Ravi R. Mazumdar

List of Publications

a) Refereed Journals

[J37] Delas, S., Mazumdar, R. R., and Rosenberg, C.; Asymptotics for HOL priority queues handling a large number of independent stationary inputs, *Queueing Systems*, Vol. 40, 2002, pp. 205-226

[J36] Likhanov, N. and Mazumdar, R.; Loss asymptotics in large buffers fed by heterogeneous long-tailed sources, *Advances in Applied Probability*, Vol. 32 (4), Dec. 2000, pp. 1168-1189.

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[J33] Mazumdar, R. and Bagchi, A.; A representation result for nonlinear filter maps in a white noise framework, *IEEE Trans. Automatic Control*, Vol. 44, No. 1, 1999, pp. 124-128.

[J32] Mazumdar, R. and Sharma, V.; Estimating traffic parameters in queueing systems based on local information, *Performance Evaluation*, Vol. 32 (3), 1998, pp. 217-230.

[J31] Rainer, C. and Mazumdar, R.; A note on the conservation law for continuous reflected processes and its application to queues with fluid inputs, *Queueing Systems*, Vol. 28, Nos. 1-3, 1998, pp. 283-291.

[J30] Theberge, F., Mazumdar, R. and Simonian; Upperbounds for blocking probabilities in large multirate loss networks, *Telecommunication Systems*, Vol. 9 (1), 1998, pp. 23-39.

[J29] Guillemin, F. and Mazumdar, R.; On pathwise analysis and existence of empirical distributions for $G/G/1$ queues, *Stochastic Processes and their Applications*, Vol. 67, No. 1, 1997, pp. 55-67

[J28] Simonian, A., Théberge, F., Roberts, J. and Mazumdar, R; Asymptotic estimates for blocking probabilities in a large multi-rate loss network, *Advances in Applied Probability*, Vol. 29, No. 3, 1997, pp. 806-829.

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[J26] Gravey, A., Hébuterne, G., Mazumdar, R. and Rosenberg, C.; Traffic engineering in ATM networks: Current trends and future issues, *Journal of the Indian Academy of Engineering and Sciences*, 25th Aniversary Special Issue, Vol. 19, No. 6, Dec. 1995, pp. 1005-1025.

[J25] Rosenberg, C., Guillemin, F. and Mazumdar, R.; A new approach for traffic characterization in ATM networks, *Proceedings of the IEE- Communications*, Vol. 142, No. 4, 1995, pp. 87-90.

[J24] Douligeris, C. and Mazumdar, R.; Multi-level flow control in telecommunication networks, *Journal of the Franklin Institute*, Vol. 331B, No. 4, 1994, pp. 417-433.

[J23] Guillemin, F., Mazumdar, R. and Simonian, A.; On heavy traffic approximations for transient characteristics of $M/M/\infty$ queues, *Journal of Applied Probability*, Vol. 33, No. 2, 1996, pp. 490-506

[J22] Mazumdar, R. and Bagchi, A.; On the relation between filter maps and correction factors in likelihood ratios, *IEEE Trans. on Information Theory*, Vol. 41, No. 3, 1995, pp. 833-836.

[J21] Guillemin, F. and Mazumdar, R.; Excursions of the workload process in $G/GI/1$ queues, *Stochastic Processes and their Applications*, Vol. 58, 1995, pp. 139-154.

[J20] Mazumdar, R. and Guillemin, F.; Forward equations for reflected diffusions with jumps, *Applied Mathematics and Optimization*, Vol. 33, No. 1, 1996, pp. 81-102.

[J19] Mazumdar, R., Kannurpatti, R. and Bagchi, A.; On Input/Output maps for nonlinear systems via continuity in a locally convex topology, *Systems and Control Letters*, Vol. 24, No. 3, 1995, pp. 273-283..

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[J17] Dijkerman, R. and Mazumdar, R.; On the correlation structure of wavelet coefficients of fractional Brownian motion, *IEEE Trans. on Information Theory*, Sept. 1994, pp. 1609-1612.

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[J14] Bagchi, A. and Mazumdar, R.; Some recent results in finitely additive white noise theory, *Acta Applicandae Mathematicae*, Vol. 35, 1994, pp. 27-47.

[J13] Guillemin, F. and Mazumdar, R.; On pathwise behavior of multiserver queues, *Queueing Systems-Theory and Applications*, Vol. 15, Nos. 1-4, 1994, pp. 279-288.

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[J7] Douligeris, C. and Mazumdar, R.; A game theoretic perspective to flow control in telecommunication networks, *Journal of the Franklin Institute*, Vol. 329, No. 2, March 1992, pp. 383-402.

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[J4] Douligeris, C. and Mazumdar, R.; Efficient flow control in a multiclass telecommunications environment, *IEE Proceedings-I, Communications, Speech and Vision*, Vol. 138, No. 6, Dec. 1991, pp. 494-502.

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b) Papers in Edited Volumes

[B7] H. Yaiche, R. Mazumdar and C. Rosenberg; A game theoretic framework for bandwidth allocation and pricing of ABR services in ATM networks, in Broadband'98, P. Kuehn, R. Ulrich eds.; Chapman and Hall, 1998.

[B6] Theberge, F., Guillemin, F. and Mazumdar, R.; Modelling and performance of ATM ABT with delayed transmission, in *Teletraffic contributions for the information age*, 15th ITC ,Washington, D.C., V. Ramaswami and P. E. Wirth eds., Elsevier Science, 1997, pp. 435-444.

[B5] Bagchi, A. and Mazumdar, R.; Direct modeling of white noise in stochastic systems, invited paper in *Stochastic Systems: Modeling, Estimation and Adaptive Control*, P. E. Caines and L. Gerenscer eds., Lecture Notes in Control and Information Sciences Vol. 161, Springer-Verlag, N.Y., 1991, pp. 1-31.

[B4] Fourneau, J-M., Gelenbe, E. and Mazumdar, R.; Instability of slotted ring local area networks, in *Computer Communications Technologies for the 90's*, J. Raviv ed., Elseviers Science Publ. B.V., North-Holland, 1988, pp. 387-401.

[B3] Mazumdar, R. and Seo, J.H.; On the analytic properties of filter maps in a finitely additive white noise framework; invited paper in *Recent Advances in Communication and Control Theory*, R. E. Kalman, G. I. Marchuk and A. Viterbi eds., Optimization Software Publ., N.Y., 1987, pp. 184-192.

[B2] Seo, J.H. and Mazumdar, R.; On the innovations problem in a finitely white noise approach to nonlinear filtering, invited paper in *Stochastic Modelling and Filtering*, A. Germani editor, Lecture Notes in Control and Information Sciences, Vol. 91, Springer-Verlag, Berlin, 1987, pp. 185-206.

[B1] Mazumdar, R. and Bagchi, A.; A finitely additive white noise approach to filtering for two-parameter diffusion processes, in *Theory and Applications of Nonlinear Control Systems*, C. I. Byrnes and A. Lindquist eds., North-Holland, Amsterdam, 1986, pp. 379-386.

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[C38] Guillemin, F., Likhanov, N., Mazumdar, R. R., and Rosenberg, C.; Extremal traffic and bounds on the mean delay of multiplexed regulated streams, Proceedings of the INFOCOM'2002, N.y., June 2002, to appear.

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[C36] Kotopoulos, C., Likhanov, N. and Mazumdar, R.; Asymptotic analysis of a GPS system fed with heterogeneous long-tailed sources, INFOCOM'2001, Anchorage, Alaska, April 2001.

[C35] Yaiche, H. , Mazumdar, R. and Rosenberg, C.; Distributed algorithms for fair bandwidth allocation to elastic services in broadband networks, IEEE INFOCOM'2000, Tel Aviv, March 2000.

[C34] Likhanov, N. and Mazumdar, R.; Cell loss asymptotics in large buffers fed with heterogeneous long-tailed sources, IEEE INFOCOM'2000, Tel Aviv, March 2000.

[C33] Kotopoulos, K, Likhanov, N. and Mazumdar, R.; Asymptotics in buffers with heterogeneous long-tailed sources and HOL service, Invited paper, Proceedings of the Allerton Conference, Montecello, Ill., Sept. 1999.

[C32] Delas, S., Mazumdar, R. and Rosenberg, C.; Cell loss in priority systems handling many sources, IEEE INFOCOM'99, N.Y., March 1999.

[C31] Likhanov, N. and Mazumdar, R.; Cell loss characteristics in buffers handling a large number of stationary sources, IEEE INFOCOM'98, San Francisco, March 1998 (**Finalist Best Paper Award**).

[C30] Guillemin, F., Mazumdar, R. and Theberge, F.; Performance of ATM Block Transfer schemes with transmission delays, 15th. International Teletraffic Congress, Washington D.C., June 25-27, 1997.

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[C27] Theberge, F. and Mazumdar, R.; An efficient heuristic for computing blocking in large multirate loss networks, IEEE GLOBECOM96, London, Nov. 1996

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[C20] Rosenberg, C., Guillemin, F. and Mazumdar, R.; On quantile measures for traffic characterization, International Teletraffic Congress (ITC) Seminar on Teletraffic Methods, Bangalore, India, Nov. 1993.

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[C13] Mazumdar, R., Mason, L. and Douligeris, C.; Fairness in network optimal flow control, Proceedings of the IEEE Conference on Telecommunications, Rio de Janeiro, Oct. 1990.

[C12] Douligeris, C. and Mazumdar, R.; Multilevel flow control of queues, Proceedings of the Conference on Information Sciences and Systems, Johns Hopkins University, May 1989.

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[C4] Mazumdar, R.; A stopping theoretic approach to minimal time detection of system parameter change, Proceedings 25th. IEEE Conference on Decision and Control, Athens, Greece, Dec. 1986, pp. 1668-1774.

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d) Invited Presentations at Conferences and Workshops

[I17] Likhanov, N. and Mazumdar, R.; Large buffer asymptotics with heterogeneous Weibullian sources, International Conference on Stochastic Optimization and Adaptation, Cochin, India, Dec. 22, 2000.

[I16] Likhanov, N. and Mazumdar, R.; Longtails and long-range dependence in network traffic- Myths and reality, NSF Workshop on Stochastic Networks, Madison, June 2000.

[I15] H. Yaiche, R. Mazumdar and C. Rosenberg; A game theoretic approach to bandwidth allocation and pricing in networks, Invited Paper, Proc. of the IEEE Intl. Conference on Communications, Control and Signal Processing (CCSP-2000), Bangalore, India, July 25, 2000.

[I14] Likhanov, N and Mazumdar, R; Queues with heterogeneous longtailed sources, Workshop on heavy tails and queues, EURANDOM, Eindhoven, The Netherlands, April 1999.

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[I2] Mazumdar, R.; The innovations process and a finitely additive version of the Girsanov theorem, Workshop on Stochastic Analysis, Silivri, Turkey, July 1986.

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e) Other Publications

[P3] L. Landwebber (U of Wisconsin) Chair, V. Cerf (Corp. for Research Initiatives), D. Farber (U of Pennsylvania), P.E. Green (IBM Research) and R. Mazumdar (Columbia University), "Networking in the Year 2000", report prepared for the United States Congress subcommittee on Science and Technology, March 1987.

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[P1] Guillemin, F., Badrinath, V. and Mazumdar, R.; Les techniques trajectorielles appliquées aux files d'attente non-stationnaires, Rapport Technique du CNET, Lannion, France, 1992.