CURRICULUM VITAE
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I. Personal Information

Donald R. Perlis
Professor
Computer Science Department and
Institute for Advanced Computer Studies
University of Maryland
College Park MD 20742
Office phone: (301) 405-2685
Email: perlis@cs.umd.edu
Fax: (301) 405-6707
Url: www.cs.umd.edu/users/perlis

6907 Wells Parkway
University Park MD 20782
Home phone: (301) 699-6207

Education

B.S.	Purdue University	1966	Mathematics
Ph.D.	New York University	1972	Mathematics (Advisor: Martin Davis)
Ph.D.	University of Rochester	1981	Computer Science (Advisor: James Allen)

University Experience

1997-	Professor, Computer Science Department, Univ. of Maryland
1988-1997	Associate Professor, Computer Science Department, Univ. of Maryland
1991-92	Visiting Associate Professor, Math. Sciences Dept., Univ. of Akron
1988-89	Visiting Associate Professor, Computer Science Dept., Univ. of Rochester
1982-1988	Assistant Professor, Computer Science Department, Univ. of Maryland
1981-1982	Visiting Assistant Professor, Computer Science Dept., Univ. of Delaware
1980-1981	Research Assistant, Computer Science Department, Univ. of Rochester
1978-1980	Teaching Assistant, Computer Science Department, Univ. of Rochester
1977-1978	Assistant Professor with tenure, Mathematics Dept., U. of Puerto Rico
1972-1977	Assistant Professor, Mathematics Department, Univ. of Puerto Rico

II. Research, Scholarly and Creative Activities

Books Authored

1. *Elementos del cálculo integral y diferencial*, (with R. Wilson), a calculus textbook in Spanish, Compañia Editorial Continental, Mexico, 1979. 191 pages. ISBN-968-26-0075-8.

Chapters in Refereed Books

1. On the consistency of commonsense reasoning. *Readings in Non-Monotonic Reasoning*, edited by M. Ginsberg. Morgan Kaufmann, 1987, pp. 56–66 (reprinted from journal paper 9 below).
2. Commonsense set theory. *Meta-level Architectures and Reflection*, edited by P. Maes and D. Nardi. North-Holland, 1988, pp. 87–98.
3. An overview of meta in logic. Invited survey article, in *Meta-level Architectures and Reflection*, edited by P. Maes and D. Nardi. North-Holland, 1988, pp. 37–49.
4. Thing and thought. Invited chapter, *Knowledge Representation and Defeasible Reasoning*, edited by H. Kyburg, R. Loui, and G. Carlson. Kluwer, 1990, pp. 99–117.
5. Memory, reason, and time: the step-logic approach. (With J. Elgot-Drapkin and M. Miller.) Invited chapter, *Philosophy and AI: Essays at the Interface*, edited by R. Cummins and J. Pollock, MIT Press, 1991.
6. Limited scope and circumscriptive reasoning. (With D. Etherington and S. Kraus.) Invited chapter, *Advances in Human and Machine Cognition, vol. 1: the Frame Problem in Artificial Intelligence*, K. Ford and P. Hayes (eds.), JAI Press, 1991 (reprinted from journal paper 18 below).
7. Intentionality and defaults. Invited chapter, *Advances in Human and Machine Cognition, vol. 1: the Frame Problem in Artificial Intelligence*, K. Ford and P. Hayes (eds.), JAI Press, 1991 (reprinted from journal paper 19 below).
8. Languages with self-reference I: Foundations. Invited chapter, *Reflexivity: A Source-Book in Self-Reference*, S. J. Bartlett (ed.), North-Holland, 1992 (reprinted from journal paper 6 below).
9. Languages with self-reference II: Knowledge, belief, and modality. Invited chapter, *Reflexivity: A Source-Book in Self-Reference*, S. J. Bartlett (ed.), North-Holland, 1992 (reprinted from journal paper 12 below).
10. Metalanguages, reflection principles and self-reference. (With V.S. Subrahmanian.) Invited chapter, *Handbook of Logic in Artificial Intelligence and Logic Programming, vol. 2: Deduction Methodologies*, D. Gabbay, C.J. Hogger, and J.A. Robinson (eds.), Oxford University Press, 1994.
11. Putting one's foot in one's head—Part II: How. Invited chapter, *From Thinking Machines to Virtual Persons: Essays on the Intentionality of Computers*, E. Dietrich (ed.), Academic Press, 1994.

12. Explicitly biased generalization. (With D. Gordon.) Invited chapter, *Goal-Driven Learning*, A. Ram and D. Leake (eds.), MIT Press, 1995 (reprinted from journal paper 16 below).
13. Toward Automated Expert Reasoning and Expert-Novice Communication. (With M. Miller.) Invited chapter, *Expertise in Context: Human and Machine*, K. Ford, P. Feltovich, and R. Hoffman (eds). MIT Press, 1997.
14. The role(s) of belief in AI. Chapter 14 in J. Minker (ed.) *Logic-based AI*, Kluwer. 2000.
15. Theory and application of self-reference: logic and beyond. To appear as chapter in book, publ Center for Study of Language and Information (CSLI, Stanford).

Articles in Refereed Encyclopedia

1. Circumscription. *The Encyclopedia of Artificial Intelligence*, edited by S. Shapiro. Wiley, 1987, pp. 100–103. Updated for 2nd edition, 1991.
2. Nonmonotonic reasoning. *The Encyclopedia of Artificial Intelligence*, edited by S. Shapiro. Wiley, 1987, pp. 849–853. Updated for 2nd edition, 1991.
3. Symbol Systems. Michael L. Anderson and Don Perlis. *Encyclopedia of Cognitive Science*, 2002.

Special Issue of Journal Edited

1. Context: Theory and Practice. A collection of eight refereed, previously unpublished papers by various authors, edited and with an introduction by D. Perlis. Special issue of *Fundamenta Informaticae*, vol. 23, pp. 145–396, 1995.

Articles in Refereed Journals

1. An extension of Ackermann's set theory. *Journal of Symbolic Logic*, vol. 37, 1972, pp. 703–704.
2. Group algebras and model theory. *Illinois Journal of Mathematics*, vol. 20, 1976, pp. 298–305.
3. An application of compiler simulation at the source language level. *The Computer Journal*, vol. 19, 1976, p. 90.
4. Utility functions, public goods, and income redistribution. (With A. Mann.) *Public Finance Quarterly*, vol. 5, 1977, pp. 9–22.
5. A re-evaluation of story grammars. (With A. Frisch.) *Cognitive Science*, vol. 5, 1981, pp. 79–86.
6. Languages with self-reference I: foundations. *Artificial Intelligence*, vol. 25, 1985, pp. 301–322. (Reviewed in *Computing Reviews*, May 1986, pp. 266–267. Listed in D. Bobrow's 1993 compilation of the most frequently-cited papers in *Artificial Intelligence* from 1970 to 1991. Central result was later selected for use in KIF: Knowledge Interchange Format, a document of the Interlingua Working Group of the ARPA Knowledge Sharing Effort, printed as a report of the Logic Group, CS Dept, Stanford University).

7. Computing protected circumscription. (With J. Minker.) *Journal of Logic Programming*, vol. 4, 1985, pp. 235–249.
8. Completeness results for circumscription. (With J. Minker.) *Artificial Intelligence*, vol. 28, 1986, pp. 29–42.
9. On the consistency of commonsense reasoning. *Computational Intelligence*, vol. 2, 1986, pp. 180–190.
10. Circumscribing with sets. *Artificial Intelligence*, vol. 31, 1987, pp. 201–211.
11. Proving self-utterances. (With M. Miller.) *Journal of Automated Reasoning*, vol. 3, 1987, pp. 329–338.
12. Languages with self-reference II: knowledge, belief, and modality. *Artificial Intelligence*, vol. 34, 1988, pp. 179–212.
13. Autocircumscription. *Artificial Intelligence*, vol. 36, 1988, pp. 223–236.
14. Uniform accountability for multiple modes of reasoning. (With L. Kanal.) *International Journal of Approximate Reasoning*, special issue on Uncertainty in Artificial Intelligence. T. Levitt (ed.), vol. 2, 1988, pp. 233–246.
15. Truth and meaning. *Artificial Intelligence*, vol. 39, 1989, pp. 245–250.
16. Explicitly biased generalization. (With D. Gordon.) *Computational Intelligence*, vol. 5, 1989, pp. 67–81.
17. Reasoning situated in time I: basic concepts. (With J. Elgot-Drapkin.) *J. of Experimental and Theoretical Artificial Intelligence*, vol. 2, 1990, pp. 75–98.
18. Limited scope and circumscriptive reasoning. (With D. Etherington and S. Kraus.) *International J. of Expert Systems*, special issue on the Frame Problem, Part A. K. Ford and P. Hayes (eds.), vol. 3, 1990, pp. 207–217.
19. Intentionality and defaults. *International J. of Expert Systems*, special issue on the Frame Problem, Part B. K. Ford and P. Hayes (eds.), vol. 3, 1990, pp. 345–354.
20. Stop the world—I want to think. (With J. Elgot-Drapkin and M. Miller.) Invited paper, *International J. of Intelligent Systems*, special issue on Temporal Reasoning, K. Ford and F. Anger (eds.), vol. 6, 1991, pp. 443–456.
21. Nonmonotonicity and the scope of reasoning. (With D. Etherington and S. Kraus.) *Artificial Intelligence*, vol. 52, 1991, pp. 221–261.
22. Putting one's foot in one's head—Part I: Why. *Noûs*, special issue on Artificial Intelligence and Cognitive Science, W. Rapaport (ed.), vol. 25, 1991, pp. 435–455.
23. Reasoning about ignorance: A note on the Bush–Gorbachev problem. (With J. Horty and S. Kraus.) *Fundamenta Informaticae*, special issue on Logic for Artificial Intelligence, Z. Ras (ed.), vol. 15, 1991, pp. 325–332.
24. Logic and artificial intelligence: a new synthesis? *Fundamenta Informaticae*, special issue on Algebraic Methods in Logic and their Computer Science Applications, C. Rauszer (ed.), vol. 18, 1993, pp. 297–305.

25. Consciousness and complexity: the cognitive quest. Invited paper, *Annals of Mathematics and Artificial Intelligence*, special issue in honor of Jack Minker, vol. 14, 1995, pp. 309–321.
26. Automated inference in active logics. (With M. Miller.) Invited paper, special issue of *Journal of Applied Non-Classical Logics*, vol. 6, 1996, pp. 9–27.
27. How to (plan to) meet a deadline between *now* and *then*. (With S. Kraus, M. Miller and M. Nirkhe.) *J. of Logic and Computation*, 1997, vol. 7.
28. Sources of, and exploiting, inconsistency: preliminary report. Special issue of *Journal of Applied Non-Classical Logics*, 1997. (Invited reprint of conference paper 38 below.)
29. Interpreting presuppositions using active logic: from contexts to utterances. (With J. Gurney and K. Purang.) *Computational Intelligence*. 1997, vol. 13, pp. 391–413.
30. Consciousness as self-function. Invited paper for special issue of *Journal of Consciousness Studies*. 1997, vol. 4, pp. 509-25.
31. Conversational Adequacy: Mistakes are the essence. *International Journal of Human Computer Studies*. 1998, vol. 48. (With K. Purang and C. Andersen.)
32. Representations of dialogue state for domain and task independent meta-dialogue. *Electronic Transactions in Artificial Intelligence*. (With C. Andersen, W. Chong, D. Josyula, M. O'Donovan-Anderson, K. Purang, and D. Traum.) 1999, Vol. 3, Section D, pp 125–152. http://www.ida.liu.se/ext/epa/ej/etai/1999/D/index.html
33. What does it take to refer? *J. of Consciousness Studies*. 2000, vol. 7, pp. 67–9.
34. A logic for characterizing multiple bounded agents. (With S. Kraus and J. Grant.) *Autonomous Agents and Multi-Agent Systems*. 2000, vol. 3, pp. 351–387.
35. The roots of self-awareness. (With Michael Anderson.) To appear, *Phenomenology and the Cognitive Sciences*.
36. A logic-based model of intention formation and action for multi-agent subcontracting. (With John Grant and Sarit Kraus.) To appear, *Artificial Intelligence*.
37. Logic, self-awareness and self-improvement: the metacognitive loop and the problem of brittleness. (With Michael Anderson.) To appear, *Journal of Logic and Computation*.

Presentations at Refereed Conferences

1. Applications of protected circumscription. (With J. Minker.) *Proceedings, Seventh Conference on Automated Deduction, May 1984*, Lecture Notes in Computer Science, Springer-Verlag, 1984.
2. Protected circumscription. (With J. Minker.) *Proceedings, Workshop on Non-Monotonic Reasoning*, New Paltz, October 1984.
3. Non-monotonicity and real-time reasoning. *Proceedings, Workshop on Non-Monotonic Reasoning*, New Paltz, October 1984.

4. Circumscription: completeness, computation, and commonsense. (With J. Minker.) *Workshop on Logic and Computer Science*, Lexington, Kentucky, June 1985.
5. What is and what isn't. Invited paper, *12th Annual Meeting, Society for Philosophy and Psychology*, Johns Hopkins, June, 1986.
6. Step-logics: an alternative approach to limited reasoning. (With J. Drapkin.) *Proceedings, 7th European Conference on Artificial Intelligence*, Brighton, England, July 1986.
7. Self-reference, knowledge, belief, and modality. *Proceedings, AAAI-86*, Philadelphia; nominated for Publisher's Prize (subsumed in journal publication 12 above).
8. A parallel self-modifying default reasoning system. (With J. Minker and K. Subramanian.) *Proceedings, AAAI-86*, Philadelphia.
9. A preliminary excursion into step-logics. (With J. Drapkin.) *Proceedings, Intl Symp on Methodologies for Intelligent Systems*, October 1986, Knoxville, Tennessee.
10. Commonsense set theory. *Proceedings, Workshop on Meta-level Architectures and Reflection*, October 1986, Sardinia (subsumed in book chapter research publication 2 above).
11. An overview of meta in logic. *Proceedings, Workshop on Meta-level Architectures and Reflection*, October 1986, Sardinia (subsumed in book chapter research publication 3 above).
12. The two frame problems. (With J. Elgot-Drapkin and M. Miller.) *Proceedings, Workshop on the Frame Problem*, April 1987, Lawrence, Kansas.
13. Life on a desert island. (With J. Elgot-Drapkin and M. Miller.) *Proceedings, Workshop on the Frame Problem*, April 1987, Lawrence, Kansas.
14. How can a program mean? *Proceedings, International Joint Conference on Artificial Intelligence,* August, 1987, Milan, Italy.
15. Proving facts about 'I'. (With M. Miller.) *Proceedings, International Joint Conference on Artificial Intelligence,* August, 1987, Milan, Italy.
16. Circumscription as introspection. *Proceedings, Second Intl Symp on Methodologies for Intelligent Systems.* October, 1987, Charlotte, North Carolina.
17. Thing and thought. Invited paper, Annual conference of the *International Society for Exact Philosophy*, on Natural Philosophy and Artificial Intelligence: Logic and Language, June, 1988, Rochester, NY.
18. Limited scope and circumscriptive reasoning. (With D. Etherington and S. Kraus.) *First International Workshop on Human and Machine Cognition*, May, 1989, Pensacola, Florida.
19. Intentionality and defaults. Invited paper, *First International Workshop on Human and Machine Cognition*, May, 1989, Pensacola, Florida.
20. Assessing others' knowledge and ignorance. (With S. Kraus.) *Proceedings, Fourth Intl Symp on Methodologies for Intelligent Systems.*

21. Nonmonotonicity and the scope of reasoning: preliminary report. (With D. Etherington and S. Kraus.) *Proceedings, AAAI-90*, pp. 600–607.
22. Planning and acting in deadline situations. (With M. Nirkhe and S. Kraus.) *AAAI-90 Workshop on Automated Planning for Complex Domains.*
23. Deadline-coupled real-time planning. (With S. Kraus and M. Nirkhe.) *Proceedings, DARPA Workshop on Innovative Approaches to Planning, Scheduling, and Control*, 1990.
24. Fully deadline-coupled planning: one step at a time. (With M. Nirkhe and S. Kraus.) *Proceedings, sixth Intl Symp on Methodologies for Intelligent Systems*, Charlotte, NC, 1991.
25. Typicality constants and range defaults: the pros and cons of a cognitive model of default reasoning. (With M. Miller.) *Proceedings, Sixth Intl Symp on Methodologies for Intelligent Systems*, Charlotte, NC, 1991.
26. Logic and AI: a new synthesis? Invited as a main speaker, Stefan Banach International Mathematical Center, *Semester on Algebraic Methods in Logic and Their Computer Science Applications,* November 1991, Warsaw, Poland.
27. Memory, mind, and models of self. One-hour invited lecture, *Canadian Society for Computational Studies of Intelligence*, presented at AI-92 conference, May 1992, Vancouver.
28. Situated reasoning within tight deadlines and realistic space and computation bounds. (With M. Nirkhe and S. Kraus.) *Second Symposium on Logical Formalizations of Commonsense Reasoning*, 1993. Also presented at the Workshop on Spatial and Temporal Reasoning, IJCAI-93.
29. Reasoning about change in a changing world. (With M. Nirkhe and S. Kraus.) *Proceedings of the Florida AI Research Symposium—FLAIRS-93*, Fort Lauderdale, 1993.
30. Presentations and this and that: logic in action. (With M. Miller.) Cog-Sci-93. Boulder, Colorado, 747-752. Also appeared as a AAAI Symposium workshop paper, Raleigh, 1993.
31. Vacuum logic. (With J. Elgot-Drapkin, S. Kraus, M. Miller, M. Nirkhe.) AAAI Fall Symposium on Instantiating Real-World Agents. Raleigh, October 1993.
32. What experts deny, novices must understand. (With M. Miller.) *Third International Workshop on Human & Machine Cognition*, 1993, Seaside, Florida.
33. Recognition of object functionality in goal-directed robotics. (With E. Rivlin and A. Rosenfeld.) Workshop on Reasoning About Function, AAAI-93, Washington, DC.
34. An error-theory of consciousness. *Toward a scientific basis for consciousness*, conference held in Tucson, 1994.
35. Calibrating, counting, grounding, grouping. (With J. Elgot-Drapkin, D. Gordon, S. Kraus, M. Miller, M. Nirkhe.) AAAI Fall Symposium on Control of the Physical World by Intelligent Agents. New Orleans, November 1994.

36. Thinking takes time: A modal active-logic for reasoning *in* time. (With M. Nirkhe and S. Kraus.) BISFAI-95 (Bar Ilan Symposium on Foundations of Artificial Intelligence).
37. Active logic and Heim's rules for updating discourse context. (With J. Gurney and K. Purang.) IJCAI-95 Workshop on context in natural language processing. Montreal, 1995.
38. Sources of, and exploiting, inconsistency: preliminary report. Common Sense 96 (Third Symposium on Logical Formalizations of Commonsense Reasoning) Stanford, January 6-8, 1996.
39. Active Logic Applied to Cancellation of Gricean Implicature. (With J. Gurney and K. Purang.) AAAI Spring Symposium on Computational Implicature. Stanford, March 25-27, 1996.
40. Conversational Adequacy: Mistakes are the Essence. (With K. Purang.) AAAI Workshop on Detecting, Repairing, and Preventing Human-machine Miscommunication, Portland, Oregon, August 1996.
41. The WHs of NCC. Annual Meeting of the Association for the Scientific Study of Consciousness. Bremen, Germany, June, 1998.
42. Consciousness, Self, and Meaning. Annual Meeting of the Association for the Scientific Study of Consciousness. London, Ontario, June, 1999.
43. Modeling Time and Meta-Reasoning in Dialogue Via Active Logic. (With K. Purang, D. Purushothaman, C. Andersen, D. Traum.) 1999 AAAI Fall Symposium, Psychological Models of Communication in Collaborative Systems (full paper).
44. Mixed Initiative Dialogue and Intelligence via Active Logic. (With C. Andersen, D. Traum, K. Purang, D. Purushothaman.) AAAI 99 Workshop on Mixed-Initiative Intelligence.
45. Practical Reasoning and Plan Execution with Active Logic. (With K. Purang, D. Purushothaman, D. Traum, C. Andersen.) 1999 IJCAI Workshop on Practical Reasoning and Rationality.
46. Seven Days in the Life of a Robotic Agent. With Waiyian Chong, Michael O'Donovan-Anderson, and Yoshi Okamoto.) GSFC/JPL Workshop on Radical Agent Concepts. 2001. NASA Goddard Space Flight Center, Greenbelt, MD, USA.
47. Handling Uncertainty with Active Logic. (With Manjit Bhatia, Paul Chi, Waiyian Chong, Darsana P. Josyula, Michael O'Donovan-Anderson, Yoshi Okamoto, and K. Purang.) Proceedings, AAAI Fall Symposium on Uncertainty in Computation. 2001.
48. An information integration environment based on the active logic framework. (With A A Barfourosh, H R Mothary Nezhad, M O'Donovan- Anderson.) MIS 2002.
49. A Logic-Based Model of Intentions for Multi-Agent Subcontracting. AAAI-2002 (26% acceptance rate this year.) (With John Grant and Sarit Kraus.)

50. Time-Situated Agency: Active Logic and Intention Formation. Cognitive Agents Workshop, 2002. With M. Anderson, D. Josyula, and Y. Okamoto.)
51. The Use-Mention Distinction and its importance to HCI. (With Michael L. Anderson and Yoshi Okamoto.) Proceedings of the Sixth Workshop on the Semantics and Pragmatics of Dialog. 2002.
52. Towards domain-independent, task-oriented, conversational adequacy. (With Darsana Josyula and Michael Anderson.) IJCAI-2003, Intelligent Systems Demonstration, Acapulco Mexico.
53. Talking to computers. (With Darsana Josyula and Michael Anderson.) IJCAI-2003, Proceedings of the Workshop on Mixed Initiative Intelligent Systems Acapulco Mexico.
54. RGL Study In A Hybrid Real-Time System. (With K. Hennacy and N. Swamy.) IASTED NCI, 2003, Cancun Mexico.
55. Active Logic for more effective human-computer interaction and other commonsense applications. (With Michael L. Anderson, Darsana Josyula, Khemdut Purang.) International Joint Conference on Automated Reasoning, Workshop on Empirically Successful First Order Reasoning, Ireland, 2004.

Reports

1. Ackermann's set theory and related topics. New York University (Ph.D. thesis), 1971.
2. Distance spaces and natural convexity. (With D. Hajek and R. Wilson.) Technical Report, National University of Mexico, 1978
3. A heuristic calculation of the utility of income. (With L. Delsanto.) University of Puerto Rico, 1978.
4. Physical theory and the divisibility of space and time. (With R. Sarraga.) University of Puerto Rico, 1978.
5. Truth and syntax. Technical Report, Computer Science Department, University of Rochester, 1979. (Revised as Truth, syntax, and reason, June and August, 1980.)
6. Language, computation, and reality. Technical Report, Computer Science Department, University of Rochester (Ph.D. Thesis) 1981.
7. A Tarskian truth definition. Manuscript, 1982.
8. Truth as normal-order principle. Manuscript, 1982.
9. A magical inference number. Manuscript, 1983.
10. True beliefs. Computer Science Department Technical Report, University of Maryland, 1984. (subsumed in journal publication 6 above)
11. Completeness results for circumscription. (With J. Minker.) Computer Science Department Technical Report, University of Maryland, 1985. (subsumed in journal publication 8 above)

12. On the consistency of commonsense reasoning. Computer Science Department Technical Report, University of Maryland, 1985.
13. Real-time default reasoning, relevance, and memory models. (With J. Drapkin and M. Miller.) Systems Research Center Technical Report, University of Maryland, 1985.
14. A commentary on the literature of self-reference. (With M. Miller.) Systems Research Center Technical Report, University of Maryland, 1985.
15. Default handling: consistency before and after. (With J. Drapkin and M. Miller.) Systems Research Center Technical Report, University of Maryland, 1985.
16. A memory model for real-time commonsense reasoning. (With J. Drapkin and M. Miller.) Systems Research Center Technical Report, University of Maryland, 1986.
17. Analytic completeness in SL_0. (With J. Drapkin.) Comp. Sci. Technical Report, University of Maryland, 1986.
18. Languages with self-reference II: knowledge, belief, and modality. Institute for Advanced Computer Studies TR-87-13, Computer Science Dept CS-TR-1815, University of Maryland, 1987 (subsumed in journal publication 12 above).
19. Autocircumscription. Institute for Advanced Computer Studies TR-88-28, Computer Science Dept CS-TR-2014, University of Maryland, 1988.
20. Reasoning situated in time I: basic concepts. (With J. Elgot-Drapkin.) Institute for Advanced Computer Studies TR-88-29, Computer Science Dept CS-TR-2016, University of Maryland, 1988.
21. Names and non-monotonicity. (With S. Kraus.) Institute for Advanced Computer Studies TR-88-84, Computer Science Dept CS-TR-2140, University of Maryland, 1988.
22. Some brief essays on mind. Technical Report 302, Computer Science Department, University of Rochester, 1989
23. Stop the world—I want to think. (With J. Elgot-Drapkin and M. Miller.) Institute for Advanced Computer Studies TR-90-26, Computer Science Dept CS-TR-2415, University of Maryland, 1990.
24. Nonmonotonicity and the scope of reasoning. (With D. Etherington and S. Kraus.) Institute for Advanced Computer Studies TR-90-56, Computer Science Dept CS-TR-2457, University of Maryland, 1990.
25. Putting one's foot in one's head—Parts I and II. Institute for Advanced Computer Studies TR-91-58, Computer Science Dept CS-TR-2659, University of Maryland, 1991.
26. Consciousness and complexity: the cognitive quest. CS-TR-3232, UMIACS-TR-94-25 March 1994.
27. Presentations and this and that: logic in action. (With M. Miller.) CS-TR-3244, UMIACS-TR-94-36 March 1994.

28. Thinking takes time: A modal active-logic for reasoning *in* time. (With M. Nirkhe and S. Kraus.) CS-TR-3249, UMIACS-TR-94-39 March 1994.
29. Logic for a lifetime. CS-TR-3278, UMIACS-TR-94-62 May 1994.
30. Calibrating, counting, grounding, grouping. (with J. Elgot-Drapkin, D. Gordon, S. Kraus, M. Miller, and M. Nirkhe.) CS-TR-3279, UMIACS-TR-94-63 May 1994.
31. What experts deny, novices must understand. (With M. Miller.) CS-TR-3280, UMIACS-TR-94-64 May 1994.
32. An error-theory of consciousness. CS-TR-3324, UMIACS-TR-94-91 July 1994.
33. Conversational Adequacy: Mistakes are the Essence. (With K. Purang.) CS-TR-3654, UMIACS-TR-96-41 June 1996.
34. Active Logic Applied to Cancellation of Gricean Implicature. (With J. Gurney and K. Purang.) CS-TR-3655, UMIACS-TR-96-42 June 1996.
35. Active Logic and Heim's Rules for Updating Discourse Context. (With J. Gurney and K. Purang.) CS-TR-3656, UMIACS-TR-96-43 June 1996.
36. Active logics: A unified formal approach to episodic reasoning. (With Jennifer Elgot-Drapkin, Sarit Kraus, Michael Miller, Madhura Nirkhe.) CS-TR-4072. October 1999.

Book Reviews, Other Articles, and Notes

1. Whose category error? (peer commentary) *Behavioral and Brain Sciences*, vol. 6, 4, 1983, pp. 606–607.
2. Belief level way stations. (peer commentary) *Behavioral and Brain Sciences*, vol. 7, 4, 1984, pp. 639–640.
3. Intentionality as internality. (peer commentary) (With R. Hall.) *Behavioral and Brain Sciences*, vol. 9, 1, 1986, pp. 151–152.
4. Discussion of Cheeseman's "An inquiry into computer understanding." (With L. Kanal.) *Computational Intelligence*, vol. 4, 1, 1988, pp. 87–89.
5. The emperor's old hat. (peer commentary) *Behavioral and Brain Sciences*, vol. 13, 4, 1990, pp. 680–681

Talks, Abstracts, and other Professional Papers Presented

Invited lectures at refereed conferences

Memory, mind, and models of self. Invited one-hour lecture, Canadian AI Conference, Vancouver, May 1992.

Putnam's Theorem and the intentionality machine. Invited one-hour lecture, Society for Machines and Mentality, Washington D.C., December 1992.

Invited talks, general

Semantics of circumscription. Stanford University, May 1984

A magical inference number. National Bureau of Standards, June 1984

A direct manipulation language. IBM Thomas Watson Laboratory, July 1984

Topics in circumscription. University of Sussex, Jan. 1985

Topics in circumscription. University of Edinburgh, Jan. 1985

Logic of belief. Louisiana State University, Aug. 1985

Logic of belief. Univ. of Toronto, Dec. 1985

Logic of belief. University of Rochester, Dec. 1985

Panel on Machine Learning, ACM Chapter, Univ. of Md., Feb. 1986

A theory of absolute universes. Univ. of Tennessee, May, 1986

An overview of meta in logic. Sardinia, Oct. 1986

Knowledge representation. Smithsonian Institution, July 1987

Self reference and artificial intelligence. Naval Research Laboratory, May 1988

Thing and thought. SUNY at Buffalo, Nov. 1988

Self reference and artificial intelligence. Univ. of Akron, Nov. 1988

Meaners. ATT Bell Labs, Mar. 1989

Russell's paradox is alive and well. Univ. of Akron, Mar. 1989

Intentionality. Univ. of Pittsburgh, Mar. 1989

Issues in circumscription. Univ. of Pittsburgh, Mar. 1989

The four references. SUNY at Buffalo, Mar. 1989

Scope and nonmonotonicity. Stanford Univ., Aug. 1990

Planning and perception. SRI International, Aug 1990

Intentionality. Xerox PARC, Aug 1990

Logic and artificial intelligence: a new synthesis? Univ. of Akron, Nov 1991

Logic and artificial intelligence: a new synthesis? Banach Center, Warsaw, Poland, Nov 1991

Memory, mind, and models of self. Invited one-hour lecture, Canadian AI Conference, Vancouver, May 1992.

Putnam's Theorem and the intentionality machine. Invited one-hour lecture, Society for Machines and Mentality, Washington D.C., December 1992.

Logic, robots, and minds. Computer Engineering Seminar Series, Purdue University, March 1994.

Logic for a lifetime. Computer Science Colloquium Series, Harvard University, March 1995.

Testable aspects of a self-theory of mind and brain. Cognitive Neuroscience Section, National Institutes of Health, November 1996.

Logic for a Lifetime. Technische Universitat, Darstadt, Germany, June 1998.

Logic for a Lifetime. University of New Mexico, July 2000.

Theory and Application of Self-reference. PHILOG Conference, Denmark, October 2002.

The Metacognitive Loop. CS and Electrical Computer Engineering Colloquium University of Wyoming, August 2004

The Metacognitive Loop. Institute for Cognitive Science Colloquium University of Colorado, August 2004

Unrefereed Conference Papers

1. A quick version of Gödel's theorem. AMS Meeting, New York, abstracted in *AMS Notices*, Feb. 1972.
2. Topics in the semantics of circumscription. *Week on Logic and Artificial Intelligence*, University of Maryland, October 1984.
3. Issues in commonsense reasoning. *Proceedings, Technical Symposium on Intelligent Systems*, (invited paper), ACM, June 1985.
4. Heidegger and artificial zoology. (With A. Kyburg.) Annual conference of the *Society for Philosophy and Psychology*, April, 1989, Tucson, Arizona.
5. Virtual symposium on virtual mind. (With P. Hayes, S. Harnad, and N. Block.) *Minds and Machines*, vol. 2, pp. 217-238, 1992.

Grants

Univ. of Md. Foundation (from Martin Marietta Corp.), $24,000, 1985.

Army Research Office, (with J. Minker), $100,600, 1985-1986.

Army Research Office, (with J. Minker), $110,460, 1986-1987.

Army Research Office, (with J. Minker), $121,100, 1987-1988.

Army Research Office, (with J. Minker), $138,554, 1988-1989.

Army Research Office, (with J. Minker), $147,890, 1989-1990.

Army Research Office, (with J. Minker), $158,484, 1990-1991.

National Science Foundation, (with J. Horty), $42,032, 1990-1991.

National Science Foundation, (with J. Horty), $19,501, 1991.

Army Research Office, $50,000, 1994-1995.

National Science Foundation (with S. Kraus), $200,000, 1994-1997.

Army Research Office (AASERT), $70,000, 1995-1997.

National Science Foundation (equipment supplement), $12,070.80, 1995.

Army Research Office, $123,235, 1995-1997.

National Science Foundation (postdoctoral associate supplement), $27,750, 1996-1997.

National Science Foundation (with S. Kraus and M. Morreau), $100,000, 1997-1999.

Air Force Office of Scientific Research, $490,960, 1999-2002.

Office of Naval Research and AFOSR, $299,331, 2000-2003.

Office of Naval Research, $300,00, 2002-2005.

Air Force Office of Scientific Research, $520,000, 2002-2005.

Honda Research Institute, $25,000, 2003-2004 (gift).

Honda Research Institute, $105,653, 2004-2005.

Awards and Honors

Woodrow Wilson Foundation Fellowship, 1966

National Science Foundation Fellowship, 1966-69

General Research Board Summer Award, Univ. of Maryland, 1983

University of Maryland Institute for Advanced Computer Studies, research appointment, 1986-1992, 1993-2007.

Invited by Canadian Society for Computational Studies of Intelligence, to give one-hour lecture at the Canadian Artificial Intelligence conference, May 1992, Vancouver.

Invited by Society for Machines and Mentality, to give one-hour lecture at annual conference, December 1992, Washington D.C.

Journal paper 6 (above) listed in D. Bobrow's 1993 compilation of the most frequently-cited papers in *Artificial Intelligence* from 1970 to 1991.)

Reviewing Activities for Journals and Other Scholarly Institutions (last five years)

National Science Foundation

Army Research Office

Artificial Intelligence Journal

Computational Intelligence

Journal of Artificial Intelligence Research

Journal of Experimental and Theoretical Artificial Intelligence

MIT Press

AAAI-04

III. Teaching and Advising

Courses Taught (last five years)

1998-99
CMSC 251: Introduction to Algorithms (2 sections, $\sim$ 55 students each)

1999-00
CMSC 251: Introduction to Algorithms (2 sections, $\sim$ 55 students each)

2000-01
CMSC 251: Introduction to Algorithms (2 sections, $\sim$ 50 students each)

2001-02
GEMS 496 and 497: Gemstone Seminar (8 students; with B. Dorr)
CMSC 297: Honors Seminar (11 students; with B. Dorr, W. Gasarch)
CMSC 251: Introduction to Algorithms (2 sections, $\sim$ 90 students each)

2002-2003
GEMS 296 and 297: Gemstone Seminar (9 students)
CMSC 351: Introduction to Algorithms (2 sections, $\sim$ 80 students each)

2003-2004
GEMS 396 and 397: Gemstone Seminar (8 students)
CMSC 297: Honors Seminar (11 students; with B. Dorr, W. Gasarch)
CMSC 351: Introduction to Algorithms (2 sections, $\sim$ 80 students each)
CMSC 838: How to do research (with B. Dorr, W. Gasarch)

2004-2005
GEMS 496: Gemstone Seminar (8 students)
CMSC 838: How to do research (with B. Dorr, W. Gasarch)

2005-2006
CMSC 351: Introduction to Algorithms (2 sections)
GEMS 497: Gemstone Seminar (8 students)
CMSC 838: How to do research (with C. Kruskal, W. Gasarch)

Curriculum, Notes, and Other Contributions to Teaching

1. Algebraic topology: an introduction to modern analytic structures with mention of physical applications, Lecture notes, University of Puerto Rico, 1977.
2. *Lecture notes in logic* (with P. Steitz, M. Miller, and C. Laskowski), 1995.
3. Development of graduate course CMSC 721 (Nonmonotonic Reasoning), with Jack Minker, Jeff Horty, VS Subrahmanian, and Michael Morreau.

Advising

Other Than Research Direction

Approximately 5 undergraduate and 3 graduate students are advised each year.

During 1999-2000, jointly with Bob Anderson in the UMCP Physics Dept, I advised Dan Giambalvo on an honors project in quantum computing. I subsequently advised Pete Schwartz on an honors project in reasoning with contradictory information.

Research Direction

UMCP Summer Research Opportunity Program mentor for Yolanda Pena-Vargas, 1995.

Master's

Dumar Villa 1977, James Abello 1978, Ruben Pereira 1978, Krishnan Subramanian 1986 (with J. Minker), Diana Gordon 1986, Hachidai Ito 1987, Tom Melton 1988, Sanjoy Paul 1988, Will Sterbenz 1989 (with D. Kueker), Michael Miller 1989, Michael Harris 1991 (with S. Kraus)

Doctoral

Jennifer Elgot-Drapkin 1988
Step-logic: Reasoning situated in time.
Assistant Professor, Arizona State University, Tempe AZ (1988-97)

Diana Gordon 1990
Active bias adjustment for incremental, supervised concept learning.
Associate Professor, University of Wyoming.

Michael Miller 1993
A view of one's past and other aspects of reasoned change in belief.
Computer Scientist, Aether Systems, Inc.

Frank McFadden 1993 (with J. Reggia and H. Szu)
Competitive learning and competitive activation in cortical map formation.
Computer Scientist, General Dynamics

Madhura Nirkhe 1994 (with J. JaJa)
Time-situated reasoning within tight deadlines and realistic space and computation bounds.
Computer Scientist, Microsoft Corporation

Khemdut Purang 2001
Systems that detect and repair their own mistakes.
Computer Scientist, Sony Corporation.

Current Doctoral:

Darsana P. Josyula (candidacy in 2003; PhD expected in Spring 2005)

Waiyian Chong (candidacy in 2003; PhD expected in Spring 2005)

Faculty Research Associates

Dr. Sarit Kraus 1988-90
Professor, Bar Ilan University, Israel
Recipient of Computers and Thought Award, 1995.
Elected Fellow of AAAI, 2002.

Dr. Elizabeth Klipple 1995-97
Army Research Laboratory

Dr. David Traum 1996-2000
Institute for Creative Technologies, University of Southern California

Dr. Michael Anderson 2001-

Dr. Ken Hennacy 2003-

IV. Service

Professional

1984	A non-monotonic reasoning bibliography, *Proceedings, Workshop on Non-monotonic Reasoning*, AAAI, New Paltz, 1984.
1984-5	Co-organizer, Week on Logic and Artificial Intelligence, October 1984, as part of special year in Logic and Theoretical Computer Science.
1989-90	Co-organizer, Annual Meeting of the Society for Philosophy and Psychology.
1990	Program Committee, Fifth International Symposium on Methodologies for Intelligent Systems.
1990-	Organizer, *Society for Philosophy and Psychology* Electronic Mailing List.
1990-	Editorial Board, *Journal of Logic and Computation.*
1991-	Editorial Board, *Computational Intelligence.*
1991-	Editorial Board, *Fundamenta Informaticae.*
1997-	Editorial Board (de facto member) and Book Review Editor, *Artificial Intelligence.*
1991	Program Committee, Sixth International Symposium on Methodologies for Intelligent Systems.
1991	Program Committee, National Conference on Artificial Intelligence (AAAI-1991).
1993	Program Committee, BISFAI-93 (Third Bar-Ilan Symposium on Foundations of AI).
1993	Participant in external review of Artificial Intelligence Program, University of Georgia.
1993-94	Program Committee, TIME-94 (Workshop on temporal representation and reasoning, to be held in conjunction with the 1994 Florida Artificial Intelligence Research Symposium.
1993-94	Program Committee (Workshop Program Chair), 1994 National Conference on Artificial Intelligence (AAAI-94), Seattle.
1994-95	Program Committee, Workshop on Rational Agency: Concepts, Theories, Models, and Applications. AAAI Fall Symposium Series. MIT, 1995.
1994-95	Program Committee, TIME-95.
1995	Participant in Army Research Office/TRADOC Spoken Human-Machine Dialogue Workshop, North Carolina, May 1995.
1995-96	Program Committee, TIME-96.
1995-98	Executive Committee, Society for Philosophy and Psychology.

2000	NSF Review Panel.
2003-04	Program Committee, DARPA Workshop on Self-Aware Systems.
2004	Program Committee, National Conference on Artificial Intelligence (AAAI-04)
2005	Program Committee, Nineteenth International Joint Conference on Artificial Intelligence
2005	Program Committee, CommonSense 2005, the Seventh Symposium on Logical Formalizations of Commonsense Reasoning
2005	Program Committee, First International Workshop on Formal Models of Resource Bounded Agents

University

Departmental

1982-	Member, Information Processing Field Committee.
1982-90	Member, Theory Field Committee.
1982-84	Organizer, weekly AI discussion group (with Nau and Weiser)
1983	Colloquium Host for Pat Hayes.
1983	Theory Representative, August Comprehensive Exam Committee.
1983-4	Member, Committee to revise the Comprehensive Exam Structure.
1983-4	Organizer, Bi-Weekly Discussion Group on Artificial Intelligence.
1985	Member, Committee to revise 200-level courses.
1985	Member, Committee on Technical Reports.
1985	Theory Representative, January Comprehensive Exam Committee.
1986	Colloquium Host for Hector Levesque.
1986	Member, Ad Hoc Committee to organize Faculty Retreat.
1986-8	Organizer, Departmental Weekly On-Line Bulletin of Events.
1986-7	Chair, AI Field Subcommittee.
1987	Colloquium Host for Drew McDermott.
1987-8	Chair, Committee for High School Day '88.
1987-8	Liaison for Mathematics, Linguistics, Philosophy, and Cognitive Studies.
1989-90	IP Comprehensive Examination Coordinator.
1989-90	Chair, IP Field Committee.
1989-90	Faculty advisor of student ACM chapter.
1990-91	Member, New Building Committee.
1990-91	Chair, Ad Hoc Committee to Re-evaluate the Comprehensive Exam Structure
1992	Committee on Professional Master's Degree.
1992	AI Comprehensive Examination Coordinator.

1993-95	Graduate Studies Committee, advisor on minority students
1993-94	Dept Representative, College Diversity Committee
1994-95	Dept Retention/Graduation Coordinator, Office of Academic Affairs
1994-95	Ad Hoc Committee on Instructor Tenure Criteria
1995-96	Graduate Admissions Committee
1995	Ad Hoc Committee on Communication Skills
1995-96	Chair, AI Field Committee
1995-96	Member, Academic Evaluation Committee
1995-97	Chair, Colloquium Series
1997-98	General Editor, CSD Annual Report
2000-01	Chair, AI Field Committee.
2000-	Co-Chair, Honors Program
2000-	Senate Representative
2002	Ad Hoc Committee on Publicity
2003-	Create/maintain web page for CS Undergraduate Research
2004	Graduate Admissions Committee
2004	Teaching Evaluation Committee
2004-7	Chair, AI Field Committee

College

1983-4	Member, organizing committee for the special year in Logic and Theoretical Computer Science, Mathematics Department.
1984-8	Co-organizer, Joint Robot Project, with Departments of Computer Science, Electrical Engineering, Mechanical Engineering, and the Center for Automation Research.
1986	Member, Ad Hoc Hearing Board on Academic Dishonesty.
1989-	Member, Committee for Cognitive Studies
1992-3	Member, College Space Committee
1993-4	Demo organizer, AI Day (UMIACS, CSD, CFAR)
1995-	Co-organizer, Logic and AI Seminar (UMIACS)
2003-4	Ad Hoc Committee on Electronic FAR (Faculty Activity Report)

Campus and University

1983	Department Representative, United Way Campaign
1984-5	Co-organizer, Study Group on Cognitive Science.
1986-7	Equal Employment Opportunity Officer, UMIACS.
1988	Member, Minority Recruiting Committee, UMIACS.
1990-97	Co-organizer, UMCP Cognitive Science Electronic Mailing List.
1990-91	Department Representative, Faculty Senate
1990	Department Liaison and Steering Committee, Neuroscience Center
1993	Participant in external review of UMCP Philosophy Department
1993-6	Member, General Research Board Committee
1997	Participant in external review of UMCP Linguistics Department
1999-	Gemstone mentor
2003-	Member, UMCP Graduate Council
2004-	Member, PCC for Graduate Council
2004-	Member, NACS Curriculum Committee

External

1995	Member of College Park Ad Hoc Working Group for Town-Center and Metro Planning
1995-6	Planning and execution of seminars for high school seniors at Prince William County Schools, especially with regard to computer science and cognitive science, and also in debate competitions.
1997	Mentor for Westinghouse Competition project by Mr. Jason Ernst of Montgomery Blair High School. His project was awarded a semifinalist position nationwide, one of 300 such out of over 1500 projects entered.
2000	Science Fair Judge, University Park Elementary School.
2003-	Assistant Scoutmaster, Boy Scout Troop 214.