

DEVIKA SUBRAMANIAN

6100 Main St MS 132
Houston, TX 77005
(713)348-5661

EDUCATION

- Ph.D. in Computer Science, Stanford University, 1989.
- M.S. in Computer Science, Stanford University, 1984.
- B.Tech. in Computer Science and Engineering, IIT Kharagpur, India, 1982.

HONORS AND AWARDS

- Invited Plenary Speaker, Heart Failure Society of America, September 2009.
- Microsoft Research ERP Board Member, 2006-2008.
- Invited Plenary Speaker, International Joint Conference on Artificial Intelligence, 2007.
- Invited Speaker, Grace Murray Hopper Conference, 2007.
- CRA Distinguished Lecturer, University of Washington, 2002.
- IJCAI Advisory Board, 2001.
- Editorial Board, Journal of AI Research, 1997-2001.
- Invited Speaker, NCARAI, Naval Research Laboratories, November 2001.
- Julia Miles Chance Prize for Excellence in Teaching, Rice University, 2000.
- Technical Program co-Chair, AAAI 1999.
- CRA DMP mentor, 1996,1997,1999.
- Editor, Special Issue on relevance, AI Journal, 1997 (with J. Pearl and R. Greiner).
- Invited Plenary Speaker, International Joint Conference on Artificial Intelligence, 1993.
- Outstanding Educator Award, Merrill Presidential Scholar Program, Cornell University, 1991, 1993.
- Invited Lectureship, Institute for Cognitive Science, University of Pennsylvania, June 1-15, 1992.
- IBM Doctoral Fellowship, Stanford University, 1985-1988.
- George Forsythe Memorial Award for Excellence in Teaching, Stanford University, 1986.
- President of India Gold Medal, IIT Kharagpur, 1982. (awarded to valedictorian of class of 1982)
- B.P. Poddar Scholarship, IIT Khargapur, 1982. (awarded to the best senior of class of 1982)
- National Science Talent Scholarship, 1977. (awarded by the Government of India to the top 100 high school students in the country)
- National Merit Scholarship, 1976. (awarded by the Government of India to the top 20 students in the I.C.S.E exam)

RESEARCH EXPERIENCE

- Professor, Computer Science Department, Rice University, July 2003 - present.
 - An innovative research course on intelligence gathering: Connecting the dots, supported by K2I Institute (with R. C. Bronk, R. Stoll and A. Elam).
 - Assessment of risk due to hurricane hazards and the design of evacuation policies, supported by the City of Houston.
 - comp140: An innovative freshman computer science class on computational thinking, supported by Microsoft Corp.
 - Building metabolic and signaling networks from high-throughput data, supported by GC4R.
 - Socially relevant computing, supported by Microsoft Corp.
 - Predicting protein-protein interactions, supported by the Keck Foundation (with K. Matthews).
 - An innovative research course in bioinformatics, supported by the NSF (with M. Kimmel, R. Guerra and L. Kavraki).
 - Prediction of militarized interstate disputes, supported by Intel and NSF ITR (with R. Stoll).
 - Hybrid learning architectures, supported by the ONR.
 - Learning algorithms for control of life support systems for the Mars mission, supported by NASA JSC.
 - Randomized adaptive search algorithms for multi-objective code optimization, supported by NSF ITR, Airforce, DARPA and Texas ATP (with K. Cooper and L. Torczon).
- Associate Professor, Computer Science Department, Rice University, July 1995 - June 2003.
 - Predicting protein-protein interactions, supported by the Keck Foundation (with K. Matthews).
 - Prediction of militarized interstate disputes, supported by Intel and NSF ITR (with R. Stoll).
 - Hybrid learning architectures, supported by the ONR.
 - Learning algorithms for control of life support systems for the Mars mission, supported by NASA JSC.
 - Randomized adaptive search algorithms for multi-objective code optimization, supported by NSF ITR, Airforce, DARPA and Texas ATP (with K. Cooper and L. Torczon).
 - Intelligent tools for synthesis of optomechanical devices, supported by the NSF.
 - Mobile robotics, supported by the School of Engineering, Rice.
 - Learning algorithms for routing, supported by SW Bell (with P. Druschel).
- Assistant Professor, Computer Science Department, Cornell University, 1989 - June 1995.
 - Automated reformulation, supported by the NSF.
 - Intelligent assistants for protein crystallography, supported by the NIH (with J. M. Rosenberg and B.G. Buchanan, University of Pittsburgh).
 - Bounded optimality, supported by the NSF (with Stuart Russell, UC Berkeley)
 - Formal foundations of AI algorithms (with C. Gunter, University of Pennsylvania).
- PhD student, Stanford University and IBM Doctoral Fellow, September 1985 to December 1988.
- Research Assistant, Heuristic Programming Project, Stanford, June 1983 to August 1985. (with Professor M.R. Genesereth)
- Research Assistant, Computer Science Department, Stanford, September 1982 to May 1983. (with Professor V.R. Pratt)

PROFESSIONAL ACTIVITIES

- Students at Rice
 - Research advisor for Mitchell Koch, runner-up of the National CRA Undergraduate Research Award, 2010-2011.
 - M.S. advisor for Theresa J. Klein, Computer Science (May 2005) thesis title: using reinforcement learning to control advanced life support systems.
 - M.S. advisor for Rajarshi Bandopadhyay, Computer Science (May 2002) thesis title: Predicting protein-ligand interactions from primary structure.
 - M.S. advisor for Sameer Siruguri, Computer Science (May 2001) thesis title: Tracking the evolution of learning in visualmotor tasks.
 - Ph.D. advisor for Johnny Chen, Computer Science (graduated May 2000) thesis title: New approaches to routing for large scale data networks. (co-advised with Peter Druschel)
 - Ph.D. advisor for Phil Schielke, Computer Science (graduated December 1999) thesis title: Stochastic techniques for instruction scheduling. (co-advised with Keith Cooper).
 - Ph.D. thesis committee: M. K. Kiran (ECE), Chaitali Chakrabarti (ECE), Adam Rawlett (Chemistry), Erica Zimmer (CAAM), Jose-Miguel Yamal (Statistics), Michael Lecoche (Statistics), Richard Swartz (Statistics), Alex Grosul (CS), Seth Nielsen (CS), Todd Watterman (CS), Mohit Aron (CS), Guoqiang Pan (CS), Mike Mendenhall (ECE), Karthick Rajamani (ECE), Ansley Post (CS).
 - M.S. thesis committee: Khao To (ECE), Theresa Klein (ECE), Guoqiang Pan (CS), Gaurav Banga (CS), Travis McPhail (CS), Spiridon Tsavachidis (CS), Deian Tabakov (CS), Abha Jain (ECE), Yi Guo (CS), Demetrios Demopolos (CS), K. Bekris (CS), Ben McMahon (CS), Brian Chen (CS), Christopher Holleman (CS), Derek Ruths (CS), Xiaoxu Wang (CS), David Piexotto (CS), Lanyue Lu (ECE), Cuong Than (CS),
 - Undergraduate mentor for 45 students from 1996-2010 at Rice.
 - CRA DMP Mentor, Summer 1996 (Stephanie Weirich), and Summer 1997 (Deborah Watt), and Summer 1999 (Gwen Thomas and Gunes Ercal).
 - Rice University Century Scholar mentor (Mitchell Koch), 2008-2011.
- Students elsewhere
 - Ph.D. chair for Adam Webber, Ph.D. (May 1993), thesis title: Principled optimization of functional programs, Cornell University.
 - Ph.D. chair for Scott Hunter, Ph.D. (June 1997), thesis title: Design of adaptive controllers for discrete environments, Cornell University
 - Member of Ph.D. committee: Laura Sabel (CS, Cornell), Ted Fischer (CS, Cornell), Desh Ranjan (CS, Cornell), Alex Seigel (CS, Cornell), Paul Wanuga (Graphics, Cornell), Frank Chance (OR, Cornell), Talal Shamoon (EE, Cornell), Anoop Singhal (MechE, Cornell), Navin Budhiraja (CS, Cornell), Teow-Hin Ngair (CS, UPenn), Anup Parikh (Baylor College of Medicine), Mary McGuire (UTHSC), Jorge Herskovic (UTHSC), Jian Li (Baylor College of Medicine).
 - Undergraduate mentoring: I worked with the following undergraduates at Cornell and sent them to graduate programs in artificial intelligence: Scott Benson (Stanford), Ed Wang (MIT), Todd Neller (Stanford), Ka Chai (University of Washington), Robert Wisniewski (Rochester), Scott Stoller (Cornell), James Altucher (CMU), Arjun Kapur (Stanford).
- Invited Lectures (partial list)
 - Invited talk, Contemporary Arts Museum, 2008 title: Art, design and computation.
 - Invited talk, Workshop on Computational Education for Scientists and Engineers, Microsoft Research, Redmond WA, 2008.
 - Invited Panelist, Artificial intelligence: theory and practice: hard challenges and opportunities ahead, Microsoft Research Faculty Summit, 2008.
 - Invited Speaker, Microsoft Research Faculty Summit, 2008.

- Invited speaker, ICAM Evolutionary Design Principles of Biological Networks, Rice University, 2008.
 - Invited Speaker, Colloquium on Modeling and Analysis of Biological Networks, University of Houston/M.D.Anderson Cancer Center, 2008.
 - Invited Speaker, Keck Seminar Series, Rice University, 2008.
 - Invited Speaker, School of Information Science, University of Texas Health Sciences Center, Texas, 2007.
 - Invited Speaker, Workshop on Computational Education for Scientists, Microsoft Research, 2007.
 - Invited Speaker, Workshop on Social Computing, Microsoft Research, 2007.
 - Invited Plenary Speaker, Grace Hopper Conference, 2007.
 - Invited Plenary Speaker, International Joint Conference on Artificial Intelligence (IJCAI),2007.
 - Invited Speaker, Max Planck Institute for Software Systems, Saarbrucken, Germany, 2006.
 - Invited Colloquium Speaker, Microsoft Research, 2006.
 - Distinguished Lucent/CRAW Lecturer, University of Washington, November 2002.
 - Invited Speaker, NCARAI Lecture Series at ONR, November 2001.
 - Invited Speaker, Workshop on Hybrid Learning Architectures, Cognitive Science, Vancouver, August 1999.
 - Invited Speaker, Workshop on distributed systems in AI, AAAI 1999, July 1999.
 - Distinguished Lecture Series Speaker, Florida Atlantic University, April 1999.
 - Invited Speaker, Joint Brazilian Science Foundation and NSF workshop on Intelligent Robotic Agents, March 1997.
 - Invited Speaker, Plenary Session, IJCAI 1993.
 - Speaker, Invited Lecture Series (3 lectures), University of Pennsylvania, Philadelphia, June 1992.
 - Invited Speaker, AAAI Workshop on Creativity: Methods, Models and Tools, July 1991.
 - Invited Speaker, AAAI Workshop on Abstractions and Approximations, July 1991.
 - Invited Speaker, DARPA Workshop on How Things Work, July 1991.
 - Invited Speaker, Darpa Planning Workshop, San Diego, Nov 1990.
 - Invited Speaker, AAAI Workshop on Representation Change, Mar 1990.
 - Invited Speaker, Workshop on Large Knowledge Bases, Stanford University, Jan 1989.
- Service to Field (partial list)
 - Panelist, NIH Study Section on SBIR in Computational Biology, 2010-present.
 - Panelist, NSF CISE grants, 2009.
 - Reviewer, Nectar Program, AAAI 2008.
 - Panelist, Medium ITR selection committee, NSF, Washington D.C., May 2003.
 - Panelist, Study section for Bioinformatics proposals, ORAU, Washington D.C, April 2002.
 - IJCAI Advisory Board, 2001.
 - Editorial Board, Journal of the AI Research, 1997-2001.
 - Program Chair, AAAI-99 (with J. Hendler).
 - Panelist, NSF Career Proposals, 1999.
 - Senior Program Committee Member, AAAI 1998,
 - Editor, AI Journal Special issue on Relevance, 1997 (with J. Pearl and R. Greiner).
 - Program Committee Member, IJCAI 1997.
 - Program Committee Member, AAAI 1996.
 - Program Committee Member, Machine Learning 1996.

- Program Committee Member, Neural Information Processing Systems 1996.
 - Program Committee Member, AAAI Spring Symposium on Multiagent systems, 1996.
 - Panelist, NSF IRIS Proposals, 1996.
 - Program Committee Member, Machine Learning 1995.
 - Program Committee Member, IJCAI Workshop on Multiagent systems Program Committee, 1995.
 - Program Committee Member, Machine Learning Workshop on Agents that Learn from other Agents, 1995.
 - Chair, Tutorial Program, AAAI 1994.
 - Program Committee Member, AAAI 1994.
 - Program Committee Member, KR 1994.
 - Co-chair, AAAI Fall Symposium on Relevance, 1994.
 - Program Committee Member, AAAI 1993.
 - Co-chair, Tutorial Program, AAAI 1993.
 - Program Committee Member, Machine Learning 1993.
 - Co-chair, AAAI Spring Symposium on Creative Design, 1993.
 - Co-chair, Workshop on Knowledge Compilation and Speed-up Learning, Machine Learning 1993.
 - Program Committee Member, Area Chair for Machine Learning, AAAI 1992.
 - Program Committee Member, KR 1992.
 - Co-chair, Workshop on Knowledge Compilation and Speed-up Learning, Machine Learning 1992.
 - Co-chair, Workshop on Inductive Biases in Learning, Machine Learning 1992.
 - Co-chair, Workshop on Approximations and Abstractions, AAAI 1992.
 - Technical Editor, AI Magazine, 1986-1991.
 - Program Committee Member, AAAI 1991. Program Committee Member, AAAI 1990.
 - Program Committee Member, Machine Learning 1990.
 - Chair, Workshop on Representational Issues in Machine Learning, Machine Learning 1989.
 - Reviewer for Circulation, Springer-Verlag, Morgan Kaufmann, Prentice Hall, AI Journal, Machine Learning Journal, Journal of Artificial Intelligence, Journal of Machine Learning Research, IEEE Pattern Analysis and Machine Intelligence, IEEE Robotics and Automation, Research in Engineering Design, Journal of Symbolic Computation, International Conference on Logic Programming, ASME, International Journal of Intelligent Systems, Information Processing Letters, Journal of the ACM, IEEE Transactions on Data and Knowledge Engineering, Cognitive Science, ACM Transactions on Information Systems, NASA, NSF, ONR, NIH.
- Departmental Service
 - Chair, Undergraduate Curriculum Committee, Rice, 2007.
 - Member, Graduate Admissions Committee, Rice, 1996-2003.
 - Member, Cognitive Science Steering Committee, Rice, 1996-present.
 - Member, CS Undergraduate Committee, Rice, 1996-2000.
 - Member, CS Faculty Recruiting Committee, Rice, 1997, 1998.
 - Member, CS Undergraduate Committee, Cornell, 1989 to 1993.
 - Member, CS Graduate Admissions Committee, Cornell, 1989, 1990.
 - Member, CS Recruiting Committee, Cornell, 1990.
 - University Service

- Member, Faculty Senate, 2009-2011.
 - Member, CRUP II, Curriculum Reform Committee, 2009.
 - Member, Patent Advisory Committee, Rice University, 2000-present.
 - Member, Duncan Hall Networking Committee, 2002-2003.
 - Developed Engineering Quad Robot Tour Guide, Rice University, 2001.
 - Member, CAIN communications project advisory committee, 1998-2001.
 - Engineering School Reorganization Committee, 1997.
 - Freshman advisor, Lovett College, Rice, 1996-1998.
 - Speaker, CRPC Math and Computational Sciences Awareness Workshop, 1996-2000.
 - Developed mobile robot for ribbon cutting ceremony for Rice University's dedication of Duncan Hall, 1996.
 - Developed enhancements to the problem reporting facility at Rice's OwlNet facility using belief networks with student Paul O'Brien and supported by a grant from Dean Michael Carroll, Summer 1996, Rice.
 - Workshop Leader, Expanding your Horizons, a national program for encouraging middle school girls in mathematics, science and engineering, Cornell University, 1990, 1992, 1994.
 - Faculty Council of Representatives, Cornell University, Jan 1990 to 1993.
 - Member, Committee for Minorities, Cornell University, 1991-92.
 - Instructor, Engineering 150, Cornell University, Fall 1991.
 - Member, Cognitive Studies Program Committee, Cornell University, Fall 1991.
 - Freshmen advisor, Cornell, 1989-1995 (handled 18 per year).
 - Technical Advisor/Reviewer, Engineering 350, Cornell, 1989-1995.
 - Member, AI Curriculum Committee, Stanford University, 1986-1988.
 - Member, Undergraduate Curriculum Committee, Stanford University, 1985-86
- Grants
 - Brown Foundation Course Development Grant, 5K, Rice University, 2011.
 - City of Houston/DHS: A new web tool for hurricane risk assessment for Harris County, 335 K, 2011 (with L. Duenas-Osorio and R. Stein).
 - City of Houston/DHS: Hurricane risk assessments and evacuation planning for the city of Houston, 35 K, 2009 (with L. Duenas-Osorio and R. Stein).
 - Doerr Foundation/GC4R: Learning signaling pathways in cancer – a mixed experimental and computational approach, 2008-2010, 150K.
 - Microsoft Corp: New approaches to computational thinking, 2008-2010, 100K gift.
 - NSF ITR: Event, Patterns and Analysis: Forecasting conflicts in the twenty-first century, PI: D. Subramanian, co-PI: R. Stoll, 2002-2008, 400K.
 - NSF ITR: Building practical compilers based on adaptive search, 1.6M, 2002-2007, PI: K. Cooper, co-PIs: D. Subramanian and L. Torczon,
 - NSF CRCD: From sequence to structure: a new course in bioinformatics, 500K, 2002-2006. PI: M. Kimmel, co-PIs: Rudy Guerrero, L. Kavvaki and D. Subramanian.
 - Office of Naval Research: Hybrid learning, 1995-2003, 1.6M. PI: D. Subramanian, co-PIs: D. Gordon and S. Marshall.
 - Intel: Digital Government, 200K equipment grant, 2001-2003. joint PIs: Ric Stoll and D. Subramanian.
 - NASA JSC: Machine learning for life support on Mars mission, 50K/yr 2000-2003. PI: D. Subramanian.
 - NSF: Intelligent tools for synthesis of optomechanical devices, 180K, 1998-2003. PI: D. Subramanian.
 - Airforce/DARPA: Special-purpose compilers for embedded systems, 1997-2001, 700K. PI: K. Cooper, co-PIs: D. Subramanian and L. Torczon.

- Texas ATP program: Compiling for low power applications, 2000, 200K. PI; K. Cooper, co- PIs: D. Subramanian and L. Torczon.
- NIH: The Crystallographers Assistant, 1994-1997, 750K. PI: J. M. Rosenberg, co-PIs: B. G. Buchanan and D. Subramanian and P. Wilkocz.
- SW Bell: A Robust Infrastructure for Large-Scale Multimedia Networks, 50K grant, 1998. Joint PIs: P. Druschel and D. Subramanian.
- NSF: Research on Automatic Reformulation, 320K, 1989-1993. PI: D. Subramanian
- Teaching
 - Designed and taught a new freshman course on computational thinking, Comp 140 at Rice, Fall 2007-2010 (<http://www.clear.rice.edu/comp140>)
 - Designed and taught Comp 540 (Adaptive Systems) a new advanced course in artificial intelligence in Spring 1996-2010 at Rice. (<http://www.clear.rice.edu/comp540>)
 - Designed and taught Comp440 (Introduction to AI) a new introductory course at Rice on designing adaptive discrete systems, in Fall 1996,1997,1999-2007, 2011. (<http://www.clear.rice.edu/comp440>)
 - Designed and taught Comp 470: a new modular course in computational biology at Rice in Spring 2003-2007, (<http://www.cs.rice.edu/devika/comp470>).
 - Designed and taught Comp 430 (Database Systems) an introductory course in database systems in Fall 1998.
 - Designed and taught CS571 (Intermediate AI) at Cornell in Fall 1994.
 - Designed and taught CS672 (Advanced AI) at Cornell in Spring 1989 and Fall 1991.
 - Designed and taught CS472 (Introduction to AI) at Cornell in Fall 1989, Fall 1990, Fall 1992.
 - Taught CS432 (Introduction to Databases) at Cornell in Spring 1990, Spring 1991, Spring 1992, Spring 1993 and Spring 1995.
 - Designed and taught a graduate AI course (CS229b : survey of research in AI) offered in Winter 84-85 at Stanford University under the direction of Professor Bruce Buchanan.

PUBLICATIONS

- Refereed journal papers
 1. New predictive models of heart failure mortality using time-series measurements and ensemble models, *Circulation: Heart Failure* (in press). (with V. Subramanian, A. Deswal, and D.Mann).
 2. MEDRank: using graph-based concept ranking to index biomedical texts, *International Journal of Biomedical Informatics*, (in press) (with J. Herskovic, T. Cohen, S. Iyengar, J. W. Smith and E. Bernstam).
 3. Quantification of Perceived and Objective Risk Discrepancies in Hurricane-Prone Areas, *Natural Hazards Review* (in press) (with L. Duenas-Osorio, R. Stein, B. Guven)
 4. New components of the Dictyostelium PKA pathway revealed by Bayesian analysis of expression data, *BMC Bioinformatics* 11:163, 2010. (with A. Parikh, E. Huang, C. Dinh, B. Zupan, A. Kuspa, G. Shaulsky)
 5. Performance assessment of topologically diverse power systems subjected to hurricane events, *Reliability Engineering and System Safety*, 95(4):323-336, 2010 (with L. Duenas-Osorio, J. Winkler and R. Stein)
 6. Who evacuates when disaster approaches: the role of risk, information and location, *Social Science Quarterly* 91:3, 2010. (with L. Duenas-Osorio and R. Stein).
 7. Structural Organization of Functional Networks from EEG Signals during Motor Learning Tasks. *I. J. Bifurcation and Chaos* 20(3): 905-912 (2010). (with Fabrizio de Vico Fallani, Farhan Baluch, Laura Astolfi, George Zouridakis, and Fabio Babiloni).
 8. AI Theory and Practice: a discussion of the hard challenges and opportunities ahead. *AI Magazine*, October 2010. (with E. Horvitz, L. Getoor, C. Guestrin, J. Hendler, H. Kautz, J. Konstan and M. Wellman).

9. Learning robust cell signaling models from high throughput proteomic data, in the International Journal of Bioinformatics Research and Applications 5(3), 2009. (with Mitchell Koch and Bradley Broom)
 10. Events, patterns and analysis: forecasting international conflict in the twenty-first century, in Programming for Peace: Computer-aided Methods for International Conflict Resolution and Prevention, Robert Trappl ed.), Springer NY, pp 145-160, 2006. (with R. Stoll)
 11. Predicting altered pathways using extendable scaffolds, in International Journal of Bioinformatics Research and Applications, 2006. (with B. M. Broom, T. J. McDonnell)
 12. Random 3-SAT: the plot thickens, in Constraints 8(3): 243-261, 2003 (with M. Vardi, D. Demopolous, A. San Miguel Aguirre, C. Coarfa).
 13. Adaptive optimizing compilers for the 21st century, Journal of Supercomputing, 23:(1), 7-22, 2002 (with K. Cooper and L. Torczon).
 14. A compositional theory of opto-mechanical synthesis, Research in Engineering Design, 13(4): 183-198, November 2002 (with R. Goldman).
 15. Statistical methods for the objective design of screening procedures for macromolecular crystallization, Acta Crystallographica D 56:817-827, 2000 (with J. Rosenberg, B. G. Buchanan, D. Hennessey, P. Wilkocz).
 16. Information retrieval, information structure and information agents, in ACM Transactions on Information Systems, 15:(1), 67-101, 1997.
 17. The Common-Order Theoretic Properties of Version Spaces and ATMSs, Artificial Intelligence, 95(2):357-407, 1997 (with C. Gunter, T. Ngair).
 18. The relevance of relevance, Artificial Intelligence, Vol 97(1-2):1-5, 1997 (with R. Greiner and J. Pearl).
 19. Shift of vocabulary bias in speedup learning, in Machine Learning, 20:155-191, 1995.
 20. Kinematic Synthesis with Configuration Spaces, in Research in Engineering Design, 7:193-213, 1995 (with E. Wang).
 21. Provably bounded optimal agents, in Journal of Artificial Intelligence Research, 2:575-609, 1995 (with S.J. Russell).
 22. Customizing multimedia information access, in ACM Computing Surveys (special issue on multimedia systems), 27(4):627-629, 1995 (with D. Rus).
 23. A multistrategy learning scheme for knowledge assimilation in embedded agents, in Informatica, 17:8-15, 1993 (with D. Gordon).
- Refereed abstracts and conference and workshop papers
 1. A comparison of hurricane-induced power outage models: component vs statistical models, National Hurricane Conference, 2011. (with L. Duenas-Osorio, R. Stein, D. Kahle)
 2. Socially relevant computing, Proceedings of the SIGCSE, March 2008. (with M. Buckley and J. Nordlinger).
 3. Serum protein fingerprints can accurately distinguish patients with colorectal cancer from patients with benign colonic pathology, Gut 2008;57(S1):A149 (with V. Subramanian, S. Krishna, M. Farthing, R. Pollok)
 4. Serum protein fingerprints can accurately distinguish patients with inflammatory bowel disease from patients with clinically relevant differential diagnosis, Gut 2007;56(S3):A66 (with V. Subramanian, C. Evans, D. Kumar, S. Krishna, R. Pollok)
 5. Serum protein signatures determined by mass spectrometry (SELDI-ToF) can accurately distinguish Crohns disease from ulcerative colitis, Gut 2007;56:A120-121 (with V. Subramanian, S. Krishna, M. Farthing, R. Pollok)
 6. Spatiotemporal Profiles of Brain Activation During Learning and Strategy Formulation, in Proc. 6th International Symposium on Noninvasive Functional Source Imaging of Brain and Heart & International Conference on Functional Biomedical Imaging, Hangzhou, China, October 2007. (with G. Zouridakis, F. Baluch, I. Stevenson and J. Diaz)

7. Long-range gamma-band synchronization during learning of a complex visuomotor task, *proc. IEEE Neural Engineering*, 2007. (with G. Zouridakis, F. Baluch, I. Stevenson and J. Diaz)
8. Computational education for scientists and engineers – a position paper, *Workshop on Computational Education for Scientists*, Microsoft Research, Redmond WA, 2007.
9. Human Learning and the Neural Correlates of Strategy Formulation, *Conf Proc IEEE SMC 2007*, San Antonio, TX. (with F. Baluch, G. Zouridakis G, I. Stevenson)
10. A Search-Based Approach for Bayesian Inference of the T-cell Signaling Network, in *BIOT 2007*. (with Mitchell Koch and Bradley Broom)
11. Hubs, authorities and networks: predicting conflict using events data, in *Proc. Annual Meetings of the International Studies Association*, 2006 (San Diego). (with R. Stoll)
12. Serum protein signatures determined by mass spectrometry (SELDI-ToF) accurately identifies patients with inflammatory bowel disease by support vector machines with linear kernels, *Gastroenterology* 130:4(S2),385,2006 (with V. Subramanian, S. Krishna, D. Agranoff, R. Pollok)
13. Serum protein signatures determined by mass spectrometry (SELDI-ToF) accurately identifies patients with inflammatory bowel disease, *Gut* 2006:55(S2),A82 (with V. Subramanian, S. Krishna, D. Agranoff and R. Pollok)
14. Predicting altered pathways using extendable scaffolds, *BIOT 2005*. (with B. M. Broom, T. J. McDonnell)
15. Computer generated events data from online sources: some assembly required, in *Proc. Annual Meetings of the International Studies Association 2004* (Montreal, Canada). (with R. Stoll)
16. Events, patterns and analysis: forecasting conflict in the twenty-first century, *Proceedings of the National Conference on Digital Government Research*, The Digital Government Research Center, pp 19-20, 2003. (with R. Stoll)
17. Compilation order matters: exploring the structure of the space of compilation sequences using randomized search algorithms, submitted, November 2003. (with K. Cooper, L. Torczon, L. Almagor, T. Harvey, A. Grosul, S. Reeves and T. Waterman).
18. The design of adaptive compilers, submitted, November 2003. (with K. Cooper, L. Torczon, L. Almagor, T. Harvey, A. Grosul, S. Reeves and T. Waterman).
19. Understanding Human Learning On Complex Tasks By Functional Brain Imaging, *20th Annual Conference on Biomedical Engineering Research in Houston*, April 2003. (with R. Bandyopadhyay and G. Zouridakis)
20. Events, patterns and analysis: forecasting international conflict in the 21st century, *Workshop on Computer-Aided Methods for International Conflict Resolution*. Austrian Research Institute for Artificial Intelligence. Vienna, Austria October 25, 2002. (with R. Stoll)
21. Robust localization methods for an autonomous campus tour guide, *International Conference on Robotics and Automation*, 2001, (with R. Thrapp and C. Westbrook).
22. Machine learning techniques for designing life support systems, in *Proceedings of IEEE Aerospace*, 2000 (with P. Bonasso and D. Kortenkamp).
23. Random 3-SAT: the plot thickens, in *Proceedings of the International Conference on Constraint Programming*, 2000 (with M. Vardi, D. Demopolous, A. San Miguel Aguirre, C. Coarfa)
24. Inducing hybrid models of learning from visuomotor data, in *Proceedings of 22nd Annual Conference of the Cognitive Science Society*, 2000.
25. Optimizing for reduced code space using genetic algorithms, *ACM SIGPLAN Workshop on Languages, Compilers, and Tools for Embedded Systems (LCTES)*, Atlanta, GA, 1999, (Proceedings will appear as an issue of *SIGPLAN Notices*) (with P. Schielke and K. D. Cooper).
26. A new approach to routing using dynamic metrics, in *INFOCOM*, 1999. (with P. Druschel and J. Chen).

27. Modeling individual differences in the ONR Navigation task, in Proceedings of 20th Annual Conference of the Cognitive Science Society, 1998 (with D. Gordon).
28. An efficient multi-path forwarding method, in INFOCOM, 1998, (with P. Druschel and J. Chen).
29. Ants and reinforcement learning: a case study in routing in dynamic networks, in Proceedings of the International Joint Conference on Artificial Intelligence, 1997, (with P. Druschel and J. Chen).
30. A cognitive model of learning to navigate, in Proceedings of 19th Annual Conference of the Cognitive Science Society, Stanford, CA, 1997. (with D. Gordon).
31. Information retrieval, information structure and information agents, in Intelligent Hypertext, Lecture Notes in Computer Science Vol 1326, edited by C. Nicholas and J. Mayfield, 1997. (with D. Rus)
32. Sets as anti-chains, in ASEAN 1996, to appear in Lecture Notes in Computer Science (with C. Gunter and T. Ngair).
33. Cognitive modeling of action selection learning, in Proc. 18th Annual Conference of the Cognitive Science Society, San Diego, 1996 (with D. Gordon).
34. Comparison of action selection learning methods, in Proceedings of the 3rd International Workshop on Multistrategy Learning, Harpers Ferry, May 1996, pp 95-102. (with D. Gordon).
35. Induction of rules for biological macromolecule crystallization, Proceedings of the 2nd International Conference on Intelligent Systems for Molecular Biology, Stanford University, AAAI Press, pp 179-187, 1994 (with J. Rosenberg, B. Buchanan, V. Gopalakrishnan, D. Hennessey).
36. The Crystallographers Assistant, Proceedings of AAAI, 1994 (with B. Buchanan, V. Gopalakrishnan and D. Hennessey).
37. Modular architectures for information agents, Proceedings of the AAAI Spring Symposium, pp 79-86, March 1994 (with D. Rus).
38. Intelligent tools for conceptual design and simulation of opto-electro-mechanical devices, Proceedings of the NSF Design and Manufacturing Grantees Conference, ASME Press, January 1994 (with E. Wang).
39. Multi-media RISSC informatics: retrieving information with simple structural components, Proceedings of the ACM Conference on Information and Knowledge Management, ACM Press, pp 283-294, November 1993 (with D. Rus).
40. Information agents for multi-media environments, Proceedings of the Workshop on Hypermedia at the ACM Conference on Information and Knowledge Management, pp 1-5, November 1993 (with D. Rus).
41. A multi-strategy approach to assimilating advice, Proceedings of the 2nd International Workshop on Multi-Strategy Learning, pp 218-233, May 1993 (with D. Gordon).
42. Provably bounded optimal agents, Proceedings of International Joint Conference on Artificial Intelligence, pp 338-344, 1993 (with S. Russell and R. Parr).
43. Artificial intelligence and conceptual design, Proceedings of International Joint Conference on Artificial Intelligence, (invited paper), pp 800-809, 1993. 10
44. Issues in the design of provably good, distribution-sensitive, speedup learning algorithms, Proceedings of the International Machine Learning Workshop on Knowledge Compilation and Speedup Learning, pp 147-154, 1993.
45. Constraint-based kinematic synthesis, Proceedings of the 7th International Workshop on Qualitative Reasoning about Physical Systems, pp 228-239, 1993 (with E. Wang).
46. Constructing bounded optimal systems, Proceedings of the AAAI Spring Symposium on AI approaches to NP-hard problems, pp 144-148, 1993 (with S. Russell).
47. The computational impact of biases in learning, Proceedings of the International Machine Learning Workshop on Inductive Biases, pp 5-15, 1992 (with S. Hunter).

48. Knowledge compilation and speed-up learning, Proceedings of the International Machine Learning Workshop on Knowledge Compilation and Speed-up Learning, pp 3-5, 1992 (with P. Tadepalli and D. Fisher).
 49. Estimating utility and the design of provably good EBL algorithms, Proceedings of the 9th International Conference on Machine Learning, pp 426-435, 1992 (with S. Hunter).
 50. Estimating utility and the design of provably good EBL algorithms (extended abstract), Proceedings of AAAI Spring Symposium on Knowledge Assimilation, pp 131-140, 1992 (with S. Hunter).
 51. The common order-theoretic properties of version spaces and ATMSs, Proceedings of AAAI 1991, pp 500-505, July 1991 (with C. Gunter, T. Ngair, P. Pannangaden).
 52. The utility of EBL in recursive domain theories, Proceedings of AAAI, pp 942-949, 1990 (with R. Feldman).
 53. Abstractions and approximations: some challenges, Proceedings of the AAAI Workshop on the Automatic Generation of Abstractions and Approximations, pp 7-8, 1990.
 54. Subjective ontologies, Proceedings of the AAAI Spring Symposium on Planning and Learning in Uncertain, Unpredictable Environments, pp 130-135, 1990, (with J. Woodfill).
 55. A theory of justified reformulations, Proceedings of the 7th International Machine Learning Workshops, pp 434-438, June 1989.
 56. Representational issues in machine learning, Proceedings of the 7th International Machine Learning Workshops, pp 426-429, June 1989.
 57. Making situation calculus indexical, Proceedings of the First International Conference on Principles of Knowledge Representation and Reasoning, pp 467-474, 1989, (with J. Woodfill).
 58. Making situation calculus indexical (extended abstract), Proceedings of the AAAI Spring Symposium on Limited Rationality, pp 101-105, 1989, (with J. Woodfill).
 59. Knowledge level learning: an alternative view, Proceedings of the AAAI Spring Symposium on Explanation Based Learning, pp 196-200, 1988 (with D.E. Smith).
 60. Mutual constraints on representation and inference, Proceedings of the International Workshop on Machine Learning, Meta-Logics and Inference, pp 167-182, 1988 (with S.J. Russell).
 61. The relevance of irrelevance, Proceedings of the International Joint Conference on Artificial Intelligence, pp 416-422, 1987 (with M.R. Genesereth).
 62. Reformulation, Proceedings of the AAAI/SIGART Workshop on Knowledge Compilation, pp 119-121, 1986 (with M.R. Genesereth).
 63. Factorization in Experiment Generation, Proceedings of AAAI, pp 518-522, 1986 (with J. Feigenbaum).
- Edited Collections and Book Articles
 1. AI Theory and Practice: A Discussion on Hard Challenges and Opportunities Ahead. AI Magazine 31(3): 103-114 (2010). (with Eric Horvitz, Lise Getoor, Carlos Guestrin, James A. Hendler, Joseph A. Konstan, Michael P. Wellman, Henry A. Kautz)
 2. Computational methods for learning Bayesian networks from high-throughput biological data, B. M. Broom and D. Subramanian, in edited by K.A. Do and P. M. Mueller and M. Vanucci, Cambridge University Press, 2006.
 3. Four way street? Saudi Arabia's behavior among the superpowers, 1966-1999, The Energy Dimension in Russian Global Strategy, published by the Petroleum Energy Center of Japan and the James A. Baker III Institute for Public Policy, 2004. (with R. Stoll)
 4. Co-edited the special issue of Artificial Intelligence on Relevance, Volume 97(1-2), 402 pages, 1997 (with R. Greiner and J. Pearl).
 5. Co-edited the Proceedings of the AAAI Fall Symposium on Relevance, November 1994 (with R. Greiner).
 6. Edited the Proceedings of the International Workshop on Knowledge Compilation and Speedup learning, 1993.

7. On provably RALPHs (rational agents with limited performance hardware), in *Computational Learning and Cognition*, edited by Eric Baum, SIAM Press, pp 197-216, 1992 (with S. Russell).
 8. A theory of justified reformulations, in *Change of Representation and Inductive Bias*, edited by Paul Benjamin, Kluwer Academic Press, pp 147-168, 1990.
 9. Mutual constraints on representation and inference, in *Research on Machine Learning, Meta-Logics and Inference*, edited by Pavel Brazdil, Kluwer Academic Press, pp 85-106, 1989 (with S.J. Russell).
- Working papers and technical reports
 1. A methodology for inferring multi-resolution classifications for violent groups based on behavioral attributes, Technical report, Computer Science Department, Rice University, 2009. (with D. Ruths and C. Bronk and J. Miller)
 2. Model averaging for structure learning in Bayesian networks: an experimental study, Technical Report, Computer Science Department, Rice University, December 2008.
 3. Automated event coding using conditional random fields, Technical report, Computer Science Department, Rice University, 2006. (with A. Stepinski)
 4. Tracking evolution of policies in a visuomotor task, Technical Report TR02-491, Rice University, Aug 2002 (with S. Siruguri).
 5. Predicting protein-ligand interactions from primary structure, Technical Report TR02-387, Rice University, February 2002 (with R. Bandyopadhyay, X.X. Tan and K. Matthews).
 6. Compilation order matters, Technical Report, Rice University, January 2002 (with K. Cooper, L. Torczon and T. Harvey).
 7. Genetic algorithms for plan space search in life support optimization, in preparation for *Machine Learning*, (with P. Bonasso and D. Kortenkamp), January 2002.
 8. A simple, practical, distributed multipath routing algorithm, TR98-320, July 1998, Rice University (with J. Chen and P. Druschel).
 9. Ants and reinforcement learning: a case study in routing in dynamic networks, TR96-259, Rice University (updated July 1998) (with J. Chen and P. Druschel).
 10. An experimental evaluation of list scheduling, TR98-326, September 1998, Rice University (with K. Cooper and P. Schielke).
 - Other reports
 1. Creative synthesis of mechanisms from function, 1992. (with E. Wang, A. Kapur, S. Stoller and K. Chai).
 2. Scope and directions of artificial intelligence, prepared for the Computing the Future Board chaired by J. Hartmanis (with the help of notes from R. Reddy), 1991.
 3. Abstractions as postponement of computation, 1991.
 4. A guide to the Lego assistant, 1991 (with S. Benson and R. Wisniewski).
 5. Life is not perfect: an alternative method of learning abstraction hierarchies, 1990 (with J. Altucher).
 6. A theory of justified reformulations, Logic Group Technical Report, 1988.
 7. Abstraction reformulations and the irrelevance principle, Logic Group Working Paper, 1988.
 8. A formal characterization of knowledge level learning, Logic Group Technical Report 15, January 1988 (with D. E. Smith).
 9. AAI-86 learning papers: developments and summaries, in *Machine Learning*, 1987 (with A. Prieditis, T. G. Dietterich, H. Hirsh, S. Kedar-Cabelli, R. Kempiminski, and S. Minton).
 10. The relevance of irrelevance, Logic Group Technical Report 5 (with M. R. Genesereth).
 11. Inductive inference: a comparison of work in AI and philosophy, Logic Group Technical Report, 1987.

12. Report on the KSL Workshop on Reformulation, Logic Group Report, Computer Science Dept, Stanford University, 1986.
13. CS229b: A Survey of AI, Stanford CS Department Technical Report STAN-CS-86-1104, 1986.
14. A general reading list in artificial intelligence, KSL Technical Report KSL-85-54, also Stanford CS Department Technical Report STAN-CS-86-1093, 1985 (with B. G. Buchanan) (updated in 1995 with K. Myers and R. Zabih).
15. Experiment generation with version spaces, Stanford HPP Technical Report HPP-84-44, 1984.
16. On some properties of Abrahamson dynamic algebras, unpublished memo (with V. R. Pratt).

LECTURES & COLLOQUIA

- Preparing for hurricanes, public lecture, Houston's office of disaster preparedness and response, May 2010.
- Hurricane map tracks many risks, interview with KUHF reporter Melissa Galvez, May 2010.
- Hurricane risk assessment and evacuation planning, SSPEED Center conference on Hurricane Ike, September 2009.
- Forecasting conflict and tracking terror group interaction using open source intelligence, Baker Institute, Rice University, 2009.
- Relational linkages of associational networks in terrorist events, Research in America Summit, 2008.
- Learning Bayesian network models of metabolic and signaling networks from gene expression and proteomic data, ICAM Evolutionary Design Principles of Biological Networks, Rice University, December 2008.
- Learning Bayesian network models of signaling from proteomic data, Keck Seminar Series, Rice University, October 2008.
- Computational thinking, Rice University CS Industrial Affiliates Program, Rice University, October 2008.
- Computational Education for Scientists and Engineers: A Curriculum Proposal. Workshop on Computational Education for Scientists and Engineers, Microsoft Research, Redmond WA., July 2008.
- Learning Bayesian network models of metabolic and signaling networks from gene expression and proteomic data, Colloquium on Modeling and Analysis of Biological Networks, University of Houston/M.D.Anderson Cancer Center, May 2008.
- Socially relevant computing, Microsoft Research Faculty Summit, Redmond WA, July 2008.
- Learning Bayesian network models from gene expression and proteomic data, Workshop on Systems Biology at University of Houston, May 2008.
- Serum protein fingerprints accurately distinguish patients with colorectal cancer from patients with benign colonic pathology, Digestive Diseases Week, American Gastroenterology Association, April 2008.
- Art, design and computation. Contemporary Arts Museum, Houston, April 2008.
- Socially relevant computing, SIGCSE 2008, Portland, Oregon, March 2008.
- A Search-Based Approach for Bayesian Inference of the T-cell Signaling Network, BIOT 2007, University of Colorado, Colorado Springs, October 2007.
- Socially relevant applications of adaptive embedded systems, Grace Hopper Conference, October 2007.
- Adaptive systems and their application to society, School of Information Science, University of Texas Health Sciences Center, Texas, September 2007.
- Computational Education for Scientists and Engineers, Workshop on Computational Education for Scientists, Microsoft Research, September 2007.

- Socially relevant computing, Workshop on Social Computing, Microsoft Research, July 2007.
- Adaptive embedded systems, International Joint Conference on Artificial Intelligence (IJCAI), January 2007.
- Learning robust Bayesian networks from limited data, Workshop on Systems Biology at M.D. Anderson, December 2006.
- Adaptive embedded systems, Max Planck Institute for Software Systems, Saarbrucken, Germany, July 2006.
- Adaptive embedded systems, Microsoft Research, March 2006.
- Forecasting international conflict from wire news: the Rice events data system, Rice Industrial Affiliates Forum, 2006.
- What are the limitations of Tabari?, Rice University, 2005.
- Predicting altered pathways using extendable scaffolds, BIOT 2005, University of Colorado, Colorado Springs, 2005.
- Four way street? Saudi Arabia's behavior among the superpowers, 1966-1999, presented at the James A. Baker III Institute for Public Policy, 2004.
- Events, patterns and analysis: forecasting conflict, presented at the NSF Digital Government Conference, 2004.
- Adaptive Systems, University of Texas at Dallas, 2003.
- Adaptive Systems, Texas A&M University, 2003.
- Computers and Learning, Computer Science Computing and Mentoring Partnership, Rice University, Houston, Texas, 2003.
- Evolutionary Computation, Scientia Lecture, Rice University, Houston, Texas, 2003.
- Evolutionary Computation, Industrial Forum Lecture, Rice University, Houston, Texas, October 2003.
- Algorithms and Art, Public lecture at the Contemporary Museum of Art, Houston on the opening of Roxy Paine, Second Nature, 2003.
- Evolutionary Computation, Industrial Forum Lecture, Rice University, October 2003.
- Evolutionary Computation, Scientia Lecture, Rice University, March 2003.
- Computers and learning, Computer Science Computing and Mentoring Partnership, Rice University, June 2003.
- Tracking the evolution of learning in the ONR Navigation Task, Lucent/CRAW lecture at the University of Washington, November 2002.
- Tracking the evolution of learning in the ONR Navigation Task, NCARAI invited lecture series at the ONR, November 2001.
- Distributed reinforcement algorithms for routing in packet networks, CS Department Colloquium, Texas A&M University, September 2001.
- Robust localization methods for an autonomous campus tour guide, International Conference on Robotics and Automation, May 2001.
- Tracking the evolution of learning in a visuomotor task, AI Colloquium series, Texas A&M University, March 2001.
- Tracking the evolution of learning in a visuomotor task. CITI Lunch, December 2000 Random 3-SAT: The plot thickens, CP 2000, Singapore, September 2000.
- Inducing hybrid models of learning in the NRL Navigation task, Annual Conference on Cognitive Science 2000, Philadelphia, August 2000.
- Progress in learning the NRL Navigation task, ONR workshop, Rice University, August 2000. Modeling learning on the NRL Navigation task, invited workshop, Annual Conference on Cognitive Science 1999, Vancouver, August 1999.
- Progress in learning the NRL Navigation task, ONR workshop, San Diego, July 1999 2000.

- Reinforcement learning and routing in packet networks, invited lecture, AAAI 1999 Workshop on Distributed Systems in AI, July 1999.
- Modeling learning on the NRL Navigation task, Distinguished Lecture Series, Florida Atlantic University, April 1999.
- A study of individual differences in the ONR Navigation task, Annual Conference on Cognitive Science 1998, Madison, Wisconsin, July 1998.
- Learning to Navigate: a new cognitive model, ONR Invited workshop on Hybrid Learning, Corvallis, July 1997.
- A cognitive model of learning to navigate, Annual Conference on Cognitive Science 1997, Stanford, July 1997.
- Genetic Algorithms: a gentle introduction, CRPC Science Awareness Seminar for High School teachers, July 1997.
- How to design adaptive embedded systems: a task-oriented perspective, NSF workshop on Intelligent Robotic Agents, Brazil, March 1997.
- Cognitive Modeling of the ONR Navigation Task: New Results, ONR Invited Workshop on Hybrid Learning, San Diego, November 1996.
- Artificial Intelligence, lecture at CITI, Rice University, November 1996.
- Cognitive Modeling of Action Selection, Psychology Departmental Colloquium, Rice University, October 1996.
- Artificial Intelligence: The New Challenges, CRPC Symposium on Math and Computational Sciences Awareness, July 1996.
- Cognitive Modeling of Action Selection, Cognitive Science 1996, San Diego, July 1996.
- Introduction to Neural Networks, Honors Senior Seminar, Cognitive Science Program, Rice University, April 1996.
- Representation and Action Choice for Bounded Agents, Rice University, April 1995.
- Teaching Artificial Intelligence, Rice University, April 1995.
- Artificial Intelligence and Conceptual Design, Rice University, December 1994.
- The Crystallographers Assistant, Department of Biochemistry, Rice University, December 1994.
- Kinematic synthesis using configuration spaces, Dartmouth College, October 1994.
- Artificial Intelligence and Conceptual Design, Computer Science Department and Knowledge Systems Laboratory at Stanford University, June 1994.
- Artificial Intelligence and Conceptual Design, NASA Ames and SRI, June 1994.
- Artificial Intelligence and Conceptual Design, Stanford Research Institute, June 1994.
- Modular Architectures for Information Agents, AAAI Spring Symposium on Software Agents, Stanford University, March 1994.
- The Cornell Lego project, University of Illinois at Urbana-Champaign, September 1993.
- Constraint-based kinematic synthesis, invited lecture at IJCAI 1993, August 1993.
- Constraint-based kinematic synthesis, Harvard University, March 1993.
- The Cornell Reformulation project, University of Pittsburgh, March 1993.
- Estimating Utility and the Design of Provably Good EBL Algorithms, Machine Learning 1992, Aberdeen, Scotland, July 1992.
- Computational Impact of Biases in Learning, Workshop on Biases in Inductive Learning, Aberdeen, Scotland, July 1992.
- A Comparative Analysis of Speed-up Learning Methods, Workshop on Knowledge Compilation and Speed-up Learning, Aberdeen, Scotland, July 1992.
- A Theory of Justified Reformulations, Invited Lecture Series, University of Pennsylvania, Philadelphia, June 1992.

- The Design of Provably Good Speed-up Learning Algorithms, Invited Lecture Series, University of Pennsylvania, Philadelphia, June 1992.
- Designing Adaptive Discrete Control Systems, Invited Lecture Series, University of Pennsylvania, Philadelphia, June 1992.
- Conceptual Synthesis of Mechanisms from Specifications of Behaviour, Invited Lecture Series, University of Pennsylvania, Philadelphia, June 1992.
- Estimating Utility and the Design of Provably Good EBL Algorithms, AAAI Spring Symposium on Knowledge Assimilation, March 1992, Stanford, California.
- Panel on Artificial Intelligence, Cornell University Philosophy Dept, November 1991.
- The Cornell Lego Project, AAAI Workshop on Creativity in Design and Workshop on How Things Work, July 1991.
- The Reformulation Project, Navy Research Lab in Artificial Intelligence, April 1991.
- Indexicality in Planning, Cognitive Science Seminar, Cornell University, November 1990.
- A Theory of Justified Reformulations, Psychology Department Colloquium, Cornell University, November 1990.
- Abstraction as Postponement of Computation, AAAI Workshop on the Automatic Generation of Approximations and Abstractions, August 1990.
- The Utility of EBL in Recursive Domain Theories, AAAI, August 1990.
- Learning and Planning, AAAI Spring Symposium on Planning in Unpredictable and Uncertain Environments, March 1990.
- A Theory of Justified Reformulations: University of Pennsylvania, Departmental Colloquium, March 1990.
- Reformulations and Planning, Cognitive Science Colloquium, Cornell University, February 1990.
- Research on Reactive Planning, IBM Hawthorne, Philips Lab, January 1990.
- Representational Issues in Machine Learning, International Machine Learning Workshop, Cornell University, 1989.
- Indexicals in Planning, AAAI Spring Symposium, March 1989.
- Research on Automated Reformulation, Cornell Computer Science Industrial Forum, 1989.
- Research on Automated Reformulation, At the AI Labs of IBM Yorktown Heights, Knowledge Systems Lab Colloquium, Stanford University in Oct 1988, IBM Almaden Research Center in November 1988.
- A Theory of Justified Reformulations, At the Computer Science Departments of MIT, University of Massachusetts, Cornell, Carnegie-Mellon University, Oregon State University, Courant Institute, Rutgers University, University of California at Berkeley, in March-April 1988
- Knowledge Level Learning: An Alternative View, At the Spring-Symposium on Explanation Based Learning, Stanford, March 1988.
- The Relevance of Irrelevance, IJCAI-87, Milan, August 1987
- Reformulation, At the Knowledge Compilation Workshop, Oregon, September 1986, and the Stanford Computer Forum, February 1987
- Factorization in Experiment Generation, At AAAI-86, Philadelphia, August 1986, and the Planlunch Seminar, SRI International, Menlo Park, September 1986.