

James A. Hendler, PhD



Born April 2, 1957
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Tetherless World Chair
Dept of Computer Science
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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.

Higher Education

2007–pres. Rensselaer Polytechnic University (RPI)

Computer Science Dept

Cognitive Science Dept

Tetherless World Constellation Chair (Endowed)

Head, Future of Information Project

1986-12/06 University of Maryland, College Park
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.
8/99-12/06. Full Professor,
8/92-7/99. Associate Professor
1/86-8/92, Assistant Professor
Head, Autonomous Mobile Robotics Laboratory, 1993-pres.
Head, Advanced Information Technology Laboratory, 1989-pres.

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 Institute for 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.

Advisory Boards

Cerebra Corp, San Jose California, 9/2005-2006.
Data-Grid, Point Richmond, CA, 3/2005-pres.
Semaview Incorporated, Toronto, Canada, 5/2003-1/2005.
Radar Networks, 3/2007 – pres.
TopQuadrant Inc, Pittsburgh, PA, 3/2004-pres.
Tucana Corp., Reston, VA, 6/2004-3/2005.

Non-DoD Consulting Experience

Artificial Intelligence and Semantic Web Consulting:

Assorted Consulting on Govt-related projects (DHS, DOJ, NIH), 2003 – pres.

Courses on Semantic Technologies (w/TopQuadrant Inc), 2003-pres.

US National Cancer Institute, Consulting on Semantic Web and Knowledge
Management systems, 2002.

ISX Corporation, BBNT, Semaview Inc, Alphatech, ImageMatters, McDonald
Bradley;

various technical consulting on agents and Semantic Web
technologies, 2001-pres.

Courses on Internet and Intelligent Agents, various US and International
locations, 1995-pres.

Legal Consulting

Foley and Lardner, Washington, DC, 1995-1997

Morrison & Foerster San Francisco, CA 2004

Pfizer Pharmaceuticals, Sandwich, England, Design of knowledge bases for 3-d chemical modeling, 1994
 Traisys Inc., Teaching AI Seminars abroad, 1989-1993.
 IBM, guest lecturer, 1991.
 Lisp Machines Incorporated (LMI) Lisp Curriculum Development; On-site training, 1983---1987.
 Smart Systems Technology (SST), On site consulting; technical consulting; teaching corporate AI seminars, 1983--1990.
 Advanced Research and Development Corp. (ARD), technical consulting, 1987, 1988.
 OAO Corporation, technical consulting; grant preparation; Object-oriented database design, 1987.
 Dept. of Energy, Technical Consulting, 1988.
 Omitron Inc, Technical Consulting, 1988.
 Gould Corporation, Design of LISP-based systems; Design of benchmarks for Lisp, 1984, 1985.
 Symbolics Inc., Third Party Software Demonstration, 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

DoD/Govt Activities

- 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, 1/99- 8/00
- Member advisory board, Air Force Information Agency, 2001 – pres.
- Member advisory board, Air Force C2 ISR Center, 2000-2001.
- Member, Air Force Science Advisory Board (AF/SB), USAF, 9/98—pres.
 - 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, Jan 1998 – Pres.
- 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 12/97; To AF Chief Scientist Dan Hastings, IDA 2/98.

Publications

Books Authored

- D. Allemang and J. Hendler, *Semantic Web for the Working Ontologist*, Elsevier, (in press)
- 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

- *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

- 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, *forthcoming*.
- 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 architectures," 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 Intelligenc* , 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 I*. 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 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

- J. Hendler and J. Golbeck, Metcalfe's law, web 2.0, and the semantic Web, *Journal of Web Semantics* (Accepted, 10/2007)
- J. Golbeck and J. Hendler, A Semantic Web Approach to the Provenance Challenge, *Concurrency and Computation: Theory and Practice*, (Accepted, 4/2007)
- O. Lassila and J. Hendler, Embracing Web 3.0, *IEEE Internet Computing*, 5, 2007.
- T. Berners-Lee, W. Hall, J. Hendler, N. Shadbolt, and D. Wietzner, Creating a Science of the Web, *Science*, 311, 2006.
- J. Hendler, Knowledge is Power: A View from the Semantic Web, *AI Magazine*, 26(4), 2005.
- J. Golbeck and J. Hendler, Inferring trust relationships in web-based social networks, *ACM Transactions in Internet Technology*, 6(4), 2006.
- Aditya Kalyanpur, Bijan Parsia, Evren Sirin, and James Hendler. Debugging unsatisfiable classes in owl ontologies. *Journal of Web Semantics* (accepted 7/2005).

- G. Jiang, G. Cybenko and J. Hendler, Semantic Interoperability and Information Fluidity, *Int'l Journal of Cooperative Information Systems* (accepted 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.
- Kalyanpur, J. Hendler and B. Parsia, A Tool for Working with Web Ontologies, *Intl Journal of Semantic Web and Information Systems*, Jan-March, 2005.
- Evren Sirin, Bijan Parsia, Dan Wu, Dana Nau, and James Hendler HTN planning for web service composition using SHOP2, *Web Semantics Journal*, 1(4), 2004.
- K. Clark, B. Parsia and J. Hendler, Will the Semantic Web Change Education, *Journal of Interactive Media in Education*, 2004(1), 2004
- Kalyanpur, J. Golbeck, J. Banerjee, and J. Hendler, OWL: Capturing semantic information using a standardized web ontology language, *Multilingual Computing and Technology Magazine*, 15(7), Nov 2004
- D. DeRoure and J. Hendler, E-Science: The Grid and the Semantic Web (Expert Opinion), *IEEE Intelligent Systems* Jan/Feb 2004
- E. Sirin, B. Parsia, and J. Hendler, Filtering and Selecting Semantic Web Services with interactive composition techniques, *IEEE Intelligent Systems* 19(4), 2004.
- Jennifer Golbeck, Gilberto Fragoso, Frank Hartel, James Hendler, Bijan Parsia, and Jim Oberthaler, The National Cancer Institute Ontology, *Web Semantics Journal*, 1(1), December, 2003
- J. Hendler, Science and the Semantic Web, *Science*, Vol 299, Oct 24, 2003.
- J. Hendler and B. Parsia, XML and the Semantic Web, *XML Journal* 3(10), October 2002
- J. Hendler, T. Berners-Lee, and E. Miller, Integrating Applications on the Semantic Web, *Transactions of the Institute of Electrical Engineers of Japan* 122(10), October, 2002 (In *Japanese*, English reprint available on line)
- D. McGuinness, R. Fikes, J. Hendler, and L. Stein, DAML+OIL: An Ontology Language for the Semantic Web, *IEEE Intelligent Systems* 17(5), Sept./Oct 2002
- D. Kotz, G. Cybenko, R. Gray, G. Jiang, R. Peterson, M. Hofmann, D. Chacon, K. Whitebread, and J. Hendler, Performance Analysis of Mobile Agents for Filtering Data Streams on Wireless Networks, *Mobile Networks and Applications* 7(2), 2001
- J. Hendler, Agents and the Semantic Web, *IEEE Intelligent Systems* 16(2), March/April, 2001.
- T. Berners-Lee and J. Hendler, Publishing on the semantic web, *Nature*, 410:6832, April 26, 2001
- J. Heflin and J. Hendler, The Semantic Web in Action, *IEEE Intelligent Systems* 16(2), March/April, 2001
- T. Berners-Lee, J. Hendler and O. Lassila, The Semantic Web: When the Internet gets smart, *Scientific American*, May 2001.
- Det semantiske Web (Dutch translation) in: *Nar Nettet Aendrer Verden*, M. Jensen, M. Pedersen, and A. Talbro (eds), Borsens Verlag: Denmark, Sept 2001.

- German translation "Mein Computer versteht mich" *Spektrum der Wissenschaft* (August 2001)
- Spanish translation "La Red semántica" from *Investigación y Ciencia* (July 2001)
- Italian translation "Il Web semantico" from *Le Scienze* (May 2001)
- Polish translation "Sieć Sematyczna" from *Swiat Nauki* (7/2001)
- Japanese translation 自分で推論する未来型ウェブ (日経サイエンス) 31 (8) , 2001.8, pp.54-65 [s] * 上記文献の和訳
- Chinese translation 語意網, 科學美國, 2001 年 5 月 (W3China.org)
- D. McGuinness and J. Hendler, The DARPA Agent Markup Language, *IEEE Intelligent Systems Trends and Controversies*, Feb, 2001 (w/D. McGuinness)
- J. Hendler, Is There an Intelligent Agent in Your Future, *Nature Web Matters* (www.nature.com), *March 11, 1999*.
- Hector Munoz-Avila, James A Hendler, and David W Aha, Conversational case-based planning, *Review of Applied Expert Systems*, 5, 1999. pp 163-173.
- K. Stoffel and J. Hendler, Back-End technology for High Performance Knowledge Representation Systems, *IEEE Intelligent Systems* May, 1999
- S. Luke and J. Hendler, Web Agents that Work. *IEEE Multimedia*, 4(3), 1997.
- K. Erol, D. Nau and J. Hendler, Complexity Results for Hierarchical Task-Network Planning, *Annals of Mathematics and Artificial Intelligence*, 18(1), 1997.
- J. Hendler, Intelligent Agents --- Where AI meets Information Technology, (i) *IEEE Expert* December, 1996. ii. Reprinted in *Proceedings, 3rd Brazilian Symposium on Intelligent Automation*, Victoria, Brazil, Sept, 1997.
- O. Seeliger and J. Hendler, Supervenient Hierarchies of Behaviors in Robotics, *Journal of Experimental and Theoretical AI*, 9(2/3), 1997
- J. Hendler and D. McDermott, Planning: What it is, What it could be, *Artificial Intelligence*, 76, 1996.
- D. Musliner, J. Hendler, A. Agrawala, E. Durfee, and J. Strosnider, The Challenges of Real-Time AI, *IEEE Computer* ,28(1), January, 1995.
- J. Hendler, Types of Planning --- can artificial intelligence yield insights into prefrontal function?, *Annals of the New York Academy of Science*, The Frontal Lobes: Vol 769, 1995 (p. 265-276).
- M. Evett, J. Hendler, A. Mahanti and D. Nau, PRA*: The SIMD Parallelization of a Memory-Limited Heuristic Search Algorithm, *Journal of Parallel and Distributed Computing* 25(2), 1995.
- J. Hendler, High Performance Artificial Intelligence, *Science*, Vol 265, Aug 12, 1994
- Kettler, W. Anderson, M. Evett and J. Hendler, Massively Parallel Support for Case-based Planning. *IEEE Expert*, February 1994
- M. Evett, L. Spector and J. Hendler, Parallel Knowledge Representation on the Connection Machine, *Journal of Parallel and Distributed Computing*, 22(2), 1994
- J. Grafman, A. Sirigu, L. Spector and J. Hendler, Damage to the Prefrontal Cortex Leads to Decomposition of Structured Event Complexes, *Journal of Head Trauma Rehabilitation*, 8(1), March, 1993
- J. Hendler, Massively Parallel AI Research in Japan: Beyond the 5th Generation i. *IEEE Expert*, February, 1994. ii reprinted in *Vivek* (Indian AI publication) , 6(2), 1993.

Wilson and J. Hendler, Linking Symbolic and Subsymbolic Computing, *Connection Science*, 5(3-4), 1993.

L. Spector and J. Hendler, Planning and Control across Supervenient Levels of Representation, *Intl Journal on Intelligent and Cooperative Information Systems*, 1(3-4), December, 1992

J. Hendler, ``Artificial Intelligence into the 21st Century," *IEEE Expert*, Forum Article, 7(6), December, 1992.

S. Kambhampati and J. Hendler, A Validation Structure Based Theory of Plan Modification and Reuse, *Artificial Intelligence*, May, 1992.

Eshner, J. Hendler and D. Nau, *Incremental Planning Using Conceptual Graphs*, Journal of Experimental and Theoretical AI 4(2), April 1992

Ostertag, J. Hendler, R. Prieto-Diaz and C. Braun, Computing Similarity in a Reuse Library System: An AI-based Approach, *ACM Transactions on Software Engineering Methodology*. June, 1992

J. Hendler, A. Tate and M. Drummond, AI Planning: Systems and Techniques, i. *Artificial Intelligence Magazine* (2), May, 1990. ii. Reprinted (Japanese Translation) in *Nikkei Artificial Intelligence Journal* , Nikkei Business Publications, Japan, Oct., 1990. iii. Reprinted Proceedings Brazilian National Conference on AI (CONAI-92), Sao Paulo, Brazil, 1992.

Q. Yang. J. Hendler and D. Nau, Merging Separately Generated Plans with Restricted Interactions, *Computational Intelligence*, 8(4), November, 1992

J. Hendler, On the need for hybrid systems, *Connection Science*, 1(3), 1990.

J. Hendler, Below the Knowledge Level , *Journal of Experimental and Theoretical AI* 1(4), 1989

J. Hendler, The Design and Implementation of Symbolic Marker-Passing Systems, *Connection Science*, 1(1), 1989.

J. Hendler, Marker-passing over microfeatures: Towards a hybrid symbolic/connectionist model, *Cognitive Science*, 13(1), March, 1989 p. 79-106

J. Sanborn and J. Hendler, A model of reaction for planning in dynamic domains, *Int'l Journal of AI and Engineering* 3(2), April, 1988.

J. Hendler and P. Michaelis, *The Effects of a System-Imposed Grammatical Restriction On Interactive Natural Language Dialog*, Papers in Linguistics (International Journal of Human Communication) 17(2), 1984. (ii) Reprinted 18(2), 1985.

Editorials in *IEEE Intelligent Systems*

(EIC of *IEEE IS* from Jan 2005)

- Impact and Action, Jan/Feb, 2005
- Fathoming Funding, Mar/Apr, 2005
- Systems, Systematically Speaking, May/Jun, 2005
- Enlarging the Tent, Jul/Aug, 2005
- Why Your Paper was Rejected, Sept/Oct, 2005
- I'm Sorry Dave, Nov/Dec, 2005
- Fly, But not Like an Eagle, Jan/Feb 2006
- Revising our mission, Mar/Apr, 2006

- Introducing the Future of AI, May/June, 2006
- Computer Play Chess; Humans Play Go, July/Aug 2006
- The State of the Magazine, Nov/Dec 2006
- The Dark Side of the Semantic Web, Jan/Feb 2007
- Department of Redundancy Department, Mar/Apr 2007
- Where are all the agents?, May/June 2007
- Agents Redux, July/Aug 2007
- Reinventing Academic Publishing – Part I, Sept/Oct 2007
- Reinventing Academic Publishing – Part II, Nov/Dev 2007

Refereed commentaries in journals

Behavior and Brain Sciences

- "Planning and the Brain" 4/91 (with J. Grafman).
- "But what is the Substance of Connectionist Representation" 13, 1990.
- A Flawed Analogy? 10(3), 1987, p. 485.

Articles in “popular press”

- Artificial Intelligence Eyes a Smart Future, *Electronic Design Magazine*, Jan 12, 2006.
- Artificial Intelligence: yesterday, today and tomorrow, *Currents in Modern Thought*, *The World & I*, Aug 1995.

Proceedings of Refereed Conferences and Workshops

- Christian Halaschek-Weiner and James Hendler, Toward Expressive Syndication on the Web, Proc. 16th International Conference on the World Wide Web (WWW 2007), May, 2007. (*nominated for best student paper*)
- Vladimir Kolovski, James Hendler and Bijan Parsia, Analyzing Web Access Control Policies, Proc. 16th International Conference on the World Wide Web (WWW 2007), May, 2007.
- Taowei David Wang, Bijan Parsia and James Hendler, A survey of the web ontology landscape, Proceedings of international semantic web conference (ISWC 06), Nov. 2006.
- Jennifer Golbeck and James Hendler. Filmtrust: Movie recommendations using trust in web-based social networks. Proceedings of the Consumer Communications and Networking Conference, January 2006.
- Vladamir Kolovski, Bijan Parsia, Yarden Katz and James Hendler, Representing Web Service Policies in OWL-DL, Proc International Semantic Web Conference (ISWC 2005), Galway, Ireland, Nov 2005.
- James Hendler, Counter Terror and the Semantic Web, *AAAI Spring Symposium on AI for Homeland Security*, March, 2005
- Ugur Kuter, Evren Sirin, Dana Nau, Bijan Parsia and James Hendler, , Information Gathering during planning for web service composition, *Proceedings of the 3rd International Semantic Web Conference (ISWC 04)*, Hiroshima, Japan, 11/2004.

- Jennifer Golbeck and James Hendler, Reputation network analysis for email filtering, *Proc. 1st Conference on Email and Anti-Spam*, June, 2004.
- Jennifer Golbeck and James Hendler, Accuracy of Metrics for Inferring Trust and Reputation in Semantic-Web-Based Social Networks, *Proc. EKAW*, 2004.
- Evren Sirin, Bijan Parsia, , and James Hendler. Composition-driven filtering and selection of semantic web services. In AAI Spring Symposium on Semantic Web Services, 2004.
- Yarden Katz and James Hendler. The Use of Lisp in Semantic Web Applications. Proceedings of International Lisp Conference 2003, New York City, August 2003.
- Jennifer Golbeck, Bijan Parsia, and James Hendler. Trust networks on the semantic web. In Proceedings of Cooperative Intelligent Agents 2003, Helsinki, Finland, August 2003.
- Dan Wu, Bijan Parsia, Evren Sirin, James Hendler, and Dana Nau. Automating DAML-S web services composition using SHOP2. In Proceedings of 2nd International Semantic Web Conference (ISWC2003), Sanibel Island, Florida, October 2003.
- Evren Sirin, James Hendler, and Bijan Parsia. Semi-automatic composition of web services using semantic descriptions. *Web Services: Modeling, Architecture and Infrastructure workshop in conjunction with ICEIS2003*, April 2003.
- Dan Wu, Evren Sirin, Bijan Parsia, James Hendler, and Dana Nau. Automatic web services composition using SHOP2. In Proceedings of Planning for Web Services Workshop in ICAPS 2003, Trento, Italy, June 2003.
- Guofei Jiang, George Cybenko and Jim Hendler, Semantic Depth and Markup Complexity, IEEE 2003 Conference on System, Man and Cybernetics, Oct. 5-8, Washington, DC.
- J. Golbeck, M. Grove, B. Parsia, A. Kalyanpur, and J. Hendler. New tools for the semantic web. In Proceedings of 13th International Conference on Knowledge Engineering and Knowledge Management EKAW02, Siguenza, Spain, Oct 2002
- CAST Agents: Network-Centric Fires Unleashed, Proceedings 2001 National Fire Control Symposium (NFCS), 24-31 August 2001 (w/ M. Hofmann, D. Chacón, G. Mayer, K. Whitebread; *Restricted Access – Distribution authorized to the Department of Defense and U.S. DoD contractors only*)
- The Semantic Web: A Network of Content for the Digital City, Proc. 2nd Kyoto Meeting on Digital Cities, Kyoto, Japan, October 2001 (w/A. Swartz)
- Semantic Interoperability on the Web. In: Proceedings of *Extreme Markup Languages 2000*. Graphic Communications Association, 2000. pp. 111-120.(w/J. Heflin).
- Dynamic Ontologies on the Web. In: Proceedings of the Seventeenth National Conference on Artificial Intelligence (AAAI-2000). AAAI/MIT Press, Menlo Park, CA, 2000. pp. 443-449.(w/J. Heflin)
- Designing StoryRooms: Interactive Storytelling Spaces for Children. Designing Interactive Systems (DIS-2000), July, 2000 (w/ Alborzi, H., Druin, A., Montemayor, J., Sherman, L., Best, J., Hammer, J., Kruskal, A., Lal, A., Plaisant-Schwenn, T., Sumida, L., Wagner, R.)
- From PETS to Storykit: Creating New Technology With An Intergenerational Design Team., In proc. *Workshop on Interactive Robotics and Entertainment (WIRE-2000)*,

- Pittsburgh, April 2000. (w/ Montemayor, J., Alborzi, H., Druin, A., Pollack, D., Porteous, J., Sherman, L., Afework, A., Best, J., Hammer, J., Kruskal, A., Lal, A., Plaisant-Schwenn, T., Sumida, L., & Wagner, R.
- Applying Ontology to the Web; A case Study, Proc IWANN 99, Volume II – Springer, Berlin, 1999 (w/J. Heflin and S. Luke)
 - SHOE: A Knowledge Representation Language for Internet Applications, Proc Ontology Management – 1999, AAAI Press, 1999. (w/ J. Heflin and S. Luke)
 - Using Planning Graphs for Solving HTN Problems. In AAAI-99, pp. 534-540, 1999 (w/ A. Lotem, D.Nau)
 - Designing PETS: A personal Electronic Teller of Stories, Proc. CHI 1999., ACM Press (w/ A.Druin, J.Montemayor, B. McAlister, A. Boltman, E.Fiterman, A. Plaisant, A. Kruskal, H. Olsen. I. Revett, T. Plaisant-Schwenn, L. Sumida, and R. Wagner)
 - Analyzing External Conditions to Improve the Efficiency of HTN Planning, Proceedings Fifteenth National Conference on AI (AAAI-98), Madison, WI, July, 1998.(W/ R. Tsuneto and D. Nau)
 - Plan-Refinement Strategies and Search-Space Size, Proc. European Conference on AI Planning, September, 1997.(w/R. Tsuneto and D. Nau)
 - "Semantic Indexing for Complex Patient Grouping," Proc. Annual Conference of the American Medical Informatics Association , Oct. 1997,(w/ K. Stoffel, J. Saltz, J. Dick, W. Merz and R. Miller)
 - "Par-kap: A knowledge Acquisition Tool for Building Practical Planning Systems," Proc. IJCAI-97 , Nagoya, Japan, 1997. ii. reprinted in Proc. The Ninth Dutch conference on Artificial Intelligence (NAIC-97) K. van Marcke, W. Daelemans (eds), University of Antwerp, Belgium, November, 1997. (w/ L. Nunes de Barros, R. Benjamins)
 - "Efficient Management of Very Large Ontologies," Proc. AAAI-97 , Providence, RI, 1997. (W/ K.Stoffel and M. Taylor)
 - "ForMAT and Parka: A technology integration experiment and beyond," Proc. Intl Conference on Case-Based Reasoning ,Providence, RI, 1997. (w/A. Mulvehill and D. Rager)
 - "The Case for Graph-Structured Representations," Proc. Intl Conference on Case-Based Reasoning , Providence, RI, 1997. (w/B. Kettler and K. Sanders)
 - "Ontology-Based Web Agents", Proc. Agents 1997 , San Mateo, CA. 1997 (w/S. Luke, L. Spector and D. Rager)
 - "Guaranteeing Safety in Spatially Situated Agents", Proc. 13th Natl. Conf. On Artificial Intelligence (AAAI-96), Portland, OR August 1996. (w/ R. Kohout and D. Musliner)
 - "Commitment Strategies in Hierarchical Task-Network Planning", Proc, Thirteenth Natl. Conf. on Artificial Intelligence (AAAI-96)", Portland, OR August 1996. (w/ R. Tsuneto, K. Erol, D. Nau)
 - "A Critical Look at Critics in HTN Planning", Proc. International Joint Conference on Artificial Intelligence (IJCAI-95), Montreal, Aug, 1995. (w/ K. Erol, D. Nau)
 - "Formalizing Behavior-Based Planning for Nonholonomic Robots,"Proc. International Joint Conference on Artificial Intelligence (IJCAI-95), Montreal, Aug, 1995. (w/ V. Manikonda and P.S. Krishnaprasad)

- "A Motion Description Language and a Hybrid Architecture for Motion Planning with Nonholonomic Robots," Proc. International Conference on Robotics and Automation, Nagoya, Japan, 1995. (w/ V. Manikonda and P. Krishnaprasad)
- "Evaluating the CAPER Planning System," Proc. Israeli Symposium on Artificial Intelligence, Jerusalem, Israel, Jan 1995. (w/B. Kettler)
- "Parka on MIMD-Supercomputers," 3rd International Workshop on Parallel Processing in AI, Montreal, Aug., 1995. (w/ K. Stoffel and J. Saltz)
- Supporting Intelligent Real-Time Control: Dynamic Reaction on the Maruti Operating System, Proc. Israeli Symposium on Artificial Intelligence, Jerusalem, Israel, Jan 1995. (w/D. Musliner and R. Kohout)
- "HTN Planning: Complexity and Expressivity" Proc. 12th Natl. Conf. on Artificial Intelligence (AAAI-94), Seattle, WA. August 1994. (w/ D. Nau and K. Erol)
- "UMCP: A sound and complete procedure for HTN planning", Proc. of the 2nd International Conference on AI Planning Systems, June, 1994. (w/ K. Erol and D. Nau)
- "The use of supervenience in Dynamic-World Planning," Proc. of the 2nd International Conference on AI Planning Systems, June, 1994. (w/ L. Spector)
- "Massively Parallel Support for Computationally Effective Recognition Queries," Proceedings of the Eleventh National Conference on Artificial Intelligence (AAAI-93), AAAI Press, Menlo Park, CA, 1993 (w/M. Evett, W. Andersen)
- "Masively Parallel Support for Case-Based Planning," Proc. Arpa/Rome Lab Knowledge-Based Planning and Scheduling Initiative , Morgan-Kaufmann, CA, Feb. 1994. (w/B. Kettler, W. Andersen, M. Evett, S. Kambhampati, and A. Agrawala).
- "Integrate Approaches for improving the effectiveness of Plan Reuse," Proc. Arpa/Rome Lab Knowledge-Based Planning and Scheduling Initiative , Morgan-Kaufmann, CA, Feb. 1994. (w/S. Kambhampati, L. Ihrig, S. Katukam, J. Chen, and A. Agrawala).
- "Massively Parallel Support for Efficient Knowledge Representation," Proceedings of the Thirteenth International Joint Conference on Artificial Intelligence (IJCAI-93), Morgan Kaufmann, 1993. (w/M. Evett, W. Andersen)
- "Massively Parallel Support for a Case-based Planning System", In Proceedings of the Ninth IEEE Conference on AI Applications, Orlando, Florida, March 1993 (w/ B. Kettler, W. Andersen, M. Evett)
- Merging Plans Efficiently, Proc. NSF Design and Manufacturing Systems Grantees Conference, UNCC, Charlotte, NC, 1/1993. (w/D. Nau)
- ``Experiments in Optimal Sensing for Situated Agents," Proceedings of the Second Pacific Rim International Conference on Artificial Intelligence, PRICAI '92 , Seoul, Korea, 1992. (w/D. Kinney, M. Georgeff).
- "Multiple Approaches to Multiple Agency (panel Report)," Proceedings of the 12th International Joint Conference on Artificial Intelligence, August, 1991.
- "Integrating Neural and Expert Reasoning: An Example," Proceedings of AISB-91, Leeds, UK, April, 1991. (W/ L. Dickens)
- "Mission Critical Planning: AI on the MARUTI real-time operating system," Proceedings of the Workshop on Innovative approaches to planning, scheduling, and control, Morgan Kaufman, Nov. 1990. (w/A. Agrawala)

- "Spreading activation over PDP networks," Proceedings of the 12th annual conference of the Cognitive Science Society, July, 1990.
- "A formal model of Abstraction for Planning," Working Notes of the AAAI Workshop on Automated Planning for Complex Domains, July, 1990. (extended abstract; w/ V.S. Subrahmanian)
- "PRA*: A memory-limited heuristic search procedure for the Connection Machine," Proceedings of Frontiers of Massively Parallel Computation, IEEE Computer Society Press, 1990. (w/M. Evett, A. Mahanti, and D. Nau)
- "An abstraction-partitioned model for reactive planning," Proc. Fifth Rocky Mountain Conference on AI, Las Cruces, NM, June, 1990. (w/ L. Spector)
- Hybrid Systems: research summary, Proc. Modeles Symboliconnexionnistes, Paris, France, April, 1990.
- "Control of Refitting during Plan Reuse," Proceedings of IJCAI-89, Detroit, MI. 1989. (w/ S. Kambhampati)
- Parallel Knowledge Representation on the Connection Machine, Proceedings of Parallel Computing 1989, Leiden, The Netherlands, Sept. 1989. (w/ M. Evett)
- Abstraction and Reaction, proc. AAAI Workshop on Perception, planning, and knowledge, Detroit, MI, Aug. 1989
- Abstraction, Reaction, and Planning (Extended Abstract), proc. AAAI Workshop on Plan Recognition, Detroit, MI, Aug. 1989.
- Massively parallel SIMD algorithms for property inheritance, proc. AAAI Workshop on Parallel Algorithms for AI, Detroit, MI. Aug., 1989. (w/ M. Evett)
- "Shared resource control between human and computer," Proceedings of the NASA conference on Space Applications of AI, May, 1989. (w/ R. Wilson)
- "Flexible Reuse of Plans via Annotation and Verification", Proceedings of Fifth IEEE Conference on Applications of Artificial Intelligence, Miami, Florida, 1989. (w/ S. Kambhampati)
- "Planning for Multiple Goals with Limited Interactions," Proceedings of Fifth IEEE Conference on Applications of Artificial Intelligence, Miami, Florida, 1989. (w/ D. Nau and Q. Yang)
- "Refitting Plans for Case-based Reasoning", Proceedings DARPA Workshop 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)
- "Planning and reaction in dynamic domains" Proceedings DARPA Workshop on Planning, Austin, Tx., Dec. 1987. (w. J. Sanborn)
- "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 i. IBM Workshop on Object-Oriented Computing, June, 1986. ii. 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)

- Database Migration for Air Force Command and Control, J. Hendler Chair, Air Force Scientific Advisory Board, Jan 2002.

Technical Reports

More than 75 technical reports dating 1978-pres.

Invited Lectures

Invited Talks at conferences/workshops

- The Tetherless Web, Invited Presentation, NFAIS annual conference, Philadelphia, Feb. 2007
- Current Status and Future Promise of the Semantic Web, Keynote, Semantics 2006, Vienna, *Austria*, Nov 2006.
- The Semantic Web: a Network of Understanding, Keynote, Asian Semantic Web Conference, Beijing, *China*, Aug 2006

- Semantic Web @ 5, Keynote, Semantic Technology Conference, San Jose, CA, Mar 2006.
- From Atoms to OWLs, the new ecology of the Semantic Web, Keynote, XML 2005, Atlanta, Nov. 2005.
- AI Funding in America, AAAI Funding Workshop, Va, , Nov 2005
- Agents and the Semantic Web – Revisited, Workshop Keynote, AAAI Fall Symposium on Agents and the Semantic Web, Va, Nov, 2005
- The Semantic Web and the Web, Workshop on the emerging science of the WWW, London, *England*, Sept 2005.
- Semantic Web-Slinging, Keynote, 8th Joint Conference on Information Sciences, Salt Lake City, Utah, July 2005.
- Knowledge is Power: The view from the Semantic Web, Robert R. Englemore Memorial Lecture, IAAI 2005, Pittsburgh, PA, July 2005.
- Semantic Web Overview; What the Semantic Web can bring to the Grid, 2 invited talks, Dagstuhl Workshop on Semantic Web and Grid, *Saarbrücken, Germany*. July, 2005
- The Semantic Web and Digital Libraries, invited talk, Joint Symposium sponsored by Digital Library Association, Library of Congress, Washington DC, April 2005
- Semantic Web Overview, Keynote, Semantic Technologies Conference, San Francisco, March 2005.
- Semantic Web Research Directions, Geospatial Semantic Web meeting, National Geospatial-information Agency, Feb 2005.
- What is the Semantic Web *Really?*, Keynote, Semantic Web Summer School, *Cercedilla, Spain*, July 2004.
- The Semantic Web: New Graphs to Conquer, keynote, 4th Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Algorithms, Haifa, *Israel*, May 2004.
- The Semantic Web, Knowledge Fusion Workshop, Maryland, Nov 2003.
- The Future of the World Wide Web, Special Celebration for the 100th Birthday of John Vincent Atanasoff, Iowa State Univ, Oct 2003.
- The Semantic Web, Special Libraries Association Technology Day 2003, Baltimore, MD, Oct 2003.
- On Beyond Ontology – the Future of the Semantic Web, Keynote, International Semantic Web Conference (ISWC-2003), Florida, Oct, 2003.
- Dynamic Composition of Web Services, Keynote, International Conference on E-Commerce, CMU. Oct 2003.
- The Future of the Semantic Web, Keynote, White House Workshop on Semantic Technologies for eGov, Sept, 2003
- Teraflops, PetaByte and Exalinks: Science on the Semantic Web, Keynote, EPSRC All Hands meeting of the e-science program, Nottingham, *UK*, 2003
- Semantic Grid Possibilities, Keynote, Workshop on Semantic and Peer to Peer Grid Services, World Wide Web Conference, Budapest, *Hungary*, May, 2003
- Modeling and Markup on the Semantic Web, Keynote, 6th Sanken Symposium on Advanced Technology, Osaka, *Japan*, March 2003.
- The Semantic Web, Keynote, Info-tech 2002, Kyoto, *Japan*, Oct 2002.

- Knowledge Acquisition – a Modern Approach, Keynote, European Knowledge Acquisition Workshop, Siquenza, *Spain*, Oct 2002.
- Knowledge and the Semantic Web, invited Plenary, IFIP World Computer Conference, (IIP workshop), Montreal, *Canada*, August 2002.
- The Web Ontology Working Group, invited talk, WWW 2002, Hawaii, May 2002.
- The Business Case for the Semantic Web, Banquet talk, Research for the Internet Society, Berlin, *Germany*, April, 2002
- The semantic web: KR's Worst Nightmare, Plenary talk, Knowledge Representation 2002, Lyons, *France*, April 2002
- The Semantic Web and Biological Ontologies, BioInformatics Research Network Planning Workshop (Inv. Only), NIH, Washington DC, US, Dec 2001.
- TheFuture of the World Wide Web, Plenary: Debate with Ben Shneiderman, ASIST 2001, Washington DC, US Nov, 2001.
- The Semantic Web, E-book 2001, Washington DC, US, Nov 2001.
- Knowledge is Power: The Semantic Web Vision, Keynote Address (joint w/E. Feigenbaum), Web Intelligence 2001, Maebashi, *Japan*, Oct 2001.
- A Web of Content for the Digital City, Invited Talk, 2nd Kyoto Meeting on Digital Cities, Kyoto, *Japan*, Oct. 2001
- Missed Perceptions: AI vs. the Funding Agencies, invited talk, National Conference on Artificial Intelligence, Austin, TX 2000.
- Agents: Beyond the hype, Agents 2000, Barcelona, *Spain*, 2000.
- AI on the Web, Banquet talk, FL AI Research Symposium, 2000.
- SHOE: Simple HTML Ontology Extension, invited talk for 3 combined workshops, European Conference on AI, Brighton, *UK*, 1998.
- Knowledge Representation for the World Wide Web, invited talk, NASA Workshop on Intelligent Agents and Their Potential for Future Design and Synthesis Environments, Langley, VA, Sept, 1998.
- Developing Intelligent Agents -- The future of AI planning systems, Invited Talk, 3 Simposio Basiliro de Automacao Inteligente (3rd Brazilian Symposium on Intelligent Automation), Vitoria, *Brazil*, Sept., 1997.
- Whither AI Planning? Invited talk, European Conference on Planning Systems, Assisi, *Italy*, September, 1995.
- High Performance Artificial Intelligence, Invited Talk, IJCAI workshop on Parallel Processing for AI, July, 1995.
- New Thoughts on Hybrid Systems, Invited Keynote Talk, IJCAI workshop on the Integration of Neural and Symbolic Systems, July, 1995.
- High Performance AI Computing, Invited Talk, Conference of the Israeli Information Processing Association, Jerusalem, *Israel*, Jan, 1995.
- SCRUFFy: An applications oriented hybrid systems shell, Swedish National Conference on Connectionism, Skovde, *Sweden*, Sept. 1992.
- Hybrid connectionist/symbolic systems: what we have learned, ONR Workshop on Multiple Strategy Learning and Hybrid Reasoning, Woods Hole, MA. Sept, 1992.
- AI Planning Systems, Invited Talk, Brazilian National Conference on Artificial Intelligence, Sao Paulo, *Brazil*, March, 1992.

- ``Problem Solving and Reasoning: The connectionist Perspective." , International Conference ``Connectionism in Perspective," Zurich, *Switzerland*, October, 1988.

Invited Colloquia

- The Future of the Semantic Web, Special Departmental Honours Seminar, Vrije Universiteit, *The Netherlands*, Feb. 2007
- Towards a Science of the World Wide Web, Distinguished lecture, Edinburgh University, *Scotland*, Dec. 2006
- The Dark Side of the Semantic Web, CISA Symposium, Edinburgh University, *Scotland*, Dec. 2006.
- Science and the Semantic Web, Distinguished Colloquium, Chinese Academy of Science, Beijing, *China*, Aug. 2006
- Science and the Semantic Web, Harvard Institute for Innovative Computing, Distinguished Lecture, Cambridge, Dec. 2005.
- *Science* and Computer Science, Science Magazine Senior Editorial Board Meeting, West Va.,, Sept 2005.
- Spinning the Semantic Web, Fujitsu Labs of America, Sept, 2005.
- The Semantic Web and Intelligence, JIKD Colloquium, Univ of Md, August, 2005.
- Semantic Web and Owl, ½ day special tutorial/colloquium, Hebrew University, *Jerusalem, Israel*, Apr, 2005.
- What's Next on the Semantic Web, Departmental Colloquium, Harvard University, Feb 2005.
- Policy Aware Web, DIG colloquium, MIT, Feb. 2005.
- The Policy-Aware Web, Departmental Colloquium, Ohio State University, Nov. 2004
- What is the Semantic Web, United Jewish Appeal – e-Jewish Project kickoff, Jerusalem, *Israel*, May 04
- The Semantic Web, Dept. Colloquium, Yale University, Apr 04
- What is the Semantic Web, ISTec Distinguished Colloquium, Colorado State Univ, Feb 04
- The Semantic Web and Science, Medical School Colloquium, Ohio State Univ., Jan, 2004.
- What is the Semantic Web, Eurolan Summer School, Bucharest, *Romania*, Aug, 2003
- The Semantic Web, College Colloquium, Morgan State Univ, July 2003
- The Semantic Web, College Colloquium Series, Computer and Engineering College, Drexel University, May, 2003.
- The Semantic Web, Distinguished Colloquium Series, Univ of Toronto, *Canada*, Nov 2002.
- Web Ontology Research, Departmental Colloquium, Kyoto Univ, *Japan*, Oct 2002.
- The Semantic Web, Distinguished Colloquium, NTT Corp, Nara, *Japan*, Oct 2002.

- Ontologies on the Web, Johns Hopkins Hospital, Baltimore, MD, Sept 2002
- The Semantic Web, Johns Hopkins University Library School, Baltimore, MD, Sept 2002
- Ontologies on the Web, NASA CEOS Workshop, Arlington, VA, Sept. 2002.
- The Semantic Web is not Rocket Science, NASA Headquarters, Washington DC, July 2002.
- Publishing on the Semantic Web, Capitol Content Network – National Press Club, Washington DC, June 2002.
- Bioinformatics and the Semantic Web, National Cancer Inst, April 2002.
- The Semantic Web, National Library of Medicine, March, 2002.
- The Semantic Web, Distinguished Lecture Series, Brighton University, Brighton, UK, March, 2002.
- The Semantic Web, National Science Foundation Distinguished Lecture Series, March, 2002.
- The Semantic Web, President's Special Colloquium, Fujitsu Research Laboratory, Tokyo, *Japan*, October 2001.
- Agent Infrastructure, Distinguished Colloquium, Swiss Group on Artificial Intelligence and Cognition, Zurich, *Switzerland*, Aug, 2000.
- The DARPA Agent-Based Computing Thrust, presented at numerous sites, 1999-2001.
- Ontology for the Web, Carnegie Mellon University, Nov 1999.
- Knowledge Representation for the World Wide Web, MacArthur Distinguished Lecture Series, Hampshire College, Nov 1998.
- Parka-DB™: Knowledge representation meets databases, Dept Colloquium, Univ of Neuchatel, *Switzerland*, Nov. 1998.
- Knowledge Representation for the World Wide Web, Dept. Colloquium, Univ of Ulm, *Germany*, Nov. 1998
- The SHOE project: HTML ontology extensions, Institute Colloquium, DFKI, *Germany*, Nov. 1998.
- Knowledge Representation for the World Wide Web, NASA Ames research Center, California, Feb. 1998.
- The Collaborative Agents Technology Systems Project: Introduction and Search Agents, Dept Colloquium, Computer Science, Univ of Maryland, College Park, Oct. 1997.
- From planning to agents, Dept. Colloquium, CSEE, Univ. of Maryland Baltimore County, Sept 1997.
- Searching For Information In Unstructured Knowledge Domains, Departmental Colloquium, Stanford University, July 1997.
- Parka-DB™ -- A new technology for large scale knowledge bases, AI Research group seminar, SAIC, San Diego, CA, July 1997.
- Searching For Information In Unstructured Knowledge Domains, Departmental Colloquium, University of Delaware, Nov. 1996.
- Hybrid Knowledge and Databases: Towards a deep integration of knowledge- and data-based technologies, Departmental Colloquium, computer Science Dept., Hebrew University, *Israel*, May, 1996

- Information Processing Requirements for Intelligent Agents. Converging evidence from frontal lobe and robotics research, Neural Computation Lecture Series, Hebrew University, *Israel*, March, 1996.
- High Performance AI, Departmental Colloquium, Computer Science, Bar-Ilan University, *Israel*, Dec. 1995.
- High Performance AI, Departmental Colloquium, Institute for Computer Science, Hebrew University, *Israel*, Oct. 1995.
- High Performance AI, Departmental Colloquium, Brandeis University, Sept. 1995.
- Very Large Knowledge Bases, Information Science Institute, Los Angeles, Aug, 1995.
- High Performance AI, Dept. Colloquium, University of Waterloo, *Canada*, 1995.
- High Performance AI, Dept Colloquium, Computing Research Lab, New Mexico State University, Los Cruces, NM, Feb, 1995.
- High Performance AI Computing, Special Speaker Series in AI and Machine Learning, George Mason University, Fairfax, VA, Feb. 1995.
- High Performance AI Computing, Dept. Colloquium, Technion, *Haifa*, Apr. 1994; Bar-Ilan Univ., Ramat Gan, *Israel*, 1994.
- Dynamic World Planning Systems, Dept. Colloquium, Ben-Gurion Univ, Beer-Sheba, *Israel*; Hebrew University, Jerusalem, *Israel*, May, 1994.
- Using High Performance Techniques in Knowledge Based Computing, Pfizer Pharmaceuticals, Sandwich, *England*, April, 1994
- AI Planning Systems, invited series of 7 one hour lectures, Bar-Ilan Univ., Ramat Gan, *Israel*, Mar-May, 1994.
- High Performance Computing and Very Large Knowledge Bases, Sony Computer Science Laboratory, Tokyo, *Japan*, Dec, 1993.
- Massively Parallel Support for Case-based Reasoning, Invited Seminar, AT&T Bell Laboratories, June, 1993.
- Merging Action And Reaction Via Abstraction, Dept. Colloquium, Massachusetts Institute of Technology, May, 1993
- Dynamic approaches to planning in dynamic worlds, Space Telescope Science Institute, Md., May, 1993.
- Massively Parallel Support for Case-based Reasoning, Invited Lectures: NEC Corp., Tokyo, *Japan*; ATR Corp., Kyoto *Japan*; ETL Corp, Tsukuba, *Japan*; Fujitsu, Tokyo *Japan*; ICOT (5th Gen Computing Project), Tokyo *Japan*. Nov. and Dec., 1992.
- Towards Intelligent Agents, Invited Lectures: NTT Corp, Tokyo, *Japan*; Sony CSL, Tokyo *Japan*. November, 1992.
- Real-World Planning Systems, Departmental Colloquium, Sao Paolo University, Sao Paolo, *Brazil*, Sept. 1992
- A hybrid connectionist/Symbolic System, University of Western Australia, Perth, *Australia*, August, 1991.
- AI planning systems, Curtin University, Perth, *Australia*, Aug., 1991.
- Real-time planning and Intelligent Control, Aerospace Research Laboratories, Melbourne, *Australia*, July, 1991.

- A set of 5 weekly lectures on AI planning and intelligent control, Australian AI Institute, Melbourne, *Australia*, July, 1991.
- A Massively-Parallel Frame-Based AI System, Kyoto University, *Japan*, July, 1991.
- Towards Intelligent agents -- bridging the gap between AI and robotics, Engineering Dept., Oxford University, *UK*, May, 1991.
- Moving Towards Intelligent Agents -- The Future of AI Planning Systems, Computer Science Dept., Cambridge University, *UK*, May, 1991.
- Levels of Abstraction in Planning Systems, Computer Science Dept., Sussex University, *UK*, May, 1991.
- Integrating Neural Networks and Symbolic Reasoners, Computer Science Dept., Exeter University, *UK*, May, 1991.
- Merging action and reaction via abstraction, Departmental Colloquium, Carnegie-Mellon University, May, 1990.
- Abstraction and Reaction, Departmental Colloquium, Washington University, Jan. 1989.
- Abstraction and Reaction, Departmental Colloquium, University of Pennsylvania, Nov. 1989
- Real-Time Planning, Boeing Technical Center, Philadelphia, Pa, Nov. 1989.
- Real-time Reaction For Planning Systems, NASA Jet Propulsion Laboratory, Pasadena, May, 1989.
- Real-time Reaction For Planning Systems, SRI International, Stanford, May, 1989.
- Towards Connectionist reasoning, Departmental Colloquium, University of Oregon, Eugene, May, 1988.
- PARKA: A frame-based AI language for the Connection Machine, International Computer Science Institute, Berkeley, May, 1989.
- Some Experiments In Parallel Knowledge Representation, Research Colloquium, Intellicorp., Menlo Park, April, 1989.
- Real-time Reaction For Planning Systems, Department Colloquium, Computer Science Dept., U. of California - Berkeley, April, 1989.
- Spreading Activation over Distributed Representations (or, Better Back-Propagation? Just Relax.) Departmental Colloquium, Computer Science Dept., U. California, San Diego, March, 1989.
- Spreading Activation Meets Back Propagation: Towards higher level inferencing with distributed networks, International Computer Science Institute, Berkeley, Ca., March, 1989.
- Towards intermediate mechanisms, or, why can't neural networks talk to expert systems?, Corporate Symposium, AT&T Bell Laboratories, July, 1988.
- Towards intermediate mechanisms, or, why can't Neural- and Symbolic- networks cooperate?, Corporate Symposium, General Electrics Research and Development, May, 1988.
- Towards Hybrid Connectionist/Symbolic Systems, Departmental Colloquium, Psychology Dept., Rutgers, April, 1988.
- Why can't Neural Networks talk to Expert Systems?, Computer Reserach Laboratory Colloquium, New Mexico State University, March, 1988.

- New directions in knowledge representation: Marker-passing, microfeatures, and more, Departmental Colloquium, UMBC, Nov. 1987.
- Using AI to Enhance Programmer Productivity, Greater Dayton ACM, Dayton, Ohio, April, 1987.
- Towards a Dynamic Planner, Greater Dayton SIGART, Dayton, Ohio, April, 1987.
- New directions in knowledge representation: Marker-passing, microfeatures, and more, Departmental Colloquium, Ohio State University, January, 1987.
- Using AI to enhance programmer productivity, Contel Spacecom, October, 1986.
- Dynamic Planning, Texas Instruments Inc, August 1986.
- AI: A technology in Transition, American Psychological Association - Division 19 Tutorial, August, 1986.
- The Enhancement Metaphor, IBM Workshop on Object-Oriented Computing, June, 1986.
- Integrating Marker-Passing and Problem-Solving, Naval Research Laboratory, Special Research Colloquia, Nov. 1985.
- Marker-Passing and Problem-Solving, Boston University, Harvard College, Oregon Graduate Center, Rutgers, U. Connecticut, U. Colorado (Boulder), U. Maryland, U. Pennsylvania, U. Oregon, U. Washington (Job talk), 1985.
- Marker-Passing and Problem-Solving, Department Colloquium, University of Toronto, March, 1985.
- Artificial Intelligence and Cognitive Science, Wellesley College, 1984.
- Introduction to Artificial Intelligence (one day course), Brown University Learning Community, 1983.
- Artificial Intelligence, Southern Methodist University Psychology Dept., 1982.
- Human Factors of Computing Systems, ACM --- Southern Methodist University Chapter, 1982.
- Artificial Intelligence at Yale University, Departmental Colloquium, Computer Science Department, Southern Methodist University, 1981.
- Artificial Intelligence, University of Texas at Dallas Computer Science Department, 1981.

Conference Panels

- Semantic Web User Interface, ISWC 2006, Athens, Georgia
- The Semantic Web, Keynote panel, WWW 2006, Edinburgh, *Scotland*.
- Microformats vs. the Semantic Web, WWW 2005, Chiba, *Japan*.
- Can the Semantic Web be made to Flourish, WWW 2005, Chiba, *Japan*.
- Scientific American Article Considered Harmful (panelist), WWW 2003, *Hungary*
- The semantic web elephant: what the blind men see: (panel chair), IJCAI, 2001.
- [More than 20 panels on funding opportunities in AI and agents – US and International conferences – 1999-2000]
- VERY Large Knowledge Bases, (Panelist), International Joint Conference on Artificial Intelligence, Toronto, *Canada*, July. 1995.

- Breakthrough technologies for Very Large Knowledge bases (Panel Member), International Conference on Building and Sharing Very Large Knowledge Bases, Tokyo, Japan, Dec, 1993.
- ``Multiple Approaches to Multiple Agency" (Panel Chair), IJCAI-91, August, 1991.
- ``Massive Parallelism in Symbolic AI" (Panel Member), IJCAI-91, August, 1991.
- ``Heterogenous Knowledge Sources In Control" (Panel Member), IEEE 5th International Symposium on Real-time Control, Sept. 1990
- ``Non-numeric Computing" (Panel Member), Int. Conference on Parallel Processing, Aug., 1990.
- ``An AI perspective on Neural Networks (Panel Chair), AI Systems in Gov't, June, 1990.
- ``Merging Planning and Reaction" (panel chair), AAAI Symposium on Planning and Change, March, 1990.
- ``Research Methodology in Planning" (panel member), AAAI Symposium on Planning and Search, March, 1989.
- Expert Systems Interfaces (panel chair), Expert Systems in Government, Oct. 1987.
- What expert systems cannot do (panel chair), AI Society of the Middle Atlantic States, March, 1987.
- New Directions for Planning Systems (Panel Chair), AAAI Workshop on Theoretical Issues in Conceptual Information Processing, August, 1986.
- ``Artificial Intelligence" (Panel Member), Aerospace Education Foundation/Air Force Association, Apr. 1986.
- ``Learning" (Panel Member), ACM, U. of Maryland, Jan. 1986.

DoD/Govt Briefings

- Semantic Web, NSA, Dec 2005 (*classified*)
- The Semantic Web for the Intelligence Analyst, KDD meeting, Va, US, Oct 2005
- Semantic Web Tour, Keynote, Semantic Web Applications for National Security, Washington DC, April, 2005.
- The Web Ontology Language OWL, NATO RTO Workshop on Ontology, Paris, France, Nov, 2003.
- Bioinformatics and Biodefense, SAIC/DHS meeting on Biodefense Knowledge Center, Washington DC, Oct 2003.
- The Semantic Web: Vision for the Future, Semantic Web Military Users Group, Keynote talk, May 2003.
- Database Migration for Command and Control, special briefing to Chief of Staff US Air Force and Secretary US Air Force, Dec. 2001.
- The Semantic Web, CENDI forum, December meeting, Dec 2001 (Govt IT Senior Leadership)
- Agents: Beyond the Hype, Institute for Defense Analysis, Distinguished Defense Lecturers Series, Jan 2000.

- The Information Technology Top Ten List, Pentagon Technology Exchange, July, 1998.
- Information Technology for the Air Force, Briefing to Chief Scientist US Air Force, February, 1998.
- Software for the Warfighter, Special Briefing, Institute for Defense Analysis, December, 1997.
- High Performance Support for Case-based Reasoning, US Air Force Laboratory, Rome, New York, Jul, 1995.
- Artificial Intelligence and the Law, seminar, Supreme Court of the United States, Washington, DC, Sept. 1993.
- Marker-passing, Microfeatures, and Perception, Naval Research Lab, Nov. 1987.
- Using AI to Enhance Programmer Productivity, Air Force Institute of Technology --- Distinguished AI Speaker Series, Wright Patterson AFB, April, 1987.
- Dynamic Planning, National Bureau of Standards, August, 1986.
- New directions in object-oriented computing, National Bureau of Standards, Feb. 1986.

Conference Tutorials

- Real Time Planning, AAAI-95 (w/Austin Tate, David Musliner).
- Dynamic Planning Systems}, IJCAI 1993, AAAI 1994 (w/ Mike Georgeff).
- Natural Language Interfaces,} ACM Computer-Human Interaction Conference, May, 1988, 1989.

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 and Awards

- Robert Engelmere Memorial Award, AAAI, Aug, 2005.
- Foreign Member, Reviewers' College, Engineering and Physical Sciences Research Council, UK,
- Finalist, Homeland Security Award in Information Sharing, Christopher Columbus Fellowship Foundation, Oct. 2003.
- Member, NASA Earth Science Activity, Advisory Board Technical Subcommittee, 2003-pres.
- 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.

- 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*, 1996.
 - International Who's Who of Professionals*, 1997-pres
 - Who's Who in Science and Engineering*, 1997-pres
 - International Who's Who of Information Technology*, 1998-pres.
 - 2000 Outstanding Intellectuals of the 21st Century*, 2001.

Editor/Editorial Board Membership

- Board of Reviewing Editors, *Science*.
- Editor in Chief, *IEEE Intelligent Systems*.
- Associate Editor, *ACM Transactions on Internet Technology*, 2001-2004
- Associate Editor, *Artificial Intelligence*
- Chair of Advisory Board, *Web Semantics*
- Editor in Chief, *Web Semantics*, 2002-2004.
- Series Editor, *Foundations of AI*, (Monograph Series, Elsevier)
- Editorial Board, *Foundations and Trends in Web Science* (Monograph series, Now Publishers)
- Editorial Board, *Connection Science*, 1995-2002.
- Editorial Board, *IEEE Intelligent Systems*, 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:

Fujitsu Laboratory of America (\$800k from 2002-2007)
 NTT Corp (150k, 2003-2005)
 LockMart ATL (200k, 2003-2006)
 Northrup Grumman (75k, 2005)
 SAIC (50k, 2001-2004)
 Kevric Corp (10k, 2004)

Grants (Principal Investigator)

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

J. Hendler, PI (and Research Director), DARPA Integrated Learning Program award to Lockheed Martin (GILA), DoD Award (subcontract through Lockheed Martin - \$2.2M; Total award, \$22M)

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.

A. 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 Institute).

- 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).

A. 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 Instruments 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.

Media “Appearances” (interviews or appearances; quotes and releases not included)

"A question of semantics," PC Magazine interview, Mar. 2007

"The Semantic Web," Interview with Austrian Broadcasting Company, Jan 2007

"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 Bulletin, 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.

"Interview 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.

Professional Societies

- Member, American Association for the Advancement of Science (AAAS)
- Member, American Association for Artificial Intelligence (AAAI)
- Member, Association for Computing Machinery (ACM)
- Member, Cognitive Science Society
- Member, Fulbright Association
- Member, New York Academy of Sciences

Research Advising

Post Doctoral /Researcher Advisor

- Bijan Parsia, 7/02 –
- 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

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. Bernardo Cuenca-Grau, Combinacion e Integracion de Ontologias en la Web Semantica, (Co-chair, University of Valencia, Valencia, Spain), 11/05.
18. Aditya Kalyanpur, Debugging and Repair of OWL Ontologies, 6/06.
19. Evren Sirin, Combining AI Planning and Description Logic Reasoning for Composition of Web Services, 6/06.

Current Students

PhD (admitted to candidacy)

- Halaschek-Warner, Chris
- Kolovski, Vladimir

PhD (not yet admitted to candidacy)

- Wang, Tao-wei
- Lin, Naiwen
- Heisler, Deborah

Visiting Student Advisor

- 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

- 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

Undergraduate Honors Projects

Amy Alford, Computer Science, 2005.
Charles Hohn, Computer Science, 1997.

High School Advising

Mentor, Melissa Pezzuti, Eleanor Roosevelt HS, 1997.
Mentor, Research Science Institute, Center for Excellence in Education, Summer, 1989.

Other University Committees

- O. Lassila, PhD external reviewer, Computer Science Dept, Helsinki Univ, Finland, 2007.
- F. Lawrence, PhD external viva 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

- Iowa State University, Dept of Computer Science External Review, Chair, 4/2004.
- Southampton University (UK), AKT Project Funding Review, Chair, 9/2003.
- U. Galway (Ireland), DERI Proposal Review, 3/2003.

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

- 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

- Chair, AAI 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, AAI Symposium Series, 1993, 1994.
- Associate Chair, AAI Symposium Committee, 1991, 1992.

Conference Committees (Chair, co-chair, conference organization only)

- Vice President, Semantic Web Science Association, 2003-pres (committee responsible for the International Semantic Web Conference)
- 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 Committee 1994, 1996 (chair), 1998.
- Program Chair, AAAI Symposium on "Planning in Uncertain, unpredictable or changing environments," AAAI Spring Symposium Series, March, 1990.
- (Program committee member for over 100 conferences and workshops in the US and abroad)

Referee, Journal

Artificial Intelligence
 Associate, Behavioral and Brain Sciences Journal
 Cognitive Science Journal
 Communications of the ACM
 Computational Intelligence
 Computers and Mathematics with Applications
 IEEE Computer
 IEEE Expert Systems
 IEEE Journal Systems, Man, and Cybernetics
 IEEE Software
 IEEE Transactions on Knowledge and Data Engineering
 IEEE Transactions on Pattern Analysis and Machine Intelligence
 IEEE Transactions on Software Engineering
 IEEE Transactions on Systems, Man, and Cybernetics
 International Journal of Intelligent Systems
 International Journal of Man-Machine Studies
 International Journal of Parallel Processing
 Journal of Experimental and Theoretical AI Science
 Nature
 Science

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.
- DoD: Additional reviewer for proposals to AFOSR, ONR, DARPA, AFRL/IF

International Grant Reviews

- 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

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 Intelligence 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

- 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.