James A. Hendler, PhD

Tetherless World Professor &
Director, Rensselaer Institute for Data
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Education

May, 1986
Department of Computer Science, Brown University, Providence, Rhode Island.
PhD -- Computer Science, Artificial Intelligence.
Thesis title: *Integrating Marker-Passing and Problem-Solving: A Spreading Activation Approach to Improved Choice in Planning*.

May, 1983
Department of Computer Science, Brown University, Providence, Rhode Island.
ScM -- Computer Science, Artificial Intelligence.
Thesis project: Implementation of a pseudo-parallel marker-passing system within a frame representation language.

May, 1982
Psychology Department, Southern Methodist University, Dallas, Tx.
MS -- Cognitive Psychology, Human Factors Engineering.
Thesis title: The Effects of a System-Imposed Grammatical Restriction on Interactive Natural Language Dialog

May, 1978
Department of Computer Science, Yale University, New Haven, Ct.
BS -- Computer Science, Artificial Intelligence.

Experience in Higher Education

2007–pres. Rensselaer Polytechnic University (RPI)
1/07 – pres, Tetherless World Constellation Chair (Endowed), joint positions in computer and cognitive science departments
9/10 – 7/12, Program Director, Information Technology and Web Science
7/12 – 9/13, Department Head, Computer Science
9/13 –pres, Director, Institute for Data Exploration and Applications
Affiliate faculty, Experimental Media and Performing Arts Center (2009-)
Affiliate, Industrial and System Engineering (2015 -)
Affiliate faculty, Center for Materials, Devices, and Integrated Systems (2015-)

1986-12/06 University of Maryland, College Park
8/99-12/06. Full Professor,
8/92-7/99. Associate Professor
1/86-8/92, Assistant Professor
Director, Joint Institute for Knowledge Discovery, 1/04-12/06.
Computer Science Department, 1986-12/06.
Institute for Systems Research, 1988-12/06.
University of Maryland Institute for Advanced Computer Studies, 1987-12/06.
Electrical Engineering Department, 1996-12/06.
Head, Autonomous Mobile Robotics Laboratory, 1993-pres.
Head, Advanced Information Technology Laboratory, 1989-pres.

Visiting Professor, DeMontfort University (part-time), 1/2008 – 12/15.
Visiting Professor, Hebrew University, Jerusalem, Israel (Oct 1995 -- Aug 1996).
Visiting Professor, Bar-Ilan University, Ramat Gan, ISRAEL (Feb-May, 1994).
Visiting Researcher, NEC Corp., Miyazaki-dai, JAPAN (Nov-Dec, 1992).
Visiting Scientist, Australian AI Institute, Melbourne, Australia (June-Aug,1991).
Guest Researcher, Cognitive Neuroscience Section, National Institutefor Neurological
Disorders and Stroke, National Institutes of Health. 1991-1995.
Visiting Scientist, International Computer Science Institute, Berkeley, CA 1989.
Lecturer, Psychology Department, Brown University, 1984.
Instructor, Computer Science Department, Wellesley College,1983,1984.

Member of Technical Staff, Texas Instruments Incorporated.
Research in Natural Language Processing and Interactive Systems,1979 --1982
Research Programmer, Yale University Artificial Intelligence Project.
Design and Implementation: Natural Language Processing Systems, 1977 --1979

Corporate Boards/Advisory Boards

Bright Hub, Advisory Board, 4/2012 – pres.
Maitreyi Capital, Advisory Board, 1/16 – 12/17.
Social Wire, Advisory Board, 1/2012 – 2016 (Acquired)
Open Data Repository, Advisory Board, 9/2011-12/2012.
Recursion Inc., Advisory Board, 1/2011 – 12/2012.
Bintro Inc., Board of Directors, 8/2008-2010 (company dissolved)
Web Science Trust, (UK charitable trust) Director, 1/2010-pres; Chair of Board, 1/2014
– pres.
Franz Inc., Advisory Board, 11/2009 – 12/2011.
Cerebra Corp, Advisory Board, 9/2005-2006.
Data-Grid, Advisory Board, 3/2005-12/1010.
Radar Networks, Advisory Board, 3/2007 – 12/2010 (Acquired)
TopQuadrant Inc, Advisory Board (chair), 3/2004-12/2010.

DoD/Govt Activities

- Review Committee, MAVEN AI Program, DOD (Via IDA), 2019/
- Directors Advisory Committee, National Security Directorate, Pacific Northwest National Labs, 4/17 – pres.
- Member, Homeland Security Science and Technology Advisory Committee, 2015-.

- Open Data Advisor, NY State, 2013-2018.
- Member, Secretary of Energy Task force on Exascale Computing, 2014.
- Senior Review Committee, Air Force Global Horizons Study, 2013.
- Internet Web Expert, US Government Data,gov project, 2010-2013.
- Member, AF Scientific Advisory Board, 2010.
- Member, AF Scientific Advisory Board panel, "Implications of Cyberwarfare," 2007.
- Member, DDR&E Biometrics Defense Technology Support Team, 2007.
- Member, Senior Advisory Group, DIA DDL, 2006.
- Member, Nasa Goddard Library Visitors panel, 2006.
- Member, National Academy Naval Studies Board report on C4I for the Navy, 2005.
- Chief Scientist for Information Systems, DARPA, 8/00-9/01
- Program Manager, DARPA, 12/98- 8/00
- Member advisory board, Air Force Information Agency, 2001 – 2003.
- Member advisory board, Air Force C2 ISR Center, 2000-2001.
- Member, Air Force Science Advisory Board (AF/SB), USAF, 9/98—12/2002.
  - Chair, Migration of Databases for Command and Control, 2001.
- Member, AF Scientific Advisory Board panel, "Information Management for the Warrior", 1998.
- Air Force Office of Scientific Research, Sept 97 – May 97
  Program Manager, Software and Systems Program
  Mathematical and Geosciences Directorate, US Air Force Research Laboratory
- Member, Special Task Force on Ballistic Missile C4I, Poet study for Ballistic Missile Defense Organization, 1998.
- Member, Defense Science Study Group, Arpa/IDA, 1/96 -- 12/97.
  Think Piece title: *Software for the Warfighter, Information Push and Pull on the digital battlefield*
  - IDA Special briefing, Warfighter Information Systems, to Gen. Welch, Pres., IDA

National/International Research Leadership Activities

- *National Academy of Public Administration*
  - Member, Standing Panel on Technology Leadership, 11/19 – pres.
  - Panelist & Author, Science and Technology Policy Assessment: A Congressionally Directed Review, 11/19
- *National Academies Science Engineering Medicine*
  - Symposium Chair, Global Data Sharing, National Academies' Symposium on International Coordination for Science Data Infrastructure, DC, 11/17.
  - Member, Board on Research Data and Information, 9/2016 – pres (renewed 2019)
  - Expert Panel, Transportation Data Distribution, *National Academy Transportation Board*, 9/2016 – 12/2017
  - National Research Council, *Communicating Science and Engineering Data in the Information Age*, Computer Science and Telecommunications Board, 2011 (Reviewer).
  - National Academy of Public Administration, Task for on Artificial Intelligence and Public Administration, 2018 (subject matter expert)

- *Other US*
  - ACM Technology Policy Committee (global), member, 2019- pres.
  - USTPC/USACM (Renamed ACM US Technology Policy Committee, 2018)
    - Chair, 2018 - pres
    - Executive Council, 2017-
    - USACM Councilor, 2015-pres (reelected 2017)
    - Chair, Digital Government Committee, 2013-2014
  - NSF
    - Executive Committee, Northeast Big Data Innovation Hub, 3/2017- pres
  - AAAS
    - Chair, Electorate Nominating Committee, Section T, 2018.
- *International*
  - Web Science Trust
    - Chair, Trustees Council, Web Science Trust, UK, 9/2015 -
    - Director/Trustee, Web Science Trust, UK, 12/2013 –
  - Health Data Research UK
    - Expert Advisor, UK, 12/2017, 3/2019

Publications

Books Authored

- Hendler, J. and Mulvehill, A. *Social Machines: The coming collision of artificial intelligence, social networking and humanity*, APress Media LLC, 10/2016. (Chinese edition: 6/2017)
- O'Hara, K., Contractor, N. S., Hall, W., Hendler, J. A., & Shadbolt, N. (2013). Web Science: Understanding the Emergence of Macro-Level Features on the World Wide Web. Foundations and Trends® in Web Science, 4(2–3), 103-267. doi: http://dx.doi.org/10.1561/1800000017
- D. Allemang and J. Hendler, *Semantic Web for the Working Ontologist*, Elsevier, March, 2008; 2nd printing, February 2009; translated into Korean (2009), Japanese (2010), Russian (2010); Second Edition (2011); Kindle Edition (2012).
- T. Berners-Lee, W. Hall, J. Hendler, N. Shadbolt and D. Weitzner, *A Framework for Web Science,* Foundations and Trends® in Web Science, 1(1), 2006.
- J. Hendler, *Integrating Marker-passing and Problem Solving: A spreading activation approach to improved choice in planning*, Lawrence Erlbaum Associates, N.J., Dec. 1987.

Books Edited

- *Handbook of Semantic Web Technologies (Vol 1 and 2),* J. Domingue, D. Fensel, and J. Hendler (eds), Springer, 2011.
- *Spinning the Semantic Web,* MIT Press, (w/D. Fensel, H. Lieberman, W. Wahlster), Jan, 2003 (2nd printing 2004; released in Japanese, 2005; soft cover release 2005)
- *The Semantic Web - ISWC 2002* (proceedings) Springer-Verlag, Lecture Notes in Computer Science 2342. June, 2002 (w/I. Horrocks)
- *Robots for Kids,* Morgan-Kaufmann Publishing, CA, March 2000. (w/A. Druin)
- *Massively Parallel Artificial Intelligence: Architectures and Algorithms,* AAAI/MIT Press, June, 1994. (W/H. Kitano).

- *Handbook of NeuroPsychology,* Volume 9, (Section Editor), Elsevier, North-Holland, 1994. (F. Boller and J. Grafman Series Editors)
- *Artificial Intelligence Planning Systems: Proceedings of the First International Conference,* Morgan-Kaufmann, CA, June, 1992.
- *Readings in Planning,* Morgan-Kaufmann, Ca., May, 1990. (w. James Allen and Austin Tate).
- *Expert Systems: The User Interface,* Ablex, N.J. Nov., 1987.

Chapters in Books

Domingue, J., Fensel, D., and Hendler, J. Introduction to the Semantic Web Technologies, *Handbook of Semantic Web Technologies,* 2011.

Lebo, T., Erickson, J.S., Ding, L., Graves, A., Williams, G.T., DiFranzo, D., Li, X., Michaelis, J., Zheng, J., Flores, J., Shangguan, Z., McGuinness, D.L., and Hendler, J. Producing and Using Linked Open Government Data in the TWC LOGD Portal. D. Wood (ed), Linking Government Data, pages 51–72. New York, 2011. 10.1007/978-1-4614-1767-5_3

Fox, P. and Hendler, J., Semantic eScience, in *The 4ᵗʰ Paradigm*, Microsoft Press, 2009.

Hendler, J., "The Semantic Web from the Bottom Up: A Little Semantics Goes a Long Way, in Thomas Bartscherer and Roderick Coover (eds), *Switching Codes: Thinking Through New Technology in the Humanities and the Arts, University of Chicago Press, 2009.*

Hendler, J. and van Harmelen, F., The Semantic Web: Webizing Knowledge Representation, in van Harmelen, F., Lifschitz, V. and Porter, B (eds) *Handbook of Knowledge Representation*, Elsevier North Holland, Dec. 2008.

Jennifer Golbeck, Aaron Mannes and James Hendler, Semantic Web Technologies for Terrorist Network Analysis, in *Emergent Technologies and Enabling Policies for Counter Terrorism,* Wiley-IEEE Press, *2007.*

Daniel Weitzner, Jim Hendler, Tim Berners-Lee, and Dan Connolly. Creating a policy-aware web: Discretionary, rule-based access for the world wide web. In Elena Ferrari and Bhavani Thuraisingham, editors, *Web and Information Security*. IRM Press, 2006.

Jennifer Golbeck, Amy Alford, and James Hendler. , Organization and Structure of Information using Semantic Web Technologies in *Handbook of Human Factors in Web Design*. 2003.

"Knowledge is Power: The Semantic Web Vision" (2001), *LNAI(2198)Web Intelligence: Research and Development*, N. Zhong, Y. Yao, J. Liu and S. Ohsuga (eds.), Springer-Verlag, Berlin, Germany (w.E. Feigenbaum).

PETS: A personal Electronic Teller of Stories, *Robots for Kids,* A. Druin and J. Hendler (eds), Morgan Kaufmann, CA 2000 (w/J. Montemayor and A. Druin)

`"Languages, Behaviors, Hybrid Architectures and Motion Control" (1997)," *Essays in Mathematical Control Theory (in honor of the 60th birthday of Roger Brockett),* (eds. John Baillieul and Jan C. Willems), Springer-Verlag. (w/ V. Manikonda, P. S. Krishnaprasad)

"Conncert: A modular approach to the design of connectionist archtectures," in C. Wilson (ed.) Progress in Neural Network, Ablex, NJ, 1997. (W/A. Wilson)

"Parka on MIMD-Supercomputers," in J. Geller (ed.) *Parallel Processing in AI,* 1997 (w/K. Stoffel)

"High Performance Support for Case-Based Planning Applications," in A. Tate (ed) *Advanced Planning Technology,* MIT/AAAI Press, Menlo Park, CA., USA, May 1996 (w/ K. Stoffel and A. Mulvehill).

"Examining a Hybrid Connectionist/Symbolic System for the Analysis of Ballistic Signals," in R. Sun and L. Bookman (eds.), *Computational Architectures Integrating Neural And Symbolic Processes,* Kluwer, Norwell, MA, 1995. (w/ C. Lin).

"Methodologies for the Computer Modeling of Human Cognitive Processing," in F. Boller and J. Grafman (ed.) *Handbook of NeuroPsychology, Volume 9,* Elsevier, North-Holland, 1994.

"Massively Parallel Matching of Knowledge Structures," in *Massively Parallel Artificial Intelligence* , Kitano, H. and Hendler, J. (eds.), AAAI/MIT Press, 1994 (w/ W. Andersen, M. Evett, and B. Kettler) ii. (expanded version of) *Knowledge Building and Knowledge Sharing,* K. Fuchi and T. Yokio (eds), Ohmsha Ltd., Tokyo Japan, 1994 (w/ W. Andersen)

"A Chemical Tank Control System," in *Hybrid Neural Network and Expert Systems*, L. Medsker, Kluwer Academic Publishers, 1993. (w/A. Wilson, Y. Cui)

"On Beyond Syntax: Use of LCS and Discourse for Intelligent Tutoring," in M. Holland, J. Kaplan, and M. Sams, *Intelligent Language Tutors: Balancing Theory and Technology,* Lawrence Erlbaum Associates, Hillsdale, NJ, 1994. (w/ B. Dorr, S. Blanksteen and B. Migdalof)

"Providing Computationally Effective Knowledge Representation via Massive Parallelism," in *Parallel Processing for AI,* L. Kanal, V. Kumar, H. Kitano and C. Suttner (eds.) Elsevier, 1994 (w/M. Evett and W. Andersen)

"Support for Modular and Interoperable Connectionist Components," in *Progress in Neural Networks,* J. Wilson (ed.), 1993 (w/ A. Wilson and R. Belew)

"A Review of AI Planning Techniques" in Readings in Planning , Allen, J., Hendler, J., and Tate, A. (eds.) 1990 (with A. Tate and M. Drummond)

"Problem Solving and Reasoning: A Connectionist Perspective," in *Connectionism in Perspective* R. Pfeifer, Z. Schreter, & L.Steels (eds.) Amsterdam: Elsevier, 1989.

"Spreading Activation Over Distributed Microfeatures" in D. S. Touretzky (ed.) *Advances in Neural Information Processing Systems 1*. San Mateo, CA: Morgan Kaufman, 1989.

"Developing Hybrid Symbolic/Connectionist Models," in Advances in Connectionist and Neural Computation Theory , J. Barnden and J. Pollack (eds.) Ablex, NJ March, 1991.

"Designing Interfaces for Expert Systems," in *Expert Systems: The User Interface* J. Hendler (ed.) Ablex, N.J., November, 1987. (with C. Lewis)

"Extending Marker-Passing to Microfeatures," *Models of Cognition* , N. Sharkey (ed.) Ablex, N.J. 1989.

"Issues in the design of Marker-Passing systems" in *The Role of Language in Problem-Solving - II* Jernigan, R., Hamill, B. and Weintraub, D. (eds.) Feb., 1987.

"Artificial Intelligence and Human Factors Engineering: A Necessary Synergism in the Interface of the Future" in *Directions in Human/Computer Interaction* Badre, A. and Shneiderman, B. (eds.) Ablex, N.J. 1982. (with P. Michaelis and M. Miller)

Journals and Scientific Publications

Special Issues Edited

- *IEEE Computer,* Web Science, June, 2018
- *IEEE Intelligent Systems,* Cognitive Computing, 32(4), 2017.
- *AI Magazine,* Semantics for Big Data, Spring, 2015.
- *Philosophical Transactions of the Royal Society A,* N. Shadbolt, W. Hall, J. Hendler and W. Dutton (eds), Web Science a New Frontier, 371, Feb 2013.
- *IEEE Intelligent Systems*, J. Hendler, W. Hall (eds), Society on Line, (part II), Jan./Feb 2011)
- *Journal of Web Semantics*, J. Hendler, P. Mika (eds), ISWC challenge, 7(4), Dec 2009.

- *IEEE Intelligent Systems*, J. Hendler, W. Hall (eds), Society on Line, Nov/Dec 2009 (part II, Jan./Feb 2011)
- *IEEE Intelligent Systems*, J. Hendler (ed), The Semantic Web Revisited, May/June, 2008.
- *IEEE Intelligent Systems*, J. Hendler (ed), The Future of Artificial Intelligence: a special issue in honor of the 50ᵗʰ anniversary of the Dartmouth Conference, May/June, 2006.
- *IEEE Intelligent Systems*, D. De Roure, Y. Gil, and J. Hendler (editors), Intelligent Systems for Science, Jan/Feb 2004.
- *Artificial Intelligence*, J. Hendler and D. McDermott (editors), Special Volume on Planning Systems, 76, 1996.
- *Journal of Experimental and Theoretical AI,* J. Hendler (editor), Special Issue on Implemented AI Systems, 7(1), 1995.
- *Connection Science, J. Hendler Editor,* Special Issue on Hybrid Connectionist/Symbolic models, *1(3), 1989*.
- *IEEE Intelligent Systems* , J. Hendler (editor), Special Issue on Intelligent Agents, J. Hendler, Dec. 1996 (additional articles in 1997.)
- *IEEE Intelligent Systems*, J. Hendler (editor), Special Issue - More Intelligent Agents, April, 1999.

Refereed Articles in Journals or other Scientific Publications
- Marjorie McShane, Selmer Bringsjord, James Hendler, Sergei Nirenburg, Ron Sun, Response to Núñez et al.'s (2019) 'What happened to cognitive science?, *Topics in Cognitive Science*, 2019.
- Qingpeng Zhang ; Dominic DiFranzo ; Marie Joan Kristine Gloria ; Bassem Makni ; James A. Hendler, Analyzing the Flow of Trust in the Virtual World With Semantic Web Technologies, *IEEE Transactions on Computational Social Science*, 8/2018.
- Jim Hendler, Noshir Contractor, and Wendy Hall, Web Science: Now More than Ever, *IEEE Computer,* June 2018
- Makoto Nakatsuji, Qingpeng Zhang, Xiaohui Lu, Bassem Makni, James A. Hendler, Semantic Social Network Analysis by Cross-Domain Tensor Factorization. *IEEE Trans. Comput. Social System*s 4(4): 207-217 (2017)
- Ellis, S. and Hendler, J., Computers Play Go, Computers Play Chess, Humans Play Dungeons and Dragons, IEEE Intelligent Systems, 32(*4*), 2017.
- M Sridharan, G Tesauro, J Hendler, Cognitive Computing, *IEEE Intelligent Systems*, 32(4), 2017.
- Huang, Lifu, Jonathan May, Xiaoman Pan, Heng Ji, Xiang Ren, Jiawei Han, Lin Zhao, and James A. Hendler. "Liberal Entity Extraction: Rapid Construction of Fine-Grained Entity Typing Systems." *Big Data* 5, no. 1 (2017): 19-31.
- Xian Li, James A. Hendler & John L. Teall (2016) Investor Attention on the Social Web, Journal of Behavioral Finance, 17:1, 45-59, DOI: 10.1080/15427560.2015.1095752
- J. Hendler and W. Hall, Science of the World Wide Web, *Science,* Nov 11, 2016.
- P. Date, J. Hendler, and C. Carothers, Design Index for Deep Neural Networks, *Procedia Computer Science*, 88, 2016.
- A. Bernstein, J. Hendler, and N. Noy, A new look at the Semantic Web, *Communications of the ACM,* 9/16.

- Q. Zhang, D. Zeng, F. Wang, R. Breiter and J. Hendler, Brokers or Bridges: Structural Holes in Crowdsourcing System, *IEEE Computer,* 49(6), 6/2016.
- Alexei Bulazel, Dominic DiFranzo, John S. Erickson, and James A. Hendler, The Importance of Authoritative URI Design Schemes for Open Government Data, *Int'l Journal of Public Administration in the Digital Age*, 3(2), April, 2016.
- Nakatsuji, Makoto, Hiroyuki Toda, Hiroshi Sawada, Jin Guang Zheng, and James A. Hendler. "Semantic sensitive tensor factorization." *Artificial Intelligence* 230 (2016): 224-245.
- Zheng JG, Howsmon D, Zhang B, Hahn J, McGuinness D, Hendler J, Ji H. Entity linking for biomedical literature. *BMC medical informatics and decision making*, 15(Suppl 1), 2015
- J Ryan J, Hendler J, Bennett KP (2015) Understanding emergency department 72-hour revisits among Medicaid patients using electronic healthcare records. *Big Data* 3:4, 238–248, DOI: 10.1089/big.2015.0038.
- T. Manzini, S. Ellis and J. Hendler, A Play on Words: Using Cognitive Computing as a Basis for AI Solvers in Word Puzzles, *Journal of Artificial General Intelligence*, 6(*1*), 2015. 109-130.
- Nidhi Rastogi, Marie Joan Kristine Gloria, and James Hendler, Security and Privacy of performing Data Analytics in the cloud – A three-way handshake of Technology, Policy and Management, *Journal of Information Policy,* Vol 5., 2015, p. 129-154.
- Makoto Nakatsuji, Ysuhiro Fujiwara, Hiroyuki Toda, Hiroshi Sawada, Jin Zheng, and James A. Hendler.中辻 真，藤原靖宏，戸田浩之，澤田 宏，チェン ジン，ヘンドラー ジェームズ：セマンティクスを用いたテンソル分解手法, *Transactions of the Japanese Society for Artificial Intelligence*, 30(3), 2015. (*Selected as best paper of 2015 by JSAI)*.
- K. Janowicz, F. van Harmelen, J. Hendler, and P. Hitzler, Why the Data Train Needs Semantic Rails, *AI Magazine*, 36(1), 2015.
- Hendler, J., Data Integration for Heterogeneous Datasets, *Big Data, 2(4),* December, 2014 (doi:10.1089/big.2014.0068)
- Y. Gil, M. Greaves, J. Hendler, and H. Hirsh, Amplify scientific discovery with artificial intelligence, *Science, 346(6206),* October 2014.
- P. Fox and J. Hendler, The Science of Data Science, *Big Data*, 2(2), June, 2014
- Tiropanis, T., Hall, W., Hendler, J., & de Larrinaga, C. (2014). The Web Observatory: A Middle Layer for Broad Data. *Big Data*, *2*(3), 129-133
- Fei-Yue Wang, Daniel Zeng, Qingpeng Zhang, Jim Hendler and Jianping Cao, The Chinese "Human Flesh" Web: The First Decade and Beyond, *Chinese Science Bulletin*, June, 2014
- Alvaro Graves, James A. Hendler: A study on the use of visualizations for Open Government Data. Information Polity 19(1-2): 73-91 (2014)
- J. Hendler and A. Hugill, The Syzygy Surfer: (ab)using the Semantic Web to Inspire Creativity, *Int'l Journal of Creative Computing,* 1(1), Dec, 2013.
- John S. Erickson, Amar Viswanathan, Josh Shinavier, Yongmei Shi, Jim Hendler, Open Government Data: A Data Analytics Approach, *IEEE Intelligent Systems, Sept/Oct 2013*.
- P. Basu, J. Bao, M. Dean and J. Hendler, Preserving Quality of Information by using Semantic Relationships, *J. Pervasive and Mobile Computing,* 2013. (http:..dx.doi.org/10.1016/j.pmcj.2013.07.013)
- K. Krasnow and J. Hendler, Getting the Dirt on Big Data, *Big Data*, 1(*3)*, 2013.

- J. Hendler, Peta vs. Meta, *Big Data,* 1(*2*), 2013 (invited)
- N. Shadbolt, W. Hall, J. Hendler, and W. Dutton, Web Science: A new frontier, *Philosophical Transactions of the Royal Society,* 371*(1987),* 2013.
- J. Hendler, Broad Data, *Big Data,* 1(*1*), 2013 (invited)
- Tiropanis, T., Hall, W., Shadbolt, N., DeRoure, D., Contractor, N. and Hendler, J., The Web Science Observatory, *IEEE Intelligent Systems,* March/April, 2013.
- Hendler, James; Holm, Jeanne; Musialek, Chris; Thomas, George, US Government Linked Open Data: Semantic.Data.Gov, *IEEE Intelligent Systems*, 27(3), May, 2012.
- Zhang, X., Yoon, S., DiBona, P., Appling, D., Ding, L., Doppa, J., Greenyy, D., Guo, J., Kuter, U., Levine, G., MacTavish, R., McFarlane, D., Michaelis, J., Mostafa, H., Ontanon, S., Parker, C., Radhakrishnan, J., Rebgunsyy, A., Shresthay, B., Song, Z., Trewhitt, E., Zafar, H., Zhang, C., Corkill, D., DeJong, G., Dietterich, T., Kambhampati, S., Lesser, V., McGuinness, D.L., Ram, A., Spearsyy, D., Tadepalli, P., Whitaker, E., Wong, W., Hendler, J., Hofmann, M., and Whitebread, K. An Ensemble Learning and Problem Solving Architecture for Airspace Management. *Transactions on Intelligent Systems and Technology, 3(4),* 2012.
- Li Ding; Timothy Lebo; John S Erickson; Dominic DiFranzo; Alvaro Graves; Gregory T Williams; Xian Li; James Michaelis; Jin Zheng; Zhenning Shangguan; Johanna Flores; Deborah L McGuinness; James A Hendler, TWC LOGD: A Portal for Linked Open Government Data Ecosystems, *Journal of Web Semantics*, 9(*3),* 2011.
- J. Fernheimer, L. Litterio, and J. Hendler, Transdisciplinary ITexts and the Future of Web-Scale Collaboration, Journal of Business and Technical Communication, 2011.
- P. Fox and J. Hendler, Changing the Equation on Scientific Data Visualization, *Science,* 331, 11 Feb 2011, 705-708.
- Eric Horvitz, Lise Getoor, Carlos Guestrin, James A. Hendler, Joseph A. Konstan, Devika Subramanian, Michael P. Wellman, Henry A. Kautz: AI Theory and Practice: A Discussion on Hard Challenges and Opportunities Ahead. *AI Magazine* 31(3): 103-114 (2010)
- Fei-Yue Wang, Daniel Zeng, James A. Hendler, Qingpeng Zhang, Zhuo Feng, Yanqing Gao, Hui Wang, and Guanpi Lai, A Study of the Human Flesh Search Engine: Crowd-Powered Expansion of Online Knowledge, *IEEE Computer*, 43(8), Aug 2010.
- G. Williams, J. Weaver, M. Atre and J. Hendler, Scalable Reduction of Large Datasets to Interesting Subsets, *Journal of Web Semantics*, 8(4), 2010.
- J. Hendler, T. Berners-Lee, From the semantic web to social machines: A research challenge for AI on the World Wide Web, *Artificial Intelligence*, Volume 174, Issue 2, February 2010, Pages 156-161 (doi: 10.1016/j.artint.2009.11.010)
- Peter Mika, Jim Hendler: The 2008 Semantic Web challenge, *J. Web Sem*. 7(4): 271 (2009)
- J. Hendler, W. Hall, N. Shadbolt, T. Berners-Lee and D. Weitzner, Web Science: An interdisciplinary approach to understanding the World Wide Web, *Communications of the ACM*, July, 2008. Also:
  - Computer Society of India Communications, August, 2008.
- D. Weitzner, H. Abelson, T. Berners-Lee, J. Feigenbaum, J. Hendler and G. Sussman, Information Accountability, *Communications of the ACM*, June, 2008.
- J. Hendler and J. Golbeck, Metcalfe's law, web 2.0, and the semantic Web, *Journal of Web Semantics*, 6(1), 2008

- Tim Berners-Lee, Dan Connolly, Lalana Kagal, Yosi Scharf, and Jim Hendler, N3Logic: A Logical Framework For the World Wide Web, *Theory and Practice of Logic Programming (TPLP)*, 2008
- J. Golbeck and J. Hendler, A Semantic Web Approach to the Provenance Challenge, *Concurrency and Computation: Theory and Practice*, 2007
- T. Berners-Lee, W. Hall, J. Hendler, N. Shadbolt, and D. Weitzner, Creating a Science of the Web, *Science*, *311*, 2006.
- J. Golbeck and J. Hendler, Inferring trust relationships in web-based social networks, *ACM Transactions in Internet Technology, 6(4),* 2006.
- J. Hendler, Knowledge is Power: A View from the Semantic Web, *AI Magazine,* 26(4), 2005.
- G. Jiang, G. Cybenko and J. Hendler, Semantic Interoperability and Information Fluidity, *Int'l Journal of Cooperative Information Systems*, 2006.
- Aditya Kalyanpur, Bijan Parsia, Evren Sirin, and James Hendler. Debugging unsatisfiable classes in owl ontologies. *Journal of Web Semantics*, 3(*4)*,2005.
- Aditya Kalyanpur, Bijan Parsia, Evren Sirin, Bernardo Cuenca-Grau, and James Hendler. Swoop - a web-ontology editing browser. *Journal of Web Semantics*, 4(2), 2005.
- U. Kuter, E. Sirin, D. Nau, B. Parsia and J. Hendler, Information Gathering During Planning for Web Service Composition, *Web Semantics Journal* 3(1) 2005.
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- ``Refitting Plans for Case-based Reasoning", Proceedings DARPA symposium on Case-based Reasoning, Clearwater Beach, Fl., May, 1988. (w/ S. Kambhampati)
- ``Adaptation of Plans via Annotation Verification," Proceedings 1st International Conference on Industrial and Engineering Applications of AI and Expert Systems, Tullahoma, Tenn. June, 1988. (w/ S. Kambhampati)
- ``Near-Term Event Projection through Dynamic Simulation or How Did the Robot Cross the Road?," 2nd Conference on AI and Simulation, Feb, 1988. (w/ J. Sanborn)
- ``Expert Systems Interfaces," Proceedings American Society of Mechanical Engineers, Symposium on AI Methodology, Boston, Dec. 1987.
- ``AIRS: An AI-Based Ada Reuse Tool," Proceedings of AIDA-87, Washington D.C., Nov. 1987, p.1-24. (w/ Y. Wong, A. Vinciguerra, and J. Mogilensky)
- Marker-passing and microfeatures, Proceedings of the 10th IJCAI, Milan, August, 1987, 151-155.
- Learning Significant Class Descriptions, Proceedings SPIE conference on applications of Artificial Intelligence V, April, 1987. (w/ J. Blumberg)
- Enhancing Instances, ACM SIGPLAN Notices, September, 1986.
- The Design of Marker-Passing Systems, Proceedings of the first Connectionist Models Summer School, Carnegie Mellon Univeristy, June, 1986.
- Heuristic Methods of Exploiting the Underlying Structure of Rule-Based Systems, Proceedings of the NASA conference on Applied AI , May, 1986
- Viewing Object-Oriented Programming as an Enhancement of Data Abstraction Methodology Proceedings of the 19th Annual Hawaii International Conference on System Sciences , Jan. 1986. (w/ P. Wegner, nominated for best paper)
- Integrating Marker-passing and Problem Solving, Proceedings of the Cognitive Science Society Conference , 1985.
- The Effects of Limited Grammar On Interactive Natural Language, Proceedings: Human Factors in Computing Systems ,3. (w/ P. Michaelis)
- "A Message Passing Control Structure for Text Understanding" Proceedings of the 9th International Conference on Computational Linguistics , July, 1982 p.307-312. (w/ B. Phillips)
- The impatient tutor: A Message Passing Control Structure for Text Understanding Proceedings of the 3rd Annual Conference of the Cognitive Science Society, May 1982. (w/ B. Phillips)

- "Issues in the Design of Natural Language Front-ends" Proceedings of the 1981 National computer Conference , Feb., 1981. (w/ Kehler, T., Michaelis, P.R., Phillips, B.Ross, K. and Tennant, H.)
- "The Impatient Tutor: An integrated natural language understanding system" Proceedings of the 8th International Conference on Computational Linguistics , Sept. 1980. (w/ B. Phillips)

Government Reports (primary author, unclassified only)

- Science and Technology Policy Assessment: A Congressionally Directed Review, National Academy of Public Administration, 2019.
- Project Maven Review Panel Report, Undersecretary of Defense Review, 2019.
- Artificial Intelligence for Homeland Security, J. Hendler Chair, Homeland Security Science and Technology Advisory Committee, March, 2017.
- Database Migration for Air Force Command and Control, J. Hendler Chair, Air Force Scientific Advisory Board, Jan 2002.

Technical Reports, Posters and Workshop Papers

More than 150 technical reports, posters or workshop papers dating 1978-pres.

OpEds, Popular Press Articles, Online opinion articles and "media appearances"
(interviews or appearances; short quotes and press releases not included)

- WAMC (Northeast NPR) Roundtable: morning talk show (weekly participant, 9/2018- pres)
- Conversational AI Can Propel Social Stereotypes, *Wired*, 1/14/2020 (w/S. Horowit-Hendler).
- As governments adopt artificial intelligence, there's little oversight and lots of danger, *The Conversation*, April, 2019.
- WAMC podcast: The Erie Canal: Compressing Time and Distance (https://wamcpodcasts.org/podcast/the-erie-canal-compressing-time-and-distance/) 9/18.
- Interview on Cambridge Analytica and Facebook data-mining, WAMC radio, 3/18.
- An AI Lesson from Stanislav Petrov, the Man Who Saved the World, OpEd, robotrepublic.org, 9/17.
- Vox Pop, Open Forum on Cybersecurity, call in show (sole guest), WAMC, 5/17
- RPI's Hendler Considers Reported CIA Hacking, WAMC interview, 3/2017
- Alexa, What's the Future of AI?, panelist, NPR Onpoint, 1/2017.
- Emerging AI (新興人工知能), NHK Television, Japan, 1/2017.
- The Future of Artificial Intelligence, FutureTech Podcast, 12/28/16.
- Why the Latest AI Wave Will Gain Momentum in the Coming Year, interview, SingularityHub, 12/26/16.
- Building Social Machines on the World Wide Web, John Batchelor Podcast, 12/1/16.
- RPI's Hendler On What We Are Learning from Election Data, WAMC Radio, 11/11/16. Fear Not, AI May be Our Best New Partners in Creative Solutions – A conversation with Dr. James Hendler, TechEmergence Podcast, April, 2016.
- The Imitation Game: interview on CBS News Sunday Morning about Alan Turing and his contributions to science, 10.2014.

The 25th Anniversary of the World Wide Web: interview on Voice of America, various short segments and quotes in newspapers

- It's Time to Reform the Computer Fraud and Abuse Act, Scientific American Forum (online), August, 2013.
- Elementary my Dear Watson – an interview with James Hendler, GEEK Magazine, 1(2), June 2013.
- The Rensselaer IDEA, Short interview, WAMC radio, June, 2013.
- Watson Tries to Learn… Everything, Interview Podcast, IEEE Spectrun Techwise Conversations, May 2013.
- Cyber Attacks Can Happen Anywhere, Short interview, WAMC radio, April, 2013.
- *OpEd:* Let's Help Computer-Science Students Crack the Code, *Chronicle of Higher Education,* March, 2013.
- *OpEd:* Watson goes to College: how the world's smartest PC will revolutionize AI, *GigaOm*, March, 2013.
- "IBM's Watson Goes to School: A Q&A with RPI's Jim Hendler," *Washington Post* (blog), February, 2013 (and other Watson interviews)
- *OpEd:* "Proposed Defense Department Rules may Stifle University Research," *Politico*, February, 2012
- Open Government Data, WAMC Speakers Corner, WAMC radio, Dec. 2012
- *OpEd:* "Are we the Web," *GigaOm*, August 2011.
- Frequent Flier: To share Grievances, Microblogging the Frustrations of Flight, New York Times (p. B-6), August 2, 2011 (as told to Joan Raymond)
- "The Science of the Web," NPR Academic Minute, May 2011.
- "Web Experts Ask Scientists to Use the Web to Improve Understanding, Sharing of Their Data in *Science* Magazine." Interview in TechCrunch repeated in numerous online sources, Press Release from RPI picked up in various papers, February, 2011 (With P. Fox)
- "Let's Play Jeopardy," NPR Roundtable on the IBM Watson Jeopardy computer, Feb 2011. (Quotes from this and other quotes on Watson were picked up in numerous papers).
- "Mining Gold from Government Data Sets," discussion of RPI work in the Data,gov project reported in the NY Times blog, ABC news, USA Today and various news agencies around the world (With D. McGuinness, 2010 and continuing).
- "More Web Smarts," article on Tetherless World Constellation, Albany Times Union, 7/2010.
- "Open Government Data," Talis podcast, 8/2009.
- "Jim Hendler shares AI's Lessons for Semantic Web," Talis podcast, accompanying articles (http://blogs.zdnet.com/semantic-web/?p=123), 3/2008.
- "Hendler's Goal, Information Everywhere," SemanticWeb.com interview/article, 2/2008.
- "A question of semantics," PC Magazine interview, Mar. 2007
- "The Semantic Web," Interview with Austrian Broadcasting Company, Jan 2007
- "Artificial Intelligence Eyes a Smart Future," *Electronic Design Magazine,* Jan 12, 2006.
- "The Future of Search," Interview on NPR's Mark Steiner Show, May 2004
- "The Semantic Web," Interview on BBC Radio "Material World" show, April,. 2004.

- An interview with Jim Hendler, Assoc of Info Systems SIG Semantic Web Bulleting, April, 2004.
- "OWL becomes a W3C recommendation" Numerous interviews and press releases related to the release of the OWL Web Ontology Language by the W3C, Feb 2004.
- "A robot that jogs", Live interview on WTOP news radio, December, 2003.
- "Interview with James Hendler on the Semantic Web" *Wirtschafts Informatik,* 44(5) November 2002 *481-483*.
- "Inteview with AI Expert," PBS Live television interview, MPT, 12/01.
- "Artificial Intelligence", radio talk show, *Public Interest,* National Public Radio, 10/00
- "DARPA's Hendler looks to a more searchable Web", IEEE Spectrum, 1/01
- "Robots for Kids", *Discover* Magazine report, 12/00
- "Entrevista con: James Hendler", En.red.ando Web magazine, interview (Spanish), 6/00
- "The Darpa Agent Markup Language," report on my work, *PC Week,* 2/7/00.
- "The future of AI", Interview and Chat, CNN.COM, 12/99.
- "Intelligent Agents," Sounds like Science, Interview, National Public Radio, 3/1999.
- "Bespoke Web Agents," Radio interview, German Public Radio, 3/1999.
- ``When the computer wins," Australian Broadcasting Company, Television Interview, 5/1997.
- ``Kasparov vs. Deep Blue," Australian Broadcasting Company, Radio Interview, 5/1997.
- ``Robots in the News," Nickolodeon News, Interview, 2/97.
- ``Hal's Birthday," Christian Science Monitor Radio, interview quotes. 12/97.
- A number of newspaper articles and TV news reports on the robotics competitions at the University of Maryland.
- "Artificial Intelligence: yesterday, today and tomorrow," Currents in Modern Thought, *The World & I* , Aug 1995.

Invited Lectures Since 2010

Invited Talks at conferences/workshops *(since 2010)*

- Is it time to regulate Artificial Intelligence?, Invited talk, Annual Conference 2019, National Academy of Public Administration, 11/19.
- AI in the era of Watson, Deep Learning and the Semantic Web, Keynote: (First) Hudson Valley TechFest, Newburgh, NY, 10/19.
- Ethical Challenges for Artificial Intelligence, North East Research and Education Network Seminar on"Bridging the Gap: AI and Machine Learning," Holyoke, MA, 10/19.
- Knowledge and Learning, Keynote, L'usine cognitive: quelle intelligence artificielle (IA) pour les PME québécoises et canadiennes du secteur manufacturier?, Montreal, *Canada,* 3/19.
- The Future(s?) of the Web, Keynote, Xornadas de Filosofía da Ciencia, A Coruña, Spain, 3/19.
- The unreasonable Power of Metadata, Keynote, Semantic Web in Libraries, Bonn, *Germany*, 11/18.

- Integrating Knowledge and Learning, Keynote, IBM Workshop on Integrating Knowledge and Machine Learning, Boston, 10/18.
- Semantic Web: Vision, Reality, Revision, Keynote, Chinese Conference on Knowledge Graphs and the Semantic Web, Tianjin, *China*, 8/18.
- Increasing the PACE: Challenges in using machine learning from data, Keynote, International Symposium on Data, Information and Society, Nanjing, *China,* 7/18.
- Data Science at Rensselaer (RPI), Invited Talk, UN Global ICT Capacity Building Symposium, Santa Domingo. *Dominican Republic*, 6/18.
- Enhancing Precision Wellness with Knowledge Graphs and Semantic Analytics, invited presentation, BIO-IT,Boston, MA, 5/18
- The Collision of Artificial Intelligence, Social Networking, and Humanity, Future Technology Conference, Vancouver, Canada, 11/17
- Digital Objects and the Web, NFAIS/CENDI conference on digital objects, Natl Library of Medicine, DC, 11/17.
- Global Data Sharing, National Academies' Symposium on International Coordination for Science Data Infrastructure, DC, 11/17.
- The Unreasonable Effectiveness of Metadata, keynote, VIVO yearly symposium, NY, NY, 8/2017.
- Metadata and Data in Open Science, Keynote, International Symposium on Open Data and Innovation: Vision and Practice, Beijing, *China*, 7/17.
- Digital Archiving, the Semantic Web and Modern Artificial Intelligence, Spotlight Award Recipient Keynote, Digital Assets Symposium, NY, NY, 4/17.
- Knowledge Representation in the Age of Deep Learning, Watson, and the Semantic Web, Intl Symposium on Designing Semantics, Kyoto, *Japan*, 3/17.
- Social Machines: The coming collision of AI, Social networks and Humanity, University of Iowa Computing Conference, (Public) Distinguished Keynote, Iowa City, Iowa, 2/17.
- Social Machines, Special Symposium Celebrating Ten Years of Web Science, Northwestern University, 11/16.
- Rethinking Data Curation, National Academy Symposium on Scalable Semantics, 10/16.
- Knowledge Representation in the Age of Deep Learning, Watson, and the Semantic Web, keynote, IJCAI 2016, NY, NY, 7/16.
- Wither OWL, Extended Semantic Web Conference, Crete, *Greece*, 6/16.
- Whither OWL in a Knowledge-Graphed, Linked-Data World, OntologySummit2016 Symposium, Washington, DC, May 2016.
- On Beyond OWL, keynote, OWLed Workshop, ISWC, Lehigh PA, May 2015.
- Touring the World Wide Web, Jim Hendler, Heng Ji and Mei Si, Late Breaking Research Presentation, *Web Science 2015*, Oxford, *UK*, 7/2015.
- Broad Data, Keynote, Indian KDD Conference (CODS2015), Bangalore, *India*, 3/2015.
- Converging forces: the Web of Data, Language processing and Semantic metadata, Keynote, KDD2014 Workshop on Discovery Informatics, NY, NY 8/2014.
- Broad Data, Keynote, Extraction et Gestion des Conaissances (EGC2014), Rennes, *France* (via skype), 1/2014

- Smart Health, Data Challenges of Healthcare Analytics, Keynote, Beijing, *China*, 8/13.
- Peta vs. Meta, Rethinking Data Interoperability on the World Wide Web, Keynote, European Commission Semantic Interoperability Conference, Dublin, *Ireland*, 6/13.
- Opening the Data, Open Source Festival 2013, SUNY Albany, 4/2013
- The Internet is the new Library: a technologist's thoughts on MOOCs, Teaching and Learning Symposium, RPI, 4/2013.
- Semantic Web at RPI, Boston Semantic Web Research, Boston, 4/2013
- Data Big and Broad, Keynote, Digital Research 2012, Oxford, *UK*, 9/2012
- The Web of Data vs. The Accessibility Challenge, Keynote, W4A Conference, Lyon, *France*, 4/2012.
- US Open Government Efforts, UK "Gov Camp 2012", London, *England*, 1/2012.
- Linked Open Government Data, Keynote, Semantic Technologies and Business East, Washington DC, 12/2011.
- Semantic Web: Reviewing and Renewing the Vision, Keynote, Semantic Technologies for Intelligence, Defense and Security, Washington DC, November, 2011
- Social Machines: We are the Web, Keynote, 2nd Brazilian Symposium on Web Science, Rio De Janeiro, *Brazil*, August, 2011.
- "Why the Semantic Web will Never Work" (note the quotes), Keynote, European Semantic Web Conference, Heraklion, *Crete*, June, 2011.
- The Semantic Web at 10, Keynote, 1s International Conference on Web Intelligence, Mining and Semantics (WIMS11), Sogndal, *Norway*, May, 2011.
- Semantic Web Science, Shenzhen Symposium on Web Science and Technology, Tsinghua University, Shenzhen, *China*, May, 2011.
- Interoperability, Standards, and Linked Data, National Academy of Science Workshop on Scientific Discovery of Knowledge, Washington DC, 3/2011.
- Semantic Web Science, Annenburg Conference on Network Science meets Web Science, Chicago, 3/2011.
- Linked Open Government Data, Korean Symposium on Web Science, Seoul, *Korea*, 2/2011
- Web 3.0 Emerges, keynote, Chinese Semantic Web Conference, Beijing, *China*, 8/2010
- Semantic Web 2010 Status, First International Workshop on Semantic Web, Mobile Web, and Social Networks, KAIST, Korea, 8/2010.
- The Semantic Web and Libraries, keynote, 1st VIVO international meeting, NYC, NY, 8/2010.
- Open Government Data and the Semantic Web, Knowledge Management 2010, Washington DC, May, 2010.
- Why Study the Web? Social Machines and the Virtual Revolution, Royal Society. London, *UK*, March 2010
- Web 3.0 Emerges, NSF Workshop on Mapping of Science and the Semantic Web, Indiana University, March, 2010
- Web 3.0 Emerges, Keynote, Conference on Semantics in Health Care and Life Sciences, Boston, MA. February, 2010

62 talks prior to 2010.

Invited Colloquia *(since 2010)*

- Social Machines, ACM Distinguished Lecture, Kennesaw State U, Kennesaw, GA, 4/19.
- The Future of AI: Going Beyond Deep Learning, Watson, and the Semantic Web, IBM Distinguished Lecture, Almaden, CA, 3/19.
- AI today, China Computer Federation: Young Computer Scientists & Engineers Forum, Tianjin, *China*, 8/18
- AI in the era of Watson, Deep Learning and the Semantic Web, Distinguished Speaker Series, Chinese Academy of Science, Beijing, *China*, 8/18
- AI in the era of Watson, Deep Learning and the Semantic Web, Distinguished Speaker Series, IBM China, Beijing, *China*, 7/18
- AI in the era of Watson, Deep Learning and the Semantic Web, Distinguished Colloquium Series, Indiana University, 1/18.
- Social Machines, Web Science Summer School, Koblenz, *Germany,* 7/16.
- AI Friend or Foe, Cognitive Computing Series, Georgia Institute of Technology, Atlanta, GA, 5/16.
- Artificial Intelligence, Existential Threat or Our Best Hope For The Future, Distinguished Lecture Series, Illinois Institute of Technology, Chicago, IL, 4/16.
- Data Science at Rensselaer, Invited Talk, University of Lyon, Lyon, *France,* 11/2015.
- Data Science at Rensselaer, Invited Talk, The MITRE Corp., Bedford, MA, 7/2015.
- The Science of Data Science, Invited Talk, FlipKart, Bangalore, *India,* 3/2015.
- The Rensselaer IDEA, Board of Trustees, Rensselaer Polytechnic Institute, California, 3/2015.
- Data Big and Broad, Distinguished Colloquium Speaker, College of Computing, Arizona State University, Arizona, 11/2014.
- Watson: an academic perspective, keynote lecture, IBM Academy of Technology, IBM Watson research center, New York, 10/2014.
- Why Watson Won, Cognitive Science Colloquium, UQAM, Montreal, *Canada,* 11/2013.
- Broad Data, NY Data skeptics meetup, 11/2013.
- Searching for Data, Search Colloquium, Baidu Inc, Beijing, *China,*8/2013.
- Broad Data, CSAIL Seminar, MIT, 4/2013.
- Linked Data and the Semantic Web, School of Computer Science Distinguished Colloquium, Wuhan University, Wuhan, *China,* 12/2012
- The Rise of the Social Machine, ECS Departmental Colloquium, University of Southampton, Southampton, *UK,* 6/2012.
- The Future of the World Wide Web, Invited Keynote, Kshitij Festival, IIT Kharagpur, Kharagpur, *India,* 2012
- The Semantic Web: Recent Developments, Departmental Colloquium, IIT Delhi, Delhi, *India,* 1/2012
- Linked Open Government Data, Indian Government Department of Science and Technology, Special Government Seminar, New Delhi, *India,* 1/2012
- Broad Data, Departmental Colloquium, IIT Bombay, Mumbai, *India,* 1/2012
- Linked Open Government Data, Distinguished Seminar, Computer Science Dept, PCU-Rio, Rio de Janeiro, *Brazil,* 8/2011
- Web 3.0 Emerging, Engineering College, University of Macao, *Macao*, May, 2011.

- The future of the World Wide Web, Public Talk, Chamber of Commerce, Genoa, *Italy*, 3/2011.
- Linked Open Government Data, Departmental Colloquium, University of Genoa, Genoa, *Italy*, 3/2011.
- Social Machines, Distinguished Speaker Series, Computer Science Dept, Lehigh, February, 2/2011.
- Open Government Data, Microsoft Faculty Think Tank, Redmond, WA, 1/2011
- We are the Web: The Rise of the Social Machine, Jones Seminar on Science, Technology and Society, Dartmouth College, May, 2010.
- We are the Web: The Rise of the Social Machine, Invited Colloquium, Oxford University Internet Institute, Oxford, UK, March 2010
- We are the Web: From Semantic Web to Social Machines, SOIC Colloquium and Data to Insight Center Sponsored Event, Indiana University, Mar. 2010

113 colloquia prior to 2010

Conference Panels *(since 2010)*
- Regulating Software as a Medical Device, AMIA Policy Forum Annual Meeting, Washington, DC, 11/19.
- How Much Knowledge Goes How Far?, Plenary Panel, International Semantic Web Conference, Auckland, *New Zealand*, 10/19.
- Debate: AI and Cognitive Science in the Era of Deep Learning, L'usine cognitive: quelle intelligence artificielle (IA) pour les PME québécoises et canadiennes du secteur manufacturier?, Montreal, *Canada*, 3/19.
- AI and Government, National Academy of Public Administration, 11/18.
- The past and future of the internet and web, DARPA 60th anniversary conference, Washington, DC, 9/18
- AI and Autonomous Weapons, International Conference on Robot Ethics and Standards, Troy, NY, 8/18.
- Artificial Intelligence and Public Service, National Academy of Public Administration, Arlington, VA, 11/17.
- Strategic Research for the Department of Homeland Security, 10th Annual Homeland Defense/Security Education Summit, Arlington, VA, 3/2017.
- Saving the World Wide Web, Distinguished Panel, Library of Congress, Washington DC, 6/16.
- Web Science Turns Ten, Websci16, Hannover, *Germany*, 5/16 (via skype).
- New Science Roadmaps for Global Research, AAAS Symposia, Washington, DC, 2/2016.
- Applications of Cognitive Technology Panel, IBM Cognitive Computing Colloquium, Troy, NY, 11/2015.
- Luminary Panel on the Value of Open Data, NY Innovates, Troy, NY, 12/2013.
- Challenges of Linked Data, CSAIL symposium, MIT, 11/2013
- Future of Education, Teaching and Learning Symposium, RPI, 4/2013.
- Discussion Leader, (i) Scientific Revolutions, (ii) Cyber Resiliency, World Economic Forum, Davos, *Switzerland*, 1/2013
- Social Machines, 1st Chinese Web Science Conference, Shenzhen, *China*, 11/2012
- Open Government Data, ICEGOV 2012, Albany, NY, 10/2012
- The Open Data Challenge, WWW Web Science Track, Lyon, *France*, 4/2012.

- Death-Match 2011: Industry, Universities and Standards – who owns the Semantic Web Vision? (moderator), International Semantic Web Conference, Bonn, *Germany,* October, 2011.
- The future of International Linked Open Government Data, European Semantic Web Conference, Heraklion, *Crete*, May, 2011.
- Research Agenda for Open Government, Open Government R&D Conference, Washington, DC, March 2011.
- Linked Open Government Data, International Open Government Data Sharing Conference, Washington DC, Nov. 2010
- Open Government and the World Wide Web, World Wide Web Conference, Raleigh, NC, April, 2010

24 conference panels prior to 2010

US DoD/Govt Briefings

- Autonomy – threat or promise, DSO offsite, DARPA, 1/2015.
- Information Levels, Invited Talk, ARL Information at the Tactical Edge, Potomac, MD, 12/2013.
- The Web of Data, Invited Keynote, IARPA Information Alignment Workshop, University of Md, 8/2012.
- The State of the Semantic Web, Intelligence Community Semantics Working Group, 4/2012.
- Linked Open Govt Data, NITRD, February, 2011.
- Linked Open Govt Data, multiple briefings to GSA, WH, and DoD agencies, 5/2010-12/2010.

20 Government briefings prior to 2010

Tutorials

- Open Government Data Tutorial, International Open Government Data Conference, Washington DC, July, 2012; ICEGOV, Albany, NY, October 2012
- Web 3.0, Special Tutorial, University of Genoa, Genoa, *Italy*, March 2011

10 Tutorials prior to 2010

Fulbright Supported Lecture Series

Invited Lectures Sponsored by Moroccan-American Commission for Educational and Cultural Exchange Lectures: High Performance Support for Very Large Knowledge Bases (CS Department Colloquium), Developing Intelligent Agents -- The future of AI planning systems (CS Department Colloquium), Artificial Intelligence: Where it's been and where it's going (Campus distinguished lecture series), Expert System Technologies (Dept. of Engineering Colloquium), Al-Akhawayn (Royal) University, *Morocco,* April, 1996.

Fellowships, Awards, and Honors

- Fellow, National Academy of Public Administration, 11/2018.
- Spotlight Award, Association of Moving Image Archivists, 4/2017.
- AAAI Distinguished Service Award, 2017.

- Fellow, ACM, 2016.
- Sublime Métèque, L'Académie québécoise de 'Pataphysique, 4/2016.
- ACM Distinguished Speaker, 2015.
- William Wiley 1866 Distinguished Faculty Award, RPI, 2014.
- IBM Faculty Award, 2014.
- Faculty Expert, World Economic Forum, Davos, Switzerland, 2013.
- Guest Professor, Wuhan University, China, December, 2012.
- Strata Data Innovation Award, Open Data, October, 2012
- Fellow, AAAS, 2012
- Fellow, IEEE, 2010
- "Honor Roll," Playboy magazine list of 20 most innovative professors in America, 10/2010.
- Fellow, British Computer Society, 2007.
- Visiting Professor, Institute of Creative Technology, DeMontfort University, Leicester, UK, 9/08 – pres.
- Rensselaer Trustees Celebration of Faculty Achievement: 2009, 2010, 2012, 2013, 2014, 2015, 2016
- Associate Director, Web Science Research Initiative, 12/06 – 12/09.
- Informatics Advisory Board, Encyclopedia of Life, 5/07 – 12/2008.
- Honorary Professor and Fellow, Univ. of Edinburgh, Scotland, 1/07-12/10.
- Robert Engelmore Memorial Award, AAAI, Aug, 2005.
- Foreign Member, Reviewers' College, Engineering and Physical Sciences Research Council, UK, 2006-2010
- Finalist, Homeland Security Award in Information Sharing, Christopher Columbus Fellowship Foundation, Oct. 2003.
- Member, NASA Earth Science Activity, Advisory Board Technical Subcommittee, 2003-2005.
- US Air Force Exceptional Civilian Service Medal, Oct 9, 2002.
- AAAI 2000 Expository Writing Award, 2000.
- Fellow, American Association of Artificial Intelligence, 1999.
- Invention of the Year Award, Univ of Maryland, 1997.
- Member, Air Force Science Advisory Board, 1998 – 2002, 2010—2011.
- Fulbright Fellowship, Senior Researcher to Israel, CIES/USIEF, 1995-1996.
- Member, Institute for Defense Analysis, Defense Science Study Group,1996-1997.
- Research Fellow, KISS Institute for Practical Robotics, Fairfax,VA, 1994 - pres.
- University Fellowship, Brown University, 1982
- Honorary Listings
  Who's Who in America
  Who's Who in the East
  Who's Who in American Education
  American Men and Women of Science
  International Who's Who of Professionals
  Who's Who in Science and Engineering
  International Who's Who of Information Technology,
  2000 Outstanding Intellectuals of the 21st Century, 2001.

Editor/Editorial Board Membership

- (Co)Editor-in-Chief, *Data Intelligence Journal*, Chinese Academy of Science, 2017-.
- Editorial and Advisory Board Member, Cognitive Technology Book Series, Springer, 2016-pres.
- Computer Society steering committee representative, *IEEE Trans. on Computational Social Systems*, 2014 - pres
- Series Editor, Synthesis Lectures on the Semantic Web, Morgan & Claypool Publishers, 2011- 2014.
- Associate Editor, *Big Data,* 2013 – pres.
- Associate Editor, *ACM Transactions on the Web*, 2011-2013.
- Board of Reviewing Editors, *Science*, 2004 - 2017
- Editor in Chief, *IEEE Intelligent Systems*, 2004 – 12/2008 (Chair of Advisory Board, 1/2009 – pres)
- Associate Editor, *ACM Transactions on Internet Technology*, 2001-2004
- Associate Editor, *Artificial Intelligence*, 2002-2006
- Chair of Advisory Board, *Web Semantics*
- Editor in Chief, *Web Semantics*, 2002-2004.
- Series Editor, *Foundations of AI*, (Monograph Series, Elsevier)
- Editorial Board, *Int'l Journal of Semantic Web and Information Systems*, 2012 – pres.
- Editorial Board, *Foundations and Trends in Web Science* (Monograph series, Now Publishers), 2010 – pres.
- Editorial Board, *Connection Science, 1995-2002*.
- Editorial Board, *IEEE Intelligent Systems (nee IEEE Expert), 1995-2004*.
- Editorial Board, *Autonomous Robotics, 1998-2006*.
- Editorial Board, *Electronic Transactions on AI: Planning and Scheduling*
- Editorial Board, *Journal on Autonomous Agents and Multiagent Systems*
- Editorial Board, *ACM Computing Surveys, 1997-2000*.
- Editorial Board, *Journal of Cognitive Theories and Systems (Electronic Journal)*

Industrial Gifts:

Elsevier, $15k, 2016.
Tokyo Electron of America, $50k, 2015.
MITRE Corp., $150k, 2015.
Microsoft Research Laboratory, $140k, 2011-2013.
Fujitsu Laboratory of America (~$800k from 2002-2012)
NTT Corp (150k, 2003-2005)
Lockheed Martin ATL (~200k, 2003-20010)
Northrup Grumman (75k, 2005)
SAIC (50k, 2001-2004)
Kevric Corp (10k, 2004)

Grants (Principal Investigator)

J. Hendler and D. McGuinness (CoPIs), Knowledge-directed Artificial Intelligence Reasoning Over Schemas (KAIROS), DARPA (subcontract to IBM), $1.3M, 9/19 – 8/22.

J. Hendler (PI), M. Zaki, D. McGuinness, K. Bennett, B. Yener, J. Dordick, Health Empowerment by Analytics, Learning and Semantics (HEALS), IBM, $9.9M, 4/17-3/23.

P. Hajela, J. Dordick, J. Hendler…, IBM-RPI AI Research Center, research component, $14.5M/1/18-12/22.

J. Hendler (PI), AI, Big Data and Cybersecurity – Roadmap Study, $86k/6mo, DoD via NCSU-LAS subcontract, 1/2017.

J. Dordick, R. Radke, J. Hendler, Selmer Bringsjord, Cognitive and Immersive Systems Laboratory, IBM, 2016.

J. Samuel, J. Hendler, P. Fox, R. Hull and D. McGuinness, Data Driven Inverse Design Paradigm for Part Qualification in Additive Manufacturing, DARPA seedling, $400k/2016.

J. Hendler and K. Bennett, Data Analytics for Microfabrication, GlobalFoundries, 2016. (corporate grant, details proprietary)

C. Carothers, J. Hendler, Neuromorphic Computing, AFRL, $1.3M/3yr, 2015.

J. Hendler, Characters and language, Walt Disney Imagineering, $294k, 1 yr (9/2014)

J. Hendler, Healthcare data analytics, RE Health, $118k, 1 yr (5/2014)

J. Hendler, Semantic Search vs. Deep Knowledge, DARPA Deft Seedling, Subcontract to BBN, $225k, 2012.

J. Hendler, D. McGuinness, COSMIC, (Subcontract to Sentimetrix Inc.), DARPA SMISC Program, $1.2M, 2012-2014

J. Hendler, Agents and the Semantic Web, (subcontract to UT El Paso DHS center funding), $185k, 1yr, 2011.

J. Hendler, KDD Program Test and Evaluation, IARPA, $175k/1yr, 2011

J. Hendler, Exploring and Linking Widely Distributed Data on the Semantic Web, NSF-EAGER, $197k/ 9/11-8/13.

D. McGuinness, J. Hendler, Foresight and Understanding from Scientific Exposition (FUSE), IARPA, $2M/4yr, 2011 (Subcontract to BAE Systems).

J. Hendler, T. Berners-Lee, Web 3.0 for AKO, DARPA, $300k/2yr, 12/09.

J. Hendler, Network Science Cooperative Technology Alliance (Interdisciplinary Research Center), ARL, $1.3M, 10/09 – 12/14 (Subcontract to BBN Technologies).
   - 2 year renewal, $298k, 10/14-9/16

J. Hendler, J. Fernheimer, Web-Scale Research Collaboration, NSF-EAGER, $300k/2yr, 9/09.

J. Hendler, D. McGuinness, Knowledge Acquisition for Human Terrain, DARPA, $150k/1yr (Seedling), subcontract to BBN Technologies

W. Zhao and J. Hendler, Networking and Information Extraction, KAUST, $250k, 1 yrs, 2009 (Subcontract to Texas A&M)

J. Hendler, US/UK Information Technology Alliance,   US ARL and UK MOD, 2006 $700k/5yrs (Subcontract to IBM, yrs 3-5 w/B. Syzmanski at RPI)

J. Hendler, T. Berners-Lee (MIT), D. Weitzner (MIT), Policy-Aware Web, National Science Foundation Homeland Security ITR, $1M/3 yr, Oct 2004.
Supplemental award, NGA, $200k/1yr, March 2005
Supplemental award, KDD, $160k/1yr, June 2005

D.Weitzner, T. Berners-Lee, H. Abelson, G. Sussman and J. Hendler, Theory and Practice of Accountable Systems, NSF, $1.25M/4 yrs, August 2008. (RPI subcontract to MIT, $260k)

J. Hendler, PI (and Research Director), DARPA Integrated Learning Program award to Lockheed Martin (GILA), DoD Award (subcontract through Lockheed Martin – total award 24M)
Univ of Md, $600k/1yr (2007)
RPI, $800k/1 year (2008, w/D. McGuinness)

D. Weitzner, T. Berners-Lee, J. Hendler and J. Feigenbaum, End to End Semantic Accountability, NSF, $1.5M/18 months (RPI subcontract to MIT, $350k)

VS Subrahmanian, J. Hendler, R. Chellapa and C. Espy-Wilson, Joint Institute for Knowledge Discovery. DoD Award (through Md. Procurement), $5M/3yr, May 2005.

J. Hendler, Semantic Web Research, NGA, $200k/1 yr, Mar 2004.

J. Hendler, DARPA Jaguar program, DARPA IXO, $100k/ 1yr, March 04 (Sub to LockMart ATL)

J. Hendler, Semantic Web Toolkit, $250k/1yr, May 2003, (subcontract w/CTC Corp)

VS Subrahmanian, J. Hendler, L. Davis, Knowledge Technologies, $700k/1 yr, Aug 2003, Army Research Lab
Increment, $75k/1yr, 9/2004.

J. Hendler, Future Combat Systems: BCME (part 18), subcontract to Raytheon on $40M procurement, $400k/3.5 yr, Sept 2003)

J. Hendler, Semantic Enterprise Exploitation, $100k/6 mo., June 2003, DARPA (Subcontract to ISX Corp)

G. Cybenko (Dartmouth) and J. Hendler, Resource Control in Large Scale Agent Systems, seedling, DARPA IXO, $475k/ 1 yr (subcontract to UMCP $75k)

J. Hendler, DARPA FastC2AP jumpstart, DARPA IPTO, $100k/ 1 yr - Mar 04 (subcontract to LockMart ATL)
Increment, $75k, 6/2005-12/2005

Increment, $350k (11/05-12/96)

J. Hendler, Semantic Interoperability, NIST, $150k/ 3yr, Oct 2003

T. Finin, J. Hendler, J.Sachs, Science and the Semantic Web, NSF ITR, $2.5M/5 yr, Sept 03 (sub to UMBC)

J. Hendler, Information Push and Pull on the Digital Battlefield - renewal/extension, DARPA, $200k/1 yr, 12/2001.
Increment from DARPA, $70k, 11/02.
Increment from US Navy Warfare Development Command, $100k, 12/2001
Increment from US Air Force Joint Battlefield Infosphere, $100k, 1/2001.

J. Hendler and V.S. Subrahmanian, A Scalable Intelligent Agent Architecture for the 21st Century Battlefield, Army Research Laboratory, $3,250,000/4yr., 7/1997.

R. Morales, J. Hendler, and W. Hueston, Food Safety Risk Assessment Clearinghouse, Food and Drug Administration (extension to UMd CRADA), $125,000/1 yr., June 1998.

B. Dorr, J. Hendler, D. Oard, and P. Resnick, Scalable Translingual Document Detection: A Rapidly Retargetable Approach, Darpa, $950,000/3yr., 7/1997.

V.S. Subrahmanian and J. Hendler, Agent-based Support for Battlefield Awareness, Army Research Laboratory (via ARO), $150,000/1 yr, 1996.

J. Hendler High Performance Computing Support for Graph Matching, DoD, $30,000/6 mo, 1996.

J. Hendler and D. Nau, Equipment for AI Planning Systems research, NSF academic infrastructure eqpt. grant, $27,000, 1995.

J. Hendler and D. Nau Scaleable Case-based Planning, ARPA (through ARO), $426,000/3 yr. (June, 1995) (renamed from "Manufacturing Planning" 6/96).
J. Hendler, 1 year with cost extension to the above, $100,000 June 1998

L. Davis, H. Elman, J. Hendler, D. O'Leary, and J. Saltz, Systems and Software Tools for High Performance Computing, National Science Foundation CISE Research Infrastructure Program, $1,000,000/3yr., (Sept 94).

J. Hendler (PI), J. Saltz (Co-PI), KQML-accessible, High-performance, Massive Knowledge Bases, ARPA (through ONR) , $310,000/3 yr., October 1994.
AASERT Augmentation grant to the above: AFOSR $100,000/3 yr. (Sept, 94).

J. Hendler (PI), A. Agrawala, S. Kambhampati (co-PIs) Automated Annotation for the Analysis and Modification of Plans, DARPA Planning Initiative, $650,000/3 yr. April, 1993.
AASERT Augmentation grant to the above: Arpa (through ARO) $100,000/3 yr (Sept, 1994.)

J. Hendler and D. Nau (PIs) Hierarchical Task-Network Planning: Formalization and Analysis, National Science Foundation, $240,000/3 yr. July, 1993.

J. Hendler and J. Carbonell (CMU), Foreign Travel Support for Japanese Conference on Very Large Knowledge Bases, $25,000/1yr. July, 1993.

J. Hendler V.S. Subrahmanian (PIs) Logic-based Intelligent Real-time Problem-Solving, Air Force Office of Scientific Research, $280,000/3 yr., Dec. 1992.

   Weinberg, B. Dorr, J. Hendler (PIs) New Cognitive Technologies to Improve Foreign Language Training, Subcontract to Micro Analysis and Design, $550,000/ 3 yr., Nov. 1992. (Funded through Army Research Insititute).
6-month extension to contract, $85,000, August, 1995.

J. Hendler (PI) Massively-Parallel Support for Case-based Reasoning, Office of Naval Research, $52,000/1 yr, Jan. 1992.
Renewal of grant, $52,000/1 yr., Jan. 1993.
Renewal of grant, $225,000/3yr., Jan. 1994.
AASERT Augmentation grant to the above $107,000/3 yr., Jan 1992.

J. Hendler (PI) Japanese efforts in parallel support for large AI systems (travel grant), Office of Naval Research, $33,000/6 mo, Nov. 1992.

J. Hendler and A. Agrawala (PIs) Real-time and Artificial Intelligence (workshop grant), National Science Foundation, $15,000/1 yr., Sept. 1992.

J. Hendler & D. Nau (PI's) Verification of Expert Systems, Westinghouse Corp, $25,000/1yr, Aug. 1991. (U Md. Foundation, through Systems Research Center).

J. Hendler, Funding for First International Conference on AI Planning Systems, AAAI, $10,000 (U Md. Foundation).

J. Hendler, Funding for First International Conference on AI Planning Systems, DARPA (admin. through ONR), $10,000 (U Md. Foundation).

   Weinberg J. Hendler (PI's) AI for foreign language training, subcontract to SAIC proposal to Army Research Institute. subcontract of $350,000/3 year. January, 1990.
Increment for extension of language capabilities to Arabic, $189,000/1.5 year. January, 1991.

J. Hendler D. Nau (PI's) Efficient Hierarchical Planning, National Science Foundation, $400,000/3 yrs., June, 1989.

J. Hendler, Neural Network Simulation, Apple Development Award, Apple Computer, (Equipment, Approx. value: $10,000), March, 1988.

J. Hendler, C. James, C. McDaniel AI-based Tools for the Teaching of Foreign Languages,Apple Development Award, Apple Computer, (Equipment, Approx. value: $20,000), March, 1988.

J. Hendler, (P.I.) A hybrid connectionist/symbolic model, Office of Naval Research, $125,000/2 yr., Sept., 1988.
Renewal,$86,000/1 yr., Jan. 1991.

J. Hendler (P.I.), AI and Software Engineering: Knowledge and Re-use, Contel Corp., awarded through Systems Research Center and University of Maryland Foundation, $100,000/3 years January,1987.

J. Baras, J. Hendler, Signal Processing Workbench, Texas Insturments Inc., (Eqpt. worth $55,500), February, 1987.

J. Hendler and Department of Computer Science, Tektronix Corporation Charitable Donation program, (Equipment worth $89,684), February, 1987.

James A. Hendler Joint LISP and UNIX processing, Texas Instruments Inc., (TI-LX product grant, Approx. value: $5000), January, 1987.

J. Hendler, Principal Investigator, AI teaching software Apple Corp. Seeding Project, (Equipment, approx. value $4000), December, 1986.

Professional Societies

- Member, American Association for the Advancement of Science (AAAS)
- Member/Fellow, American Association for Artificial Intelligence (AAAI)
- Member, Association for Computing Machinery (ACM)
- Member/Fellow, British Computer Society (BCS)
- Member/Fellow, IEEE
- Member, Fulbright Association
- Member, New York Academy of Sciences

Research Advising

Post Doctoral /Researcher Advisor

- Qingpeng Zhang, 1/13 – 2/14
- Yangfan He, visiting professor from China, 2011.
- Jie Bao, 2/08 – 12/11.
- Li Ding (co-adviser), 6/07 – 12/11,
- Bijan Parsia, 7/02 – 6/06
- James Beisaw, 8/98 – 6/01.
- Julio Rosenblatt, 11/96-9/97.
- Kilian Stoffel, 11/94-6/98.
- Kathryn Sanders, 10/94-9/95.
- Jana Koehler, 4/95.
- David Musliner, 9/93-2/95

PhD Advisor

UMCP

1. Khambampati, SubbaRao - Thesis: ``Flexible reuse and modification in hierarchical planning: A validation structure based approach'' 9/89.
2. Spector, Lee - Thesis: ``Supervenience in Dynamic World Planning'' 3/92.

3. Ostertag, Eduardo - Thesis: ``A Classification system for software reuse'' 8/92.
4. Wilson, Anne - Thesis: ``Encapsulating Neural Networks,'' 12/93.
5. Evett, Matthew - Thesis: ``PARKA: A System for Massively Parallel Knowledge Representation,'' 2/94.
6. Erol, Kutluhan - Thesis: ``Hierarchical Task Network Planning: Formalization, Analysis, and Implementation,'' 10/95 (co-chair w/D. Nau).
7. Kettler, Brian - Thesis: ``Case-based Planning with a High-Performance Parallel Memory,'' 10/95.
8. Kohout, Robert – Thesis: "Guaranteeing safety in the presence of moving obstacles", 8/98.
9. Tsuneto, Reiko - Thesis: "Efficient Refinement Strategies for HTN Planning," 12/98 (co-chair w/D.Nau)
10. Taylor, Merwyn - Thesis: "Finding High Level Discriminant Rules in Parallel, 12/98."
11. Luke, Sean – Thesis: "Issues in Scaling Genetic Programming: Breeding Strategies, Tree Generation, and Code Bloat", 8/00
12. Heflin, Jeff – Thesis: Towards the Semantic Web: Knowledge Representation in a Dynamic, Distributed Environment, 7,01.
13. Barbour, Garth – Thesis: Program Modeling: A Machine Learning Approach to Intrusion Detection, 7, 02.
14. David Silberberg, Uniform and High-level intelligent Access to Heterogeneous Information Sources, 9, 02.
15. Jaime Montemayor, Physical Programming, 7/03 (co-chair w/A. Druin).
16. Jennifer Golbeck, Computing and Applying Trust in Web-based Social Networks, 4/05.
17. Aditya Kalyanpur, Debugging and Repair of OWL Ontologies, 6/06.
18. Evren Sirin, Combining AI Planning and Description Logic Reasoning for Composition of Web Services, 6/06.
19. Christian Halaschek-Weiner, Expressive Syndication on the Web Using a Description Logic Approach, 11/07.
20. Vladimir Kolovski, A Logic-Based Framework for Web Access Control Policies, 4/08.

U. Valencia, Spain
21. Bernardo Cuenca-Grau, Combinacion e Integracion de Ontologias en la Web Semantica, (Co-chair, University of Valencia, Valencia, Spain), 11/05.

RPI
22. Medha Atre, Bit-by-Bit: Indexing and Querying RDF data using Compressed Bit-Vectors, 8/11.
23. Jesse Weaver, Toward webscale, rule-based inference on the Semantic Web via data parallelism, 2/13.
24. Gregory Williams, Planning and Evaluation of Federated Queries on the Web, 3/13.
25. Alvaro Graves-Fuenzalida (Cognitive Science), Improving The Use of Open Government Data Using Visualizations, 11/13
26. Xian Li (Cognitive Science), Dynamics of Investor Attention on the Social Web, 11/13
27. James Michaelis, (Cognitive Science), Methodology For Evaluation of Provenance-Based User Interfaces, 11/14.
28. Joshua Shinavier, Web Semantics for Multisensory Integration, 9/15.
29. Dominic DiFranzo, The Semantic E-humanities Methodology, 10/15.
30. Simon Ellis, Cognitive Gameplaying: Playing Games with Cognitive Computing, 7/16.
31. Kristine Gloria (Cognitive Science), Imprudence of Reason: An Examination of Privacy Expectations, 11/16.
32. Bassem Makni, Deep Learning for Noise-Tolerant Rdfs Reasoning, 2/18

33. Nidhi Rastogi, A Network Intrusion Detection System (NIDS) Based On Information Centrality To Identify Systemic Cyber Attacks In Large Systems, 2/18.
34. Amar Viswanathan, Schema- and Data-Aware Query Reformulation in Knowledge Graphs, 2/18.
35. Eric Ameres (Cognitive Science), Reducing The Cognitive Load Of Visual Analytics Of Networks Using Concentrically Arranged Multi-Surface Projections Focusing Immersive Real-Time Exploration, 2/18.
36. Matthew Klawonn, Combining Supervised Machine Learning and Structured Knowledge for Difficult Perceptual Tasks, 2/19.

(Hendler has also served on more than 20 other RPI PhD thesis committees in computer science, cognitive science, science and technology studies, and industrial systems engineering.)

Students

Current students (Computer Science unless otherwise noted)

RPI, Pre-candidacy
- Cara Reedy (Cog Sci)
- Nkechinyere Agu
- Neha Upadhya (Cog Sci)

Visiting Student Advisor
- Xixi Luo, 10-07 – 5/09, from Bhaihing University, China
- Ruckhaus, Edna, 9/04-6/05 from University Simon Bolivar, Venezuela
- Cuenca-Grau, B., 11/03 – 11/05, from Universidad de Valencia, Spain
- Nunes de Barros, L. 1/96- 2/97, from Univ of Sao Paolo, Brazil.
- Lopes, C. 9/94-8/95, from Univ of Sao Paolo, Brazil.

Masters Students

Masters with thesis – University of Maryland (Advisor only)

- Sperer, Ruth, 10/99 – Thesis: Cross Language Information Retrieval (Co-chair w/D. Oard)
- Seeliger, O., 10/95 - Thesis: The Use of Behavior Hierarchies for controlling a vision-based space teleoperation robot
- Migdalof, B., 5/95- Thesis: Use of Lexical Conceptual Structure for Intelligent Tutoring
- Lin, C., 5/92 - Thesis: Analysis of ballistic signals using a hybrid connectionist/ expert system model (MS in EE;Co-chair)
- Wong, Y. C., 11/91, Thesis: Using Version Spaces to Support Incremental Searches in a Software Library
- Sanborn, J., 5/88; Thesis - Monitoring and reacting: Planning in Dynamic Domains
- Bane, R.,5/88: Thesis - AGAST: The great American Story Teller
- Bush, J., 5/88: Thesis - InSite: An AI-Based Archaeological Tool Using Multi-layer Constraint Propagation
(numerous Masters Thesis committees at UMCP as committee member)

Other University Committees

- L. Zhang, PhD Internal Examiner, Creative Computing, Bath Spa University, Bath Spa, UK, 2016.
- A. Hogan, PhD External viva Examiner, Computer Science, National University Ireland, 2011
- D. Smith, PhD External viva Examiner, Computer Science, Southampton University, UK, 2011.
- D. Vrandecic, PhD, Erster Koreferent (outside member), Wirtschaftswissenschaften (Business/Economics), der Universitat Fridericiana zu Karlsruhe, 2010
- M. Hildebrand, PhD external reviewer, Computer Science Dept, Vrije Universiteit, Netherlands, 2010
- O. Lassila, PhD external reviewer, Computer Science Dept, Helsinki Univ, Finland, 2007.
- F. Lawrence, PhD external vive examiner, Computer Science, Southampton Univ, UK, 2007.
- P. Mika, PhD committee external member, Computer Science and Social Science, Vrije Universiteit, Netherlands, 2007.
- Couriveau, U. Toronto, Canada, PhD Computer Science, 1992.
- Mansell, University of Melbourne, Australia, PhD Computer Science, 1994.
- Chiu, Courant Institute, PhD Computer Science, 1995.
- J. Beisaw, Rutgers, PhD Psychology, 1997.

Professional Service
Site visits/Reviews

- Illinois Institute of Technology, Dept of Computer Science, External Review, 2018
- Yale University, Dept of Computer Science External Review, Chair, 2010.
- Nat'l U. Ireland (Galway), Irish Sci Foundation, DERI Site Review, Chair, 2010.
- Iowa State University, Dept of Computer Science External Review, Chair, 2004.
- Southampton University (UK), AKT Project Funding Review, Chair, 2003.
- Nat'l U. Ireland (Galway), Irish Sci Foundation, DERI Proposal Site Visit, 2003.

Academic Advisory Boards

- INSIGHT, Irish University Consortium, 2013-2018.
- DERI, National University Ireland, 2004-2007.
- Web Science Technology Institute, KAIST, Korea, 2011-
- Institute for Creative Technology, DeMontfort University, UK, 2011- 2015.
- Trustee and Programme Board, Web Science Trust, registered Trust, United Kingdom, 2010-
- Associate Director, Web Science Research Initiative, 2008-2010 (renamed Web Science Trust)

World Wide Web Consortium (not incl. WG/IG member)

- Advisory Committee, RPI Representative, 1/2008-12/2012.
- Web Ontology Working Group, Chair, 11/2001-7/2004.
- Advisory Committee, MIND Lab representative, 1/2002-pres.

- Semantic Web Coordination Group, Member, 9/2001-pres.

Professional Society Leadership Positions
- Chair, ACM US Technology Policy Committee, 2018-2019.
- Co-chair, IEEE Technical Committee on Social Computing and Social Intelligence, IEEE SCM, 2016- pres.
- Chair, Digital Government Committee, USACM, 6/13- pres., Member of USACM council, 2014.
- Semantic Web Science Association
  - Vice president, 2003-2008
  - President, 2008 – 2011
  - Immediate Past President, 2011- 2017
  - Board Member, 2018.
- Chair, AAAI Conference Committee, 2001-2005.
- Member, ACM Awards Doctoral Dissertation Prize Committee, (Chair, 1999) 1996-2000.
- Member, AAAS Science Journalism Awards Screening Committee, 1997-1999.
- Chair, AAAI Symposium Series, 1993, 1994.
- Associate Chair, AAAI Symposium Committee, 1991, 1992.

Conference Committees (Chair, co-chair, Significant role: major conference organization only)
- Area Chair, International Joint Conference on AI (IJCAI 18), 2018.
- Conference Chair, 1ˢᵗ International Conference on Big Knowledge (ICBK 17), Hefei, China.
- Conference Chair, World Wide Web 2016, Montreal, Canada.
- Conference Chair, WebSci14, Indiana Univ.
- Organizing Committee, White House/World Bank International Open Government Data Conference, 2012.
- Conference Chair, WebSci10, Raleigh, VA.
- Program Chair, WebSci09, March 2009, Athens, Greece.
- Developers' Day Chair, World Wide Web Conference, 2004 (USA), 2005 (Japan).
- Conference Chair, First International Semantic Web Conference, Sardinia, Italy, 2002.
- Dagstuhl Seminar Co-chair, Dagstuhl Seminar on The Semantic Web, Germany, 2000.
- Program Chair, National Conference on Artificial Intelligence (AAAI '99), 1999.
- Dagstuhl Seminar Co-chair, Dagstuhl Seminar on Control of Search in AI Planning, Germany, 1997.
- Executive Council, AI Planning Systems Conference, 1994-1999.
- Program Co-Chair, Workshop on AI and Real-time, Univ. of Md., 1993.
- Program Chair, International Conference on AI Planning Systems, June, 1992; Program Committee 1994, 1996,1998; Executive Steering Commitee 1994, 1996 (chair), 1998.
- Program Chair, AAAI Symposium on "Planning in Uncertain, unpredictable or changing environments," AAAI Spring Symposium Series, March, 1990.

- *(Program Chair or Program Committee member for over 100 other conferences and workshops in the US and abroad)*

US Grant Reviews

- Program Manager, Defense Advanced Research Projects Agency, 1999-2001.
- Small Business Initiative Reviews: Phase I and Phase II reviews for NSF, NASA, ONR.
- National Science Foundation: Reviewer and panelist for individual proposals, research infrastructure proposals, multidisciplinary research proposals, and other special programs (1986-pres)
- DoD: Additional reviewer for proposals to AFOSR, ONR, DARPA, AFRL/IF

International Grant Reviews

- Expert Review Committee, Medical Research Council, United Kingdom, 12/2017.
- European Research Council, Distinguished Awards, panel 6, 2009 and 2011 (Brussels)
- International Member, EPSRC College, Engineering and Physical Sciences Research Council, United Kingdom, 2005-pres.
- Reviewer, Austrian Science Fund (FWF), Vienna, 2005-
- Mentor/Reviewer, US Council for International Exchange of Scholars (Fulbright Foundation Program), 1996-2001.
- Program Assistant, Mathematics and Computer Science, Binational Science Foundation, US/Israel, 1996, 1997.
- Reviewer, Enterprise Ireland, 2000-
- Reviewer, Irish National Science Foundation, 2000-
- Reviewer, Netherlands Computer Science Research Foundation (SION), 1997 -
- Reviewer, Foundation for Research Development, South Africa, 1992,1995.
- Reviewer, Ansokan ska vara Teknikvetenskapliga forskningsradet (Swedish Science Foundation), Sweden, 1996, 2000.

University Service – RPI (2008—pres)

2019- , Acting Director, RPI-IBM Artificial Intelligence Research Collaboration.
2018- , Chair, Institute Search Committee, Artificial Intelligence and Machine Learning Faculty.
2017, Chair, IBM-RPI AI and ML relationship advisory committee
2017, Chair, Constellation Professor Search
2016, Internal Review Committee, Dean of Lally School of Management
2015, President's Task Force on Strategic Communications
2016 -, Search Committee, Computational Science and Engineering Constellation
2014, 2015, 2016 Faculty Search Committee, Computer Science
2013 -, Director, The Rensselaer Institute for Data Exploration and Applications
2014, Search Committee, Dean of Science
2013 – 2014, Head, Computer Science Department
2008-2012 – Assistant Dean of Information Technology and Web Science, (renamed "Program Director," 2011)
2009 – Search committee (chair), Head of CSCI (Search postponed)

2008 – Search Committee, VP Research
2008 – President's ad hoc Graduate Education Committee
2007 – Tetherless World Constellation Chair

University Service – University of Maryland (1986-2007)

Department

2003-2004, Departmental Academic Dishonesty Committee
2001-2003.,Member, Teaching Review Committee
1996-1999, ACM Student Chapter Faculty Advisor
1994-pres, Artificial Intelligence Field Committee, (Chair, 1994)
1994-1995, Department Outreach Coordinator, Technical Report Distribution
1993-1994, Lab Committee, Distinguished Speaker Series Coordinator
1992-1993,Annual Report Preparation
1989-1991,Ass't to Graduate Program Advisor (committee member)
1987-1988,Member, Laboratory Equipment Committee
1986-1987,Chair, Laboratory Committee Equipment Sub-committee
1986-1994,Member, Information Processing Field Committee
1987-1994,Member, Software Engineering Field Committee
1986-1994,Member, Artificial Intellgience Field Sub-Committee
1986- 1992,Member, Computer Science Department Laboratory Committee

Campus, College

2005, Search Committee, Associate Vice President for Research, Univ of Md
2005-, Director, Joint Institute for Knowledge Discovery (Umiacs Ctr)
2003-2005, College APT committee (Chair, 2004-2005)
2001-2002, Member, ISR APT Committee
1998-, Member, Graduate Program Committee, Program on Neuroscience and Cognitive Science (NACS)
1996-, Member, ISR Gemstone Executive Council
1997, Member, ISR Elections Board
1995-,Member,Campus committee on International Affairs
1995-,Chair, Campus Committee on Robotics.
1992,Member, ISR committee on Post-doctoral appointments.
1989-1995,Facilities and Services Committee, (Chair, 1989-1990) ISR.
1989-,Member, CMPS Committee on Cognitive Studies.
1991,Member, SRC committee on Post-doctoral appointments.
1988-,Dept. Rep. to College Program and Curriculum Committee, University of Maryland.
1987-,Member, Computer and Facilities Committee, ISR.
5/1988,Chair, Technical Session, SRC Annual Research Review Conference.
3/1988,Member, Search Committee, Research Engineer in Applied AI, ISR
8/1988,Participant, Technical Screening Panel, UM Technology Advancement Program.
1988-,Member, Research Committee, Systems Research Center
Academic Dishonesty Panels: 5/88, CMPS; 12/86, CMPS

Community Service

- Board of Directors, Trinity Alliance (Charitable non-profit), 3/2017-pres.
- Religious Life Committee, Synagogue Board, Ohav Shalom Synagogue, Albany NY, 12/2007 – 6/2013; Religious Life Committee (only) 9/2015-pres.
- President, Tikvat Israel Synagogue, Rockville Maryland, 12/2005-1/2007.

- Volunteer Instructor, Presidential Classroom Program for high-school students, Feb, 2000.
- Vice President, Tikvat Israel Synagogue, Rockville, MD 2000-2004.
- Board Member, Tikvat Israel Synagogue, Rockville, MD. 1994, 2000.
- Vice President, Brookhaven Elementary PTA, 1996.
- Member, School Improvement Team, Montgomery County Public Schools, 1994 - 1996.
- Member Principal's Advisory Committee, Brookhaven Elementary School, 1993.