.0 and IEEE802.15.4 Transceiver SoC. *Kim, N.*, *TMTT June 2020 2020-2029*