CURRICULUM VITA

THOMAS GLEN DIETTERICH
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Education:

> **A.B., Mathematics,** Oberlin College (Oberlin, Ohio), 1977
>> with Honors in Mathematics (Probability and Statistics)

> **M.S., Computer Science,** University of Illinois (Urbana, Illinois), 1979
>> Thesis supervisor: Ryszard S. Michalski
>> Thesis title: "The Methodology of Knowledge Layers for Inducing Descriptions of Sequentially Ordered Events"

> **Ph.D., Computer Science,** Stanford University (Stanford, California), 1984
>> Dissertation supervisor: Bruce G. Buchanan
>> Dissertation title: "Constraint-Propagation Techniques for Theory-Driven Data Interpretation"

Positions Held:

2016-present: Professor Emeritus, School of Electrical Engineering and Computer Science, Oregon State University

2013-2016: Distinguished Professor of Computer Science, Oregon State University.

2011-present: Chief Scientist, BigML, Corvallis, OR.

2005-present: Director of Intelligent Systems Research, School of Electrical Engineering and Computer Science, Oregon State University.

2006-2008: Chief Scientist, Smart Desktop, Inc. Seattle, WA.

2004-2005: Chief Scientist, MyStrands, Inc., Corvallis, OR.

1995-2013: Professor of Computer Science, Oregon State University.

1998-1999: Visiting Senior Scientist, Institute for the Investigation of Artificial Intelligence, Barcelona, Spain. (Sabbatical leave position)

1988-1995: Associate Professor of Computer Science, Oregon State University. (50% time 9/92–12/93)

1991-1993: Senior Scientist (50% time), Arris Pharmaceutical Corporation, S. San Francisco, CA.

1985-1988: Assistant Professor of Computer Science, Oregon State University.

1979-1984: Research Assistant, Heuristic Programming Project, Department of Computer Science, Stanford University.

1979 (Summer): Member of Technical Staff, Bell Telephone Laboratories, Naperville, Illinois. Computer-to-computer file transfer and micro-code distribution to remote switching systems.

1977 (Summer): Assistant to the Director of Planning and Research, Oberlin College, Oberlin, Ohio. Developed institutional planning database.

Honors:

Distinguished Service Award, 2022, Association for the Advancement of Artificial Intelligence
Distinguished Contribution Award, 2020, Asian Conference on Machine Learning
Distinguished Educator Award, 2016, University of Illinois, Urbana-Champaign
Distinguished Professor, Oregon State University, 2013
ACM Distinguished Lecturer, 2012-2013
Fellow, American Association for the Advancement of Science, 2007
Oregon State University, College of Engineering Collaboration Award, 2004
Winner, JAIR Award for Best Paper in Previous Five Years, 2003
Fellow, Association for Computing Machinery, elected 2003
Oregon State University, College of Engineering Research Award, 1998
Fellow, Association for the Advancement of Artificial Intelligence, elected 1994
NSF Presidential Young Investigator, 1987–92
Nominated for Carter Award for Graduate Teaching, 1987, 1988
IBM Graduate Fellow, 1982, 1983
Upsilon Pi Epsilon, 1996
Sigma Xi, 1979-present
State Farm Companies Foundation Fellowship, 1978
Member, Board of Trustees, Oberlin College, 1977-1980
Graduation with Honors in Mathematics, Oberlin College, 1977
Phi Beta Kappa, 1977
National Merit Scholar, 1973

Professional Activities:

Government Service:

Member, NAS/CSTB Committee on Computing Research for Environmental and Societal Sustainability, 2010-2012
Member, NSF Advisory Committee for Cyberinfrastructure, 2009-2012
Member, DARPA Information Science and Technology Study Group
(ISAT), 2004-2007; Steering Committee, 2017-present
Co-Chair, CCC 20-year Community Roadmap for Artificial Intelligence Research section on Self-Aware Learning and Vision, 2018
Fulbright Expert Visitor, Beijing China, Fall 2018
Fulbright Expert Visitor, Ljubljana Slovenia, June 2023
Member, NASEM Study Panel on Machine Learning in Safety-Critical Applications, 2023.

Service to Scientific Associations:

AAAI/ACM Allen Newell Award Selection Committee (2016-20)
Past-President (2016-2018), Association for the Advancement of Artificial Intelligence (AAAI)
President (2014-2016), Association for the Advancement of Artificial Intelligence (AAAI)
President-Elect (2012-2014), Association for the Advancement of Artificial Intelligence

(AAAI)

AAAS Electorate Nominating Committee (ENC) of the Section on Information, Computing & Communication, 2012-2015

Member, IJCAI Awards Committee, 2009-2015

Founding Member and First President, International Machine Learning Society, 2001-2008

Founding Member, Steering Committe of the Asian Conference on Machine Learning, 2009-2018

Founding Member, IFIP Working Group WG12.2, Machine Learning

Councilor of the Association for the Advancement of Artificial Intelligence (AAAI), 1990–1993

Member, AAAI Fellows Selection Committee, 1999–2001

Member, NIPS Foundation Board, 2001–2008; Advisory Board 2009–present

Member, Joint IEEE Computer Society/ACM Task Force on Year 2001 Model Curricula for Computing (CC-2001), Intelligent Systems subgroup.

Study Groups and Advisory Boards:

Chair, ISAT Study Group on Trustable Deployed Adaptive Systems, 2005-2006

Co-Chair, ISAT Study Group on Reliable Teamwork (TEAMMS), 2018-2019

Chair, ISAT Study Group on Next Generation Artificial Intelligence (AINext), 2020

Co-Chair, ISAT STudy Group on Performance and Resilience Arising from Defense-Informed Giant Models (PARADIGM), 2022-2023

Member, National Center for Ecological Analysis and Synthesis (NCEAS) Machine Learning Study Group, 2006-2008

Member, National Socio-Environmental Synthesis Center (SESYNC), Models to unleash the power of citizen-science insect data for science, policy, education, and conservation

Journals:

Advisory Board, *Journal of Machine Learning Research*, 2000–present

Advisory Board, *ACM Transactions on Intelligent Systems and Technology*, 2010–present

Action Editor, *Neural Computation*, 2000–2004

Action Editor, *Journal of Machine Learning Research*, 2000–2003

Member, Editorial Board, *Journal of Machine Learning Research*, 2009-present.

Executive Editor, *Machine Learning* journal, 1993–1998

Action Editor of *Machine Learning*, 1988–1992

Founding Member of the editorial board of *Machine Learning* 1986–2000

Member, Editorial Board, *Neural Computation*, 2005–2013.

Founding Member, Advisory Board, *Journal of Artificial Intelligence Research* (electronic journal), 1995–1997

Member, Editorial Board, *Journal of Artificial Intelligence Research*, 1997–2000

Founding Member, Advisory Board, *Neural Computing Surveys*

Reviewer for *Adaptive Behavior*

Reviewer for *Annals of Statistics*

Reviewer for *Artificial Intelligence*

Reviewer for *AI-EDAM (Artificial Intelligence in Engineering Design, and Manufacturing)*

Reviewer for *Autonomous Agents and Multi-Agent Systems*

Reviewer for *Behavioral and Brain Sciences*

Reviewer for *Communications of the ACM*

Reviewer for *Computer-Aided Design*
Reviewer for *Computational Economics*
Reviewer for *Computational Intelligence*
Reviewer for *Computational Linguistics*
Reviewer for *Cybernetics and Systems*
Reviewer for *Data Mining and Knowledge Discovery*
Reviewer for *IBM Systems Journal*
Reviewer for *IEEE Systems, Man, and Cybernetics*
Reviewer for *IEEE Transactions on Neural Networks*
Reviewer for *IEEE Transactions on Knowledge and Data Engineering*
Reviewer for *IEEE Pattern Analysis and Machine Intelligence*
Reviewer for *IEEE Software*
Reviewer for *Information Fusion*
Reviewer for *Journal of Artificial Intelligence Research*
Reviewer for *Journal of Machine Learning Research*
Reviewer for *Mathematical and Computer Modeling*
Reviewer for *Machine Learning*
Reviewer for *Neural Computation*
Reviewer for *Pattern Recognition*
Reviewer for *Pattern Recognition Letters*
Reviweer for *Science*
Reviewer for *Water Resources Research*

Conferences:

Co-Chair, CompSust-2016 (Fourth International Conference on Computational Sustainability)

Co-Chair, CompSust-2010 (Second International Conference on Computational Sustainability)

Member, Program Committee, ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS 2018)

General Chairman, NIPS-2001 (Neural Information Processing Systems)

Technical Program Chairman, NIPS-2000

Program Co-Chairman, AAAI-90 (National Conference on Artificial Intelligence)

Member, Ethics Review Panel, ICLR-2021, ICLR-2022

Member, Senior Program Committee, IUI-2007 (Intelligent User Interfaces)

Member, Program Committee, NIPS-1997

Member, Program Committee, AAAI-86, AAAI-87, AAAI-88, AAAI-90, AAAI-96, AAAI-98, AAAI-02, AAAI-2011, AAAI-2012, AAAI-2013, AAAI-2014, AAAI-2015, AAAI-2017 (Area coordinator for Machine Learning, 1986, 1988, 1996, 2002) (Senior Program Committee member for Computational Sustainability, 2014)

Member, Program Committee, International Conference on Machine Learning, 1988, 1994, 1995, 1996, 1997, 1998, 1999, 2001, 2003, 2004, 2005, 2007, 2008, 2012, 2014, 2015

Member, Organizing Committee, International Conference on Machine Learning, 1991-2008

Member, Advisory Board, ACM SIGAI (formerly SIGART), 2011-present

Member, Advisory Board, International Joint Conference on Artificial Intelligence (IJCAI), 2007-2009

Member, Awards Committee, International Joint Conference on Artificial Intelligence

(IJCAI), 2009, 2011

Member, Program Committee, ACM Workshop on Computational Learning Theory (COLT), 1991, 1995

Member, Program Committee, International Conference on Autonomic Computing (ICAC-04), 2004

Reviewer for the International Joint Conference on Artificial Intelligence, 1981, 1983, 1985, 1987, 1989, 1995, 1997, 1999, 2003, 2005, 2013

Reviewer for the Neural Information Processing Systems (NeurIPS) Conference, 1994-1998, 2000-2002, 2004-2005, 2007-2016, 2018

Reviewer for Knowledge Discovery and Data Mining Conference, 1999, 2003

Reviewer for Intelligent Data Analysis Conference, 1999

Reviewer for Catalan Conference on Artificial Intelligence, 1999

Reviewer for Workshop on Multiple Classifier Systems, 2000

Reviewer for the AI and Design Conference, 1991

Reviewer for International Joint Conference on Neural Networks, 2003

Reviewer for Mexican International Conference in Artificial Intelligence, 2002, 2004

Reviewer for IBERAMIA, 2004

Workshops:

Co-Organizer of *KDD 2021 Workshop: Anomaly and Novelty Detection, Explanation and Accommodation (ANDEA)*, Augst 16-17, 2021

Co-Organizer of *IJCAI 2021 Workshop: Artificial Intelligence for Anomalies and Novelties*, 20-21 August, 2021

Co-Organizer of *ICML 2021 Workshop: Uncertainty in Deep Learning*, July 23, 2021, Virtual

Co-Organizer of *IJCAI 2020 Workshop: Artificial Intelligence for Anomalies and Novelties*, January 7, 2021, Virtual

Co-Organizer of *ICML 2020 Workshop: Uncertainty and Robustness in Deep Learning*, July 17, 2020, Virtual

Co-Organizer of *ICML 2016 Workshop: Reliable Machine Learning in the Wild*, June 23, 2016, New York, NY

Co-Organizer of *NIPS Symposium: Algorithms Among Us: the Societal Impacts of Machine Learning*, December 10, 2015, Montreal, Canada

Co-Organizer of *AAAI Fall Symposium on Embedded Machine Learning*, November 2015, Arlington, VA

Co-Organizer of *NIPS Workshop: 3rd NIPS Workshop on Probabilistic Programming*, December, 2014, Montreal, Canada

Co-Organizer of *NIPS Workshop: Machine Learning for Sustainability*, December 2013, South Lake Tahoe, California

Co-Organizer of *NIPS Workshop: Workshop on Human Computation for Science and Computational Sustainability*, December 2012, South Lake Tahoe, California

Co-Organizer of *NIPS Workshop: Machine Learning for Sustainability*, December 2011, Granada, Spain.

Co-Organizer of *NIPS Mini-Symposium: Machine Learning for Sustainability* December 2009, Vancouver, BC.

Co-Organizer of *DARPA Workshop on Complete Intelligence*, February, 25-26, 2009, Biosphere II, AZ.

Co-Organizer of *Contemporary Approaches to Human-Level Artificial Intelligence*, an

NSF planning workshop, July 12-13, 2007, Cambridge, MA.

Co-Organizer of *AAAI-2007 Workshop: Acquiring Planning Knowledge via Demonstration*, July 23, 2007.

Co-Organizer of *Probabilistic, Logical and Relational Learning: A further Synthesis*, a workshop at the International Conference Center for Computer Science, Dagstuhl, Germany, April 2007

Co-Organizer of *Probabilistic, Logical and Relational Learning – Towards a Synthesis*, a workshop at the International Conference Center for Computer Science, Dagstuhl, Germany, February 2005

Co-Organizer of *ICML-2004 Workshop: Statistical Relational Learning: Connections to Other Fields*, July 2004

Co-Organizer of *Modern AI and Human-Level AI: The Big Picture*, Asilomar, CA, March 2004

Organizer of *ICML-2001 Workshop: Spatial and Temporal Learning*

Co-Organizer of *ICML-2000 Workshop: Cost-Sensitive Learning*

Co-Organizer of *NIPS*98 Workshop: Learning from Complex and Ambiguous Examples*

Co-Organizer of *NIPS*98 Workshop: Hierarchy and Abstraction in Reinforcement Learning*

Co-Organizer of *NIPS*95 Workshop: Benchmarking of Neural Network Learning Algorithms*

Co-Organizer of *Machine Learning: Theory and Praxis*, a workshop at the International Conference Center for Computer Science, Dagstuhl, Germany, 1997

Co-Organizer of *Machine Learning: Theory and Praxis*, a workshop at the International Conference Center for Computer Science, Dagstuhl, Germany, 1994

Organizer of *NIPS*93 Workshop: Memory-Based Methods for Classification and Regression*

Organizer of *Workshop on Knowledge Compilation*, Oregon State University, September, 1986

Funding Agencies:

Reviewer for Canada CIFAR 2018

Reviewer for Canada NSERC 2017

Reviewer for NSF 2016 (program and date withheld per NSF rules)

Reviewer for NSF 2015 (program and date withheld per NSF rules)

Reviewer for NSF 2013 (program and date withheld per NSF rules)

Reviewer for ARO 2013

Reviewer for NSF 2012 (program and date withheld per NSF rules)

Reviewer for NSF 2010 (program and date withheld per NSF rules)

Reviewer for AFOSR 2008

Reviewer for NSF 2008 (program and date withheld per NSF rules)

Reviewer for NSF 2007 (program and date withheld per NSF rules)

Panel member, NSF 2005 (program and date withheld per NSF rules)

Reviewer for NSF Information Technology Research program, 2003

Panel Member, NSF 2003 (program and date withheld per NSF rules)

Panel Member, NSF Graduate Fellowships, 1994

Reviewer for NSF Information, Robotics, and Intelligent Systems Program

Reviewer for NSF Design Methodology Program

Publishers:

Editor, MIT Press Series on *Adaptive Computation and Machine Learning*, 1998–2015
Editor, MIT Press Series on *Neural Information Processing Systems*
Moderator, cs.LG category of the Computing Research Repository (CoRR), 1998–present
Member, Advisory Board, AI Access, 2013
Editor, Morgan-Claypool "Synthesis" Series on *Artificial Intelligence and Machine Learning*, 2008-2012.
Reviewer for MIT Press
Reviewer for Pitman Advanced Publishing Program, AI Series
Reviewer for Benjamin-Cummings Publishers (AI texts)
Reviewer for Academic Press
Reviewer for Morgan Kaufmann Publishers
Reviewer for Franklin, Beedle & Associates

Other:

Full Professor Review Committee, University of Helsinki, 2009
AI Hub Board of Trustees, 2018-present

Entrepreneurial Activities:

Co-founder *BigML*, Corvallis, Oregon. Chief scientist 1/11–present.

Co-founder *Smart Desktop* (now part of Decho, Inc., a subsidiary of EMC), Seattle, Washington. Commercialization of TaskTracer system. Chief scientist 7/06–12/08.

Co-founder *Strands* (originally *MusicStrands*), Corvallis, Oregon and Barcelona, Spain. Recommendation and Social Media. Chief scientist 6/04–6/05.

Grants, Contracts, and Gifts:

6/85 to 9/85 *Knowledge Based Systems* from Tektronix, Inc., $5,045 to support development of advanced programming tools.

9/85 to 9/87 *Toward Improved Models of the Design Process* from NSF (DMC-8514949) with Prof. D. G. Ullman, Department of Mechanical Engineering, $310,354.

4/86 to 4/88 *Learning by Experimentation* from NSF (IST-8519926), $85,746.

9/86 *Workshop on Knowledge Compilation* from Association for the Advancement of Artificial Intelligence, $5,000 and ACM Special Interest Group in Artificial Intelligence, $2,500.

10/87 to 9/93 *Presidential Young Investigator Award* from NSF (IRI-8657316), $125,000 with matching funds of $187,500.

4/87 to 7/87 *Control Techniques for FORLOG* from Tektronix, Inc. $5,000.

8/87 *Hardware Gift* from Tektronix, Inc., one Xerox 1108 workstation valued at $8,000.

9/87 to 8/90 *Understanding and Improving the Mechanical Design Process* (with Prof. D. G. Ullman) from NSF (DMC-87-12091), $360,000.

10/87 to 9/88 *Unrestricted Gift* (with Prof. D. G. Ullman) from Schlumberger Palo Alto Research, $20,000.

12/87 *CISE Research Instrumentation* (with Prof. B. D'Ambrosio) from NSF (CCR-8716748), $25,000.

12/87 *PYI Matching Gift* from Tektronix, Inc., $20,000.

8/88 *PYI Matching Gift* from Tektronix, Inc., $10,000.

10/88 to 9/89 *Unrestricted Gift* (with Prof. D. G. Ullman) from Schlumberger Laboratory for Computer Science, $20,000.

10/89 to 9/90 *Unrestricted Gift* (with Prof. D. G. Ullman) from Schlumberger Laboratory for Computer Science, $20,000.

1/90 to 12/93 *Improving Search-Based AI Programs* from NASA Ames Research Center, $227,448

7/93 to 6/96 *Learning from Knowledge and Data for Ecosystem Prediction* from NSF (IRI-9204129), $239,395.

4/93 to 3/98 *A Laboratory for Joint Research in Artificial Intelligence and Parallel Computing* from NSF (CDA-9216172) (with Mike Quinn and Bruce D'Ambrosio). $1,191,283 with OSU matching of $535,000.

3/95 to 2/98 *Hybrid Computational Methods for Skill Acquisition* (with Prasad Tadepalli). Office of Naval Research (N00014-95-1-0557). $379,200.

5/95 to 4/97 *CISE Post-Doctoral Associateship in Experimental Science* (with Eric Chown). NSF (ASC-9503976). $46,200 over 2 years.

7/96 to 7/00 *Understanding and Scaling-Up Machine Learning Algorithms* NSF (IRI-9626584). $358,240 over 4 years.

9/97 to 9/98 *Prediction of Economic Grasshopper Populations in Eastern Oregon* Oregon Department of Agriculture. $23,780.

4/98 to 3/01 *Machine Learning for Real-Time Decision Making.* Air Force Office of Scientific Research. $256,493.

1/99 to 12/01 *Instrumentation for Experimental Research in Machine Learning, Probabilistic Reasoning, Molecular Dynamics, and Software Maintenance.* NSF EIA9818414. $86,970.

3/99 to 2/00 *Sabbatical Fellowship.* Spanish Government; Ministerio de Educación y Cultura – Estancias de Investigadores Extranjeros en Regimen de Año Sabatico en España. $22,500.

6/00 to 11/01 *International Travel Grant. Commission for Cultural, Educational, and Scientific Exchange between Spain and the US.* $14,800.

9/00 to 8/03 *Divide and Conquer Methods for Machine Learning.* NSF IIS-0083292. $374,989.

9/00 to 8/03 *ITR: From Bits to Information: Statistical Learning Technologies for Digital Information Management and Search.* NSF (subcontract from MIT). $312,850.

9/04 to 8/06 *Instrumentation for Experimental Research in Machine Learning, Collaborative Filtering, and Virtual Environments.* With Ron Metoyer and Jon Herlocker. NSF EIA-0423733. $50,000 (with match of $44,319 from Oregon State University).

9/03 to 8/06 *Off-the-shelf Learning Algorithms for Structural Supervised Learning.* NSF $464,176.

6/03 to 3/04 *Machine Learning for the Knowledge Plane: Technology Assessment and Research Scenarios.* Air Force Research Lab (DARPA) $114,986.

9/03 to 8/05 *MKIDS: Capturing, Reusing, and Leveraging Knowledge from Human Task Processes* (PI: Jon Herlocker). NSF MKIDS program. $443,123.

8/03 to 7/04 *SGER: Exploiting Contextual Knowledge to Design Input Representations for Machine Learning.* NSF SGER program. $99,393.

9/03 to 8/07 *ITR: Pattern Recognition for Ecological Science and Environmental Monitoring* NSF ITR program. $1,730,000. REU Supplement $6,000.

10/03 to 9/08 *IGERT: Ecosystem Informatics.* NSF program for interdisciplinary graduate stipends. $3,913,548.

10/03 to 11/05 *KI-LEARN: Knowledge-Intensive Learning Methods for Knowledge-Rich/Data-Poor Domains* DARPA $997,000.

7/04 to 1/09 *Machine Learning for Task Recognition and Exploitation in CALO* (co-PIs Jon Herlocker, Margaret Burnett, Prasad Tadepalli, Alan Fern) DARPA via SRI $3,050,850.

1/05 to 9/05 *Feasibility Study for Cognitive Networking.* Air Force Research Lab (DARPA) $133,280.

1/05 to 8/05 *Learning Generalized Task Knowledge from Demonstration and Question Answering.* Air Force Research Lab (DARPA) $129,853.

10/05 to 3/09 *Effective Bayesian Transfer Learning.* DARPA via Berkeley. (co-PIs Alan Fern, Prasad Tadepalli) $2,200,120.

6/06 to 12/08 *Generalized Integrated Learning Architecture (GILA)* DARPA via Lockheed Martin ATL. (co-PIs Prasad Tadepalli, Weng-Keen Wong, Ron Metoyer) $804,818.

4/06 to 8/06 *Research Experiences for Undergraduates: Computer Vision for Insect Identification.* (co-PIs David Lytle and Eric Mortensen) NSF. $12,000.

6/06 to 5/10 *Summer Institute in EcoInformatics.* NSF. (PI: Desiree Tullos; co-PIs: Julia Jones, Kari O'Connell, and Enrique Thomann). $581,291.

9/07 to 8/10 *RI: Machine Learning for Robust Recognition of Invertebrate Specimens in Ecological Science.* NSF. (co-PIs Andrew Moldenke, David Lytle, Linda Shapiro, Robert Paasch). $800,000.

4/08 to 3/09 *Quantifying and supporting multitasking for Intel knowledge workers.* Intel Corporation. $47,996.

5/08 to 4/13 *MURI: A Unified Approach to Abductive Inference.* Army Research Office (subcontract from UW). $630,000.

11/08 to 10/11 *HCC-Medium: End-user debugging of machine-learned programs.* NSF. (PI: Margaret Burnett; co-PIs Weng-Keen Wong, Simone Stumpf). $890,112.

9/08 to 8/13 *Computational Sustainability.* NSF. (PI: Carla Gomes (Cornell); OSU co-PIs: Weng-Keen Wong, Claire Montgomery, H. Jo Albers). $1,858,209.

9/08 to 12/10 *PLATO: Phased Learning Through Analyzing Teaching and Observation.* DARPA (Subcontract from SRI International). $1,104,190.

7/09 to 6/14 *ERUDITE: A Machine that Reads.* DARPA (Subcontract from BBN Technologies). $1,208,179.

7/10 to 6/13 *II-EN: A compute cluster and software tools for Monte-Carlo methods in artificial intelligence.* NSF. $600,000.

1/11 to 12/11 *A study of automated tagging and tag propagation for contextual information access.* Google. $64,276.

6/11 to 6/15 *Proactive Detection of Insider Threats with Graph Analysis at Multiple Scales (PRODIGAL)* DARPA (Subcontract from SAIC). $1,679,606.

9/11 to 8/15 *BirdCast: Novel Machine Learning Methods for Understanding Continent-Scale Bird Migration.* NSF (Collaborative with Cornell Lab of Ornithology; Steve Kelling is PI). $980,271.

10/11 to 9/13 *Computing Innovation Fellowship (Selina Chu).* NSF (Subaward from CRA). $140,000.

4/12 to 3/15 *Collaborative Research: AVATOL – Next Generation Phenomics for the Tree of Life.* NSF. (PI: of OSU portion; overall PI Maureen O'Leary, Stony Brook; co-PI: Sinisa Todorovic). $863,285 (OSU Portion).

10/12 to 4/17 *Deep Reading and Learning.* DARPA. (co-PI; PI is Prasad Tadepalli). $2,221,485.

9/13 to 8/16 *CyberSEES: Type 2: Computing and Visualizing Optimal Policies for Ecosystem Management.* NSF. PI. $1,200,000.

10/13 to 10/17 *Promoting PPS Development in PPAML* DARPA (Subcontract from Galois, Inc.). $1,257,862

10/14 to 9/17 *II-EN: Software Tools for Monte-Carlo Optimization.* NSF. co-PI. $442,366

9/15 to 8/17 *Safe Behavior in Open Worlds: AI Methods for Learning and Acting in the Presence of Unknown Unknowns.* Future of Life Institute. PI. $200,000.

7/15 to 6/18 *Algorithms and Cyberinfrastructure for High-Precision Automated Quality Control of Hydro-Meteo Sensor Networks.* NSF. PI. $635,476.

9/2015 *Automatic Sharing of Relevant Work Products via Machine Learning-Based Tagging.* Gift from Keysight Technologies, Inc. PI. $61,645.

1/16 to 12/20 *CompSustNet: Expanding the Horizons of Computational Sustainability.* NSF. PI (OSU Portion). $1,400,000 (OSU Portion).

4/17 to 4/21 *EXACT: Explanation-Informed Acceptance Testing of Deep Adaptive Programs.* DARPA. Co-PI. (Alan Fern, PI). $6,545,123.

5/17 to 4/18 *Robust Artificial Intelligence.* Gift from Huawei, Inc. $137,872.

5/18 to 4/19 *Robust Artificial Intelligence.* Gift from Huawei, Inc. $220,471.

7/19 to 6/21 *Assured Learning.* Co-PI (Alan Fern, PI). DARPA via Galois, Inc. $440,000.

12/19 to 12/22 *Competency-Aware Reinforcement Learning through Introspection.* DARPA via SRI International. OSU PI. $787,069.

11/19 to 5/23 *Symbiant: Exploiting the fast/slow framing of the mind for robust behavior in open worlds.* DARPA via Raytheon/BBN Technologies. OSU PI. $1,553,951

12/19 to 11/23 *GARD.* DARPA via SRI International. co-PI (Fuxin Li PI). $432,441.

Memberships:

Association for the Advancement of Artificial Intelligence (AAAI)
Association for Computing Machinery (ACM)
IEEE
American Association for the Advancement of Science (AAAS)
American Statistical Association (ASA)

Students Supervised:

Nicholas S. Flann, M.S. in Computer Science, "Learning Functional Descriptions from Examples," June, 1986.

Daniel R. Corpron, M.S. in Computer Science, "Disjunctions in Forward-Chaining Logic Programming," December, 1986.

Prafulla K. Mishra, M.S. in Computer Science, "An Investigation of the Search Space of Lenat's AM Program," March, 1988.

Colin Gerety, M.S. in Computer Science, "Truth Maintenance Systems," May, 1988.

Caroline Koff, M.S. in Computer Science, "A Specialized ATMS for Equivalence Relations," May, 1988.

Ulhas Warrier, M.S. in Computer Science, "A SOAR-based Computational Model of Mechanical Design," August, 1988.

Hermann Hild, M.S. in Computer Science, "Variations on ID3 for Text-to-Speech Conversion," June, 1989.

Richard Charon, M.S. in Computer Science, "Development of a Graphical Interface to the Design History Tool," February, 1990.

Martha Chamberlin, M. S. in Computer Science. "Relationship of Pauses to Problem Solving Events in Mechanical Design Protocols," May 1990.

Dietrich Wettschereck, M. S. in Computer Science. "An Initial Test of Generalized Radial Basis Functions," June, 1990.

Ritchey Ruff, Ph.D. in Computer Science. "An Empirical Study into Learning Through Experimentation," September, 1990.

Ghulum Bakiri, Ph.D. in Computer Science. "Converting English Text to Speech: A Machine Learning Approach," January, 1991.

Nicholas S. Flann, Ph.D. in Computer Science. "Correct Abstraction in Counter-Planning: A Knowledge Compilation Approach." December, 1991.

Giuseppe Cerbone, Ph.D. in Computer Science. "Machine Learning in Engineering: Techniques to Speed Up Numerical Optimization," May, 1992.

Hussein Almuallim, Ph.D. in Computer Science. "Concept Coverage and its Application to Two Learning Tasks." May, 1992.

Varad Joshi, M.S. in Computer Science. "The Expert-Gate Algorithm," December, 1992.

William Langford, M.S. in Computer Science. "Classification Context in a Machine Learning Approach to Predicting Protein Secondary Structure," May, 1993.

Dietrich Wettschereck, Ph.D. in Computer Science. "A Study of Distance-Based Machine Learning Algorithms," June, 1994.

Eun Bae Kong, Ph.D. in Computer Science. "Understanding and Improving Error-Correcting Output Coding," February, 1995.

Wei Zhang, Ph.D. in Computer Science. "Reinforcement Learning for Job-Shop Scheduling," April, 1996.

Tony Fountain, Ph.D. in Computer Science. "Just Enough Die-Level Functional Test: Optimizing IC Test via Machine Learning and Decision Theory" August, 1998.

Waranun Bunjongsat, M.S. in Computer Science. "Grasshopper Infestation Prediction: An Application of Data Mining to Ecological Modeling" January, 2000.

Dragos Margineantu, Ph.D. in Computer Science. "Machine Learning Methods for Cost-Sensitive Classification" October, 2001.

Daniel Forrest, M.S. in Computer Science, "Shrunken Learning Rates Do Not Improve Adaboost on Benchmark Datasets" December, 2001.

William Langford, Ph.D. in Computer Science, "Evaluation Functions for Segmentation of Ecological Images" January, 2002.

Ashit Gandhi, M.S. in Computer Science, "Content-Based Image Retrieval: Plant Species Identification" September, 2002.

Diane Damon, M. S. in Computer Science, "Three Methods for Estimating Subpixel Cover Fractions in Coarse Resolution Imagery" June, 2003.

Valentina Bayer Zubek, Ph.D. in Computer Science, "Learning Cost-sensitive Diagnostic Policies from Data" July, 2003.

Bernd Michael Kelm, M. S. in Computer Science, "Demosaicking of Color Images by Means of Conditional Random Fields" October, 2003.

Saket Joshi, M. S. in Computer Science, "Calibration of Recurrent Sliding Window Classifiers for Sequential Supervised Learning," October, 2003.

Adam Ashenfelter, M. S. in Computer Science, "Sequential Supervised Learning and Conditional Random Fields", December, 2003.

Shriprakash Sinha, M. S. in Computer Science, "Leaf Shape Recognition via Support Vector Machines with Edit Distance Kernels", April, 2004.

Eric Altendorf, M. S. in Computer Science, "A Qualitative Modeling Language for Knowledge Intensive Machine Learning", May, 2005.

Dan Vega, M. S. in Computer Science, "Spatial Supervised Learning Using Recurrent Sliding Window Classifiers", June, 2005.

Xin Wang, Ph.D. in Computer Science, "Model Based Approximation Methods for Reinforcement Learning", May, 2006.

Rongkun Shen, M.S. in Computer Science, "Protein Secondary Structure Prediction Using Conditional Random Fields and Profiles", May, 2006.

Ethan Dereszynski, M.S. in Computer Science, "A Probabilistic Model for Anomaly Detection in Remote Sensor Streams", November 2007.

Michael Wynkoop, M.S. in Computer Science, "Learning MDP Action Models via Discrete Mixture Trees", June 2008.

Wei Zhang, Ph.D. in Electrical Engineering, "Image Features and Learning Algorithms for Biological, Generic and Social Object Recognition", March 2009.

Jianqiang Shen, Ph.D. in Computer Science, "Activity Recognition in Desktop Environments", March 2009.

Victoria Keiser, M.S. in Computer Science, "Evaluating Online Text Classification Algorithms for Email Prediction in TaskTracer", June 2009.

Guohua Hao, Ph.D. in Computer Science, "Efficient Training and Feature Induction in Sequential Supervised Learning", July, 2009.

Xinlong Bao, Ph.D. in Computer Science, "Applying Machine Learning for Prediction, Recommendation, and Integration", August, 2009.

Ethan Dereszynski, Ph.D. in Computer Science, "Probabilistic Models for Quality Control in Environmental Sensor Networks", June, 2012.

Junyuan Lin, M. S. in Computer Science, "A Study of Methods for Fine-grained Object Classification of Arthropod Specimens", April, 2013.

Arwen Lettkeman Griffioen, Ph.D. in Computer Science, "Creating, Understanding, and Applying Machine Learning Models of Multiple Species", June 2015.

M. Shahed Sorower, Ph.D. in Computer Science, "Improving Automated Email Tagging with Implicit Feedback", November 2015.

Michael Slater, M. S. in Computer Science, "TAPE: A Tagging Assistant for Productive Email", May 2016.

Liping Liu, Ph.D. in Computer Science, "Machine Learning Methods for Computational Sustainability", June 2016.

Majid Alkaee Taleghan, Ph.D. in Computer Science, "Simulator-Defined MDP Planning with Applications in Natural Resource Management", January, 2017.

Jesse Hostetler, Ph.D. in Computer Science, "Monte Carlo Tree Search with Fixed and Adaptive Abstractions", March 2017.

Sean McGregor, Ph.D. in Computer Science, "Machine Learning Methods for Public Policy: Simulation, Optimization, and Visualization", June 2017.

Amelia Snyder, M.S. in Water Resources Research, "Optimizing Placement of Weather Stations: Defining and Testing a Meaningful Objective for Multi-Variable Weather Monitoring Networks", August 2018.

Tadesse Zemicheal, Ph.D. in Computer Science, "Anomaly Detection and Probabilistic Diagnosis for Automated Data Quality Control", April 2020.

Andrew Emmott, M.S. in Computer Science, "A Benchmarking Study of Unsupervised Anomaly Detection Algorithms", June 2020.

Si Liu, Ph.D. in Statistics, "Statistical Properties and Guarantees for Certain Anomaly Detection Relevant Problems", August 2020.

Risheek Garrepalli, M.S. in Computer Science, "Oracle Analysis of Representations for Deep Open Category Detection", September 2021.

Alexander Guyer, M.S. in Computer Science, "The Familiarity Hypothesis: Explaining the Behavior of Deep Learning Methods in Out-of-Distribution Detection", May, 2022.

Thomas Noel, M.S. in Computer Science, "Exploring Outlier Exposure Methods for Deep Margin-Based Anomaly Detection", August, 2022.

Postdocs Supervised:

Eric Chown, Ph.D. in Computer Science (University of Michigan). Currently Professor of Computer Science, Bowdoin College. NSF CAREER awardee.

Francisco Martin, Ph.D. in Computer Science (Autonomous University of Barcelona). Currently CEO, BigML, Inc. Corvallis, Oregon.

Angelo Restificar, Ph.D. in Computer Science (University of Wisconsin, Milwaukee). Senior Director, Data Science, Expedia, Inc.

Simone Stumpf, Ph.D. in Computer Science (University College London). Currently Lecturer, City University London.

Soumya Ray, Ph.D. in Computer Science (University of Wisconsin). Currently Assistant Professor of Computer Science, Case-Western Reserve University.

Hei Chan, Ph.D. in Computer Science (UCLA). Currently Research, Transdisciplinary Research Integration Center, University of California, Los Angeles

Gonzalo Martinez, Ph.D. in Computer Science (Autonomous University of Madrid). Fulbright Scholar. Currently Profesor Titular in the Department of Information Engineering, Autonomous University of Madrid.

Rebecca Hutchinson, Ph.D. in Computer Science (Carnegie Mellon University). Currently Assistant Professor at Oregon State University.

Daniel Sheldon, Ph.D. in Computer Science (Cornell University). Currently Associate Professor of Computer Science, University of Massachusetts, Amherst.

Michael Shindler, Ph.D. in Computer Science (UCLA). Currently Lecturer, USC.

Selina Chu, Ph.D. in Computer Science (USC). Currently Staff Scientist, NASA Jet Propulsion Laboratory.

Mark Crowley, Ph.D. in Computer Science (UBC). Currently Assistant Professor at University of Waterloo.

Publications:

Refereed Journal Articles:

Wagstaff, K. L., Dietterich, T. G. (2023). Hidden heterogeneity: When to choose similarity-based calibration. *Transactions on Machine Learning Research.* `https://openreview.net/forum?id=RAOTDqt3hC`.

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Lukas Ruff, Jacob R. Kauffmann, Robert A. Vandermeulen, Grégoire Montavon, Wojciech Samek, Marius Kloft, Thomas G. Dietterich, Klaus-Robert Müller (2021). A Unifying Review of Deep and Shallow Anomaly Detection. *Proc. IEEE, 109*(5): 756–795.

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Carla P. Gomes, Thomas G. Dietterich, Christopher Barrett, Jon Conrad, Bistra Dilkina, Stefano Ermon, Fei Fang, Andrew Farnsworth, Alan Fern, Xiaoli Z. Fern, Daniel Fink, Douglas H. Fisher, Alexander Flecker, Daniel Freund, Angela Fuller, John M. Gregoire, John E. Hopcroft, Steve Kelling, J. Zico Kolter, Warren B. Powell, Nicole D. Sintov, John S. Selker, Bart Selman, Daniel Sheldon, David B. Shmoys, Milind

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Dietterich, T. G., and Bennett, J. S., (1986). *The Test Incorporation Hypothesis and the Weak Methods*, Rep. No. TR 86-30-4, Department of Computer Science, Oregon State University, Corvallis, OR.

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Dietterich, T. G., (Ed.), (1986). *Proceedings of the Workshop on Knowledge Compilation*, Technical report, Department of Computer Science, Oregon State University, Corvallis, OR.

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Dietterich, T. G., (1980). *The Methodology of Knowledge Layers for Inducing Descriptions of Sequentially Ordered Events,* Master's Thesis, Rep. No. UIUCDCS-1024, Department of Computer Science, University of Illinois, Urbana, Illinois.

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Dietterich, T. G., Horvitz, E. (2015). Benefits and Risks of Artificial Intelligence. *Medium.* https://medium.com/@tdietterich/benefits-and-risks-of-artificial-intelligence-460d288cccf3.

Patents Awarded: (1 pending)

Forbes, J., Maritz, P., Herlocker, J., Dietterich, T. (2016). *Methods for Delivering Task-Related Digital Content Based on Task-Oriented User Activity.* United States Patent No. 9,524,355. Filed January 2007. Assigned to Mozy, Inc.

Maritz, P., Forbes, J., Herlocker, J., Dietterich, T. (2014). *Methods for enhancing digital search query techniques based on task-oriented user activity.* United States Patent No. 8,706,748. Filed January 2007. Assigned to Decho Corporation.

Herlocker, Johnathan L., Dietterich, Thomas G., Forbes, John B., Maritz, Paul (2012). *Methods for enhancing digital search results based on task-oriented user activity.* United States Patent No. 8,126,888. Assigned to Decho Corporation. Filed December 12, 2007.

Herlocker, Jonathan L., Dietterich, Thomas G., Forbes, John B., Maritz, Paul (2012). *Methods for Generating Search Engine Index Enhanced with Task-Related Metadata.* United States Patent No. 8,117,198. Assigned to Decho Corporation. Filed December 12, 2007.

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Chapman, D., Critchlow, R., Jain, A., Lathrop, R., Lozano-Perez, T., Dietterich, T. (1996). *A Machine-Learning Approach to Modeling Biological Activity for Molecular Design and to Modeling Other Characteristics,* United States Patent No. 5,526,281. Filed October 28, 1994; Issued June 11, 1996. Assigned to Arris Pharmaceutical Corporation.

Invited Talks:

The Familiarity Hypothesis: Explaining the Behavior of Deep Open Set Methods, Research Seminar, Google Research (virtual). August 4, 2022.

The Familiarity Hypothesis: Explaining the Behavior of Deep Open Set Methods, I Can't Believe It's Not Better (internet research seminar). July 7, 2022.

Conformal Prediction Intervals for MDP policies. Computer Science Seminar, Technical University of Delft, Delft, The Netherlands, July 7, 2022.

Further Studies of the Familiarity Hypothesis for Deep Novelty Detection. CVPR Workshop on Visual Perception and Learning in an Open World. June 19, 2022.

Deep Novelty Detection: The Familiarity Hypothesis. Oregon State University AI Seminar. February 2, 2022.

Anomaly Detection for OOD and Novel Category Detection. Anomaly Detection for Scientific Discovery (AD4SD) seminar series. January 13, 2022.

Deep Novelty Detection: The Familiarity Hypothesis. Invited talk. Dealing with Novelty in Open Worlds: DNOW workshops at WACV 2022 workshop. January 4, 2022.

Anomaly Detection for OOD and Novel Category Detection, Keynote Speech, International Conference on Machine Learning Applications (ICMLA-2021). December 13, 2021. Virtual

Anticipatory Thinking in ML: Robustness and uncertainty quantification, AAAI Fall Symposium on Cognitive Systems for Anticipatory Thinking. November 4-6, 2021. Virtual.

Introduction to Machine Learning with BigML, Data Science Nigeria AI Bootcamp. October 26, 2021. Virtual.

Anomaly Detection for Open Set Classification, INRIA Seminar, October 26, 2021. Virtual.

Anomaly Detection for Open Set Classification, 1st Workshop on Multimedia Understanding with Less Labeling, October 24, 2021. Virtual.

Machine Learning in the 1980s and 1990s, Class presentation, CMU, October 20, 2021. Virtual.

Anomaly Detection for OOD and Novel Category Detection, Keynote Speech, Amazon Machine Learning Conference, October 4, 2021, Virtual.

Innateness in Machine Learning. Preprogrammed: Innateness in Neuroscience and AI. September 9, 2021. Virtual.

Computational Sustainability: Challenges and Lessons Learned, Oxford Machine Learning Summer School (OxML 2021). August 20, 2021.

Robust Autonomy: Some Pieces of the Puzzle, IJCAI-2021 Workshop on Robust and Reliable Autonomy in the Wild. August 19, 2021.

(Some) Steps Toward Trustworthy Machine Learning, Seminar. IIIA (Spanish National Institute for AI Research), Barcelona, Spain. July 29, 2021.

A Representation Analysis of Image Anomaly Detection CVPR-2021 Workshop on Open World Vision. June 20, 20221.

Robust AI in the Small and in the Large, Beneficial AI Seminar, University of California, Berkeley, Division of Computer Science. May 26, 2021.

Steps Towards Trustworthy Machine Learning Seminar at Pennsylvania State University, Department of Computer Science. March 12, 2021.

Providing Prospective Guarantees on the Performance of MDP Policies. Seminar at Waterloo University Department of Computer Science. March 9, 2021.

Anomaly Detection in Machine Learning and Computer Vision. Webinar at Caterpillar Research Lab (virtual). March 5, 2021.

Progress on Shallow and Deep Anomaly Detection. Invited talk. IJCAI 2020 Workshop on AI for Anomalies and Novelties (AI4AN). January 7, 2021. (virtual)

Applying RL to Ecosystem Management: Lessons Learned. Invited Talk, NeurIPS Workshop on Challenges of Real-World RL. December 12, 2020. (virtual)

Challenges for Machine Learning. ACML Distinguished Contribution Award Presentation. November 20, 2020. (virtual)

Anomaly Detection in Machine Learning and Computer Vision. Invited Tutorial. Data Science Nigeria AI Bootcamp, November 14, 2020. (virtual)

Seven Challenges for Machine Learning. Invited Presentation. Data Science Nigeria AI Bootcamp, November 13, 2020. (virtual)

Steps Toward Trustworthy Machine Learning Seminar. JHU Applied Physics Laboratory, November 5, 2020. (virtual)

Six Challenges for Machine Learning in the Real World. Invited Presentation. AI Saturdays, Abeokuta, Nigeria, October 31, 2020. (virtual)

Machine Learning and Computational Sustainability: Lessons Learned and Future Challenges. Keynote Speech. CompSustNet Doctoral Consortium, October 17, 2020. (virtual)

Explainable AI Responsible AI for Social Empowerment (RAISE 2020; India). Invited Panel, October 7, 2020. (virtual)

Toward Automated Quality Control for Hydro-Meteorological Weather Station Data. Invited Talk. Data Science Africa, Kampala, Uganda. July 26, 2020. (virtual)

Anomaly Detection in Machine Learning and Computer Vision. Invited Tutorial. Data Science Africa, Kampala, Uganda. July 25, 2020. (virtual)

Anomaly Detection in Machine Learning and Computer Vision. Frontiers in Machine Learning Research, Invited Talk and Panel, Microsoft Research, July 22, 2020. (virtual)

Robustness In-the-Small and In-the-Large. International Conference on Robotics: Science and Systems (RSS 2020). Workshop on Robust Autonomous Systms, Invited Talk and Panel. July 13, 2020. (virtual)

Machine Learning: Opportunities and Challenges. Invited Speech. Campus Party (www.campus-party.org). July 10, 2020. (virtual)

Setting Alarm Thresholds for Anomaly Detection. Computer Vision and Pattern Recognition (CVPR 2020), Workshop on Adversarial Machine Learning in Computer Vision. Invited Talk, June 19, 2020. (virtual)

Advances in Anomaly Detection. Invited Speaker, CMU Symposium on AI for Social Good. Carnegie Mellon University, Pittsburgh, PA. April 14, 2020. (virtual)

Robustness In-the-Small and In-the-Large. Computing Community Consortium Workshop on Assured Autonomy. Invited Presentation. Phoenix, AZ. February 4, 2020.

Advances in Anomaly Detection. AI Seminar. Department of Computer Science, Arizona State University. February 3, 2020.

Advances in Anomaly Detection. Seminar. Okinawa Institute of Technology, Okinawa, Japan. January 7, 2020.

Automated Quality Control for a Weather Sensor Network. NeurIPS Workshop on AI for Social Good, Vancouver, BC, Canada. December 14, 2019.

Trustworthy Machine Learning and Robust Artificial Intelligence. Keynote Lecture, Data Science Nigeria AI Bootcamp, Lagos, Nigeria. November 21, 2019.

Artificial Intelligence for Sustainable Development. Artificial Intelligence for Socio-Economic Development. The Oriental Hotel, Victoria Island, Lagos, Nigeria. November 19, 2019.

Advances in Anomaly Detection. Computer Science Seminar, Department of Computer Science, Australian National University, Canberra, Australia, August 28, 2019.

What High-Reliability Human Organizations can Teach Us about Robust Artificial Intelligence. Invited Talk, Workshop on Decision Theory III. Leverhulme Centre for the Future of Intelligence. Australia National University, Canberra, Australia, August 26, 2019.

Machine Learning at 39: Les Meme Choses et Plusieurs Changes BigML Machine Learning Summer School in The Netherlands, Breukelen, The Netherlands, July 10, 2019.

Steps Toward Robust Artificial Intelligence. Keynote Speech, International Symposium on Imprecise Probability Theory and Applications, Ghent, The Netherlands, July 5, 2019.

Approaches to Robust Artificial Intelligence: Can Geometry Help? Keynote Speech, Workshop on Geometry and Machine Learning, Portland, Oregon, June 20, 2019.

Viewing Machine Learning Through a Software Engineering Lens. Symposium on Software Engineering and Machine Learning Applications (SEMLA-2019). Montreal Polytechnique University, Montreal, Canada, May 23, 2019.

Highly-Reliable AI and Highly-Reliable Human Organizations. Berkeley Center for Human-Compatible Artificial Intelligence (CHAI) Third Annual Workshop, Asilomar, California, May 11, 2019.

Towards Machine Learning Systems that Know Their Limits. Intel Open Forum. Jones Farm Campus, Hillsboro, Oregon, April 8, 2019.

Toward Automated Quality Control for Hydro-Meteorological Weather Station Data. USC Symposium on AI and Conservation. University of Southern California, Los Angeles, California, February 8, 2019.

Trusting Human Organizations that Employ Artificial Intelligence. International Conference on Building Trust for Beneficial AI. Department of Philosophy, Peking University, Beijing, China. November 18, 2018.

Anomaly Detection: Algorithms, Explanations, Applications, Department of Computer Science, Tsinghua University, Beijing, China, October 25, 2018.

Steps Toward Robust Artificial Intelligence, Seminar, Department of EECS, Case Western Reserve University, Cleveland, OH, September 12, 2018.

Research Priorities for AI R&D, Invited Speaker, Huawei Strategic Technology Workshop, Shenzhen, China, May 15, 2018.

Research Priorities for AI R&D, Keynote Speech. DARPA ISAT Spring Meeting, Irvine, California, April 13, 2018.

Anomaly Detection: Algorithms, Explanations, Applications, FutureTalks, New Relic, Inc., Portland, OR, April 9, 2018.

Steps Toward Robust Artificial Intelligence, AI Seminar, Department of Computer Science and Engineering, University of Washington, Seattle, WA, March 15, 2018.

Anomaly Detection: Algorithms, Explanations, Applications, Distinguished Lecture, Microsoft Research, Redmond, WA, March 13, 2018.

Steps Toward Robust Artificial Intelligence, Keynote Speech, AI for Social Good, Royal Society, London, UK, February 12, 2018.

Discovering and Removing Exogenous State Variables and Rewards for Reinforcement Learning, Google Deepmind, London, UK, February 13, 2018.

Steps Toward Robust Artificial Intelligence, Distinguished Lecturer, University of Edinburgh, UK, February 15, 2018.

Combining ML and Visualization to Manage Ecosystems Keynote Speech, Asian Conference on Machine Learning (ACML-2017), Seoul Korea, November 17, 2017.

Discovering and Removing Exogenous State Variables and Rewards For Reinforcement Learning, Keynote Speech, 2nd Asian Workshop on Reinforcement Learning, Seoul, Korea, November 15, 2017.

Machine Learning and Autonomy At Rest, Institute for Human and Machine Cognition, Pensacola, FL, October 25, 2017

Progress in Machine Learning, National Academy of Sciences, Washington, DC, August 9, 2017.

Robust AI: Why and How, Keynote Speech, 3nd Chinese Congress on Artificial intelligence, Hangzhou, China, July 23, 2017.

Robust Artificial Intelligence and Anomaly Detection, Seminar, Galois, Inc. Portland, Oregon, June 26, 2017.

Robust AI: Why and How, Keynote Speech, FLAIRS-2017, Marco Island, Florida, May 22, 2017.

Advances in Anomaly Detection, Huawei, Shenzhen, China. May 4, 2017.

Anomaly Detection: Principles, Benchmarking, Explanation, and Theory, Seminar, Department of Computer Science, University of Illinois Chicago, February 16, 2017.

Advances in Anomaly Detection, Cray Distinguished Speaker, Department of Computer Science, University of Minnesota, February 13, 2017.

Anomaly Detection: Principles, Benchmarking, Explanation, and Theory, Seminar, Department of Computer Science, University of California, Santa Cruz, Santa Cruz, California, January 10, 2017.

Automated Data Cleaning via Multi-View Anomaly Detection, Invited talk, NIPS-2016 Workshop on Artificial Intelligence for Data Science, Barcelona, Spain, December 10, 2016.

Risks and Opportunities of Autonomous Artificial Intelligence Systems, Invited Speech, Paley International Council Summit, Paley Center for the Media, Mexico City, Mexico, November 17, 2016.

Anomaly Detection: Principles, Benchmarking, Explanation, and Theory, Invited Seminar, Department of Computer Science, University of Illinois, Urbana, IL, October 28, 2016.

Artificial Intelligence: Progress and Prospects, Keynote Speech, AI World, Beijing, China, October 18, 2016.

Solving MDPs for Ecosystem Management: Lessons Learned, CompSustNet Seminar, October 11, 2016.

Machine Learning for Understanding and Managing Ecosystems, IBM Cognitive Systems Institute seminar series. August 3, 2016.

Making Artificial Intelligence Systems Robust, OSTP Workshop on Safe Artificial Intelligence, Pittsburgh, PA, June 28, 2016.

Machine Learning for Sustainable Development and Biological Conservation, OSTP Workshop on Artificial Intelligence for Social Good, Washington, DC, June 6-7, 2016.

Advances in Anomaly Detection, ICML Workshop on Anomaly Detection, New York, NY, June 14, 2016.

Making Machine Learning Robust in Open Worlds, Colloquium Series on Robust and Beneficial AI, Berkeley, CA, May 27-29, 2016.

Steps Toward Robust Artificial Intelligence, Keynote Speech, Huawei Science and Technology Conference, Shenzhen, China, May 17, 2016.

AAAI Presidential Address: Steps Toward Robust Artificial Intelligence, AAAI 2016, Phoenix, AZ, February 14, 2016.

Smart Software in a World with Risk, Invited Speaker, DARPA Wait, What?, Saint Louis, MO, September 10, 2015.

Efficient Sampling for Simulator-Defined MDPs, Invited Speaker, European Workshop on Reinforcement Learning (EWRL 2015), Lille France.

Anomaly Detection with Applications in Security and Sensor Networks, AMPLab Seminar, May 11, 2015.

Anomaly Detection with Applications in Security and the Internet of Things, Huawei AI & Machine Vision Workshop, Santa Clara, California, April 1, 2015.

Advances in Anomaly Detection, Stanford Data Science Seminar, Stanford University, February 27,2015.

Efficient Exploration for Simulator-Defined MDPs, Invited Speaker, NIPS 2014 Workshop From Bad Models to Good Policies (Sequential Decision Making under Uncertainty), Montreal, Canada, December 12, 2014.

Constructing a Continent-Scale Bird Migration Model to Understand Bird Decision Making, AAAI Discovery Informatics Workshop, Quebec City, Canada, July 27, 2014.

New Artificial Intelligence Tools for Modeling and Managing Ecosystems, Ecosciences Precinct, Brisbane, Australia, July 1, 2014.

Computer Vision for Insect Population Counting: Project BugID, China National Rice Research Institute, Hangzhou, China, June 18, 2014.

Computational Ecology and Ecosystem Management, Invited Speaker, Zhejiang Sci-Tech University, Hangzhou, China, June 17, 2014.

Introduction to Machine Learning, Invited Lecture, Machine Learning Summer School, Beijing, China, June 16, 2014.

Advances in Anomaly Detection, Invited Speaker, Signatures Lecture Series, Pacific Northwest National Labs, June 9, 2014.

Modeling bird migration by combining weather radar and citizen science data, Keynote Speaker, Computational Modeling Showcase, Oberlin College, Oberlin, Ohio, May 8, 2014.

Challenges for Machine Learning in Computational Sustainability, University of San Francisco, April 11, 2014.

Challenges for Machine Learning in Computational Sustainability, Columbia University, March 13, 2014.

Simulator-defined MDPs in Ecosystem Management, Invited Talk, Reinforcement Learning and Decision Making (RLDM-2013), Princeton University, October 27, 2013.

Reflections on CALO: General Intelligence for the Desktop, Keynote Speech. International Conference on Artificial General Intelligence (AGI-2013), Beijing, July 30, 2013.

Challenges for Machine Learning in Computational Sustainability, Google/CMU Machine Learning Distinguished Speaker. Carnegie Mellon University, March 6, 2013.

Challenges for Machine Learning in Computational Sustainability, Seminar, School of Engineering and Applied Sciences, Harvard University. March 4, 2013.

Challenges for Machine Learning in Computational Sustainability Posner Lecture, Neural Information Processing Systems Invited Speech, December 5, 2012.

Graphical Models and Flexible Classifiers: Bridging the Gap with Boosted Regression Tress. Keynote Address. Jornadas Chilenas de Computacion, Valparaiso, Chile, November 12-16, 2012.

Machine Learning and Computational Sustainability. Keynote Address. 2012 Brazilian Symposium on Neural Networks, Curitiba, Brazil, October 20-25, 2012.

Bridging the two cultures: Latent variable statistical modeling with boosted regression trees. Ecological Society of America, Invited Symposium Speaker. Portland, OR, August 7, 2012.

Machine Learning Methods for Timing of Biological Events, Invited Talk, Second Workshop on Understanding Climate Change from Data, Minneapolis, MN, August 6, 2012.

Computational Sustainability: Applying Advanced Computing to Ecological Science and Ecosystem Management, Keynote Speaker, International Symposium on IT Convergence Engineering, Seoul, South Korea, July 12, 2012.

Machine Learning for Computational Sustainability, Invited Presentation, Third International Green Computing Conference, San Jose, CA, June 6, 2012. p. 1.

Novel machine learning methods for learning models of bird distribution and migration from citizen science data, Seminar Speaker, NICTA, Canberra, Australia, May 15, 2012.

Challenges for Machine Learning in Ecological Science and Environmental Management, Colloquium Speaker, Toyota Technology Institute, Chicago, IL, January 27, 2012.

Challenges for Machine Learning in Ecological Science and Environmental Management, Research Triangle Distinguished Lecture Series, Departments of Computer Science, Duke University, University of North Carolina, North Carolina State University, January 24-25, 2012.

Graphical Models and Flexible Classifiers: Bridging the Gap with Boosted Regression Trees, Invited Speaker, 2011 Conference on Technologies and Applications of Artificial Intelligence, Chung-Li, Taiwan, November 12, 2011.

Challenges for Machine Learning in Ecological Science and Environmental Management, Distinguished Lecture Series, Department of Computer Science, University of British Columbia, Vancouver, BC, October 20-21, 2011.

Inferring moth emergence from abundance data: A novel mathematical approach using birth-death contingency tables, Invited presentation, Ecological Society of America, Austin, TX, August 11, 2011.

Learning more from end-users and teachers, Invited talk, IJCAI 2011 Workshop on Agents Learning Interactively from Human Teachers. Barcelona, Spain, July 16, 2011.

Challenges for Machine Learning in Ecological Science, Invited talk, ICML 2011 Workshop on Machine Learning for Global Challenges, Bellevue, Washington, July 2, 2011.

Machine Learning for Ecological Science and Environmental Management, Invited Tutorial (with Rebecca Hutchinson and Dan Sheldon), International Conference on Machine Learning, Bellevue, Washington, June 28, 2011.

Integrating Boosted Regression Trees into Ecological Latent Variable Models, Seminar, CSAIL, MIT, Cambridge, Massachusetts, May 5, 2011.

Activity Discovery and Recognition for a Knowledge Worker Assistant, Presentation, Dagstuhl Seminar on Plan Recognition, Dagstuhl, Germany, April 7, 2011.

Machine Learning for Plan Recognition Using Inverse Reinforcement Learning, Invited Tutorial, Dagstuhl Seminar on Plan Recognition, Dagstuhl, Germany, April 6, 2011.

Machine Learning in Ecological Science and Ecosystem Management, Seminar, Environmental Science, University of Melbourne, February 21, 2011.

Machine Learning in Ecological Science and Ecosystem Management, Seminar, Arthur Rylah Institute, Heidelberg, Australia, February 18, 2011.

Machine Learning Challenges in Ecological Science and Ecosystem Management, Invited Talk, University of Waikato, Hamilton, New Zealand, February 10, 2011.

Boosted Evidence Trees for Object Recognition with Applications to Arthropod Biodiversity Studies, Perona Vision Group Talk, Caltech, Pasadena, California, January 19, 2011.

Machine Learning Challenges in Ecological Science and Ecosystem Management, Information for Lunch Bunch, Caltech, January 18, 2011, Pasadena, California.

Machine Learning Challenges in Ecological Science and Ecosystem Management, Departmental Seminar, Department of Computer Science, University of California, San Diego, October 29, 2010.

Keynote Address, First Asian Conference on Machine Learning, Nanjing, China, November 1, 2009.

Machine Learning in Ecosystem Informatics, International Joint Conference on Artificial Intelligence, Pasadena, CA. July 16, 2009.

Activity Recognition in TaskTracer and CALO, Invited Talk, Workshop on Plan, Activity, and Intent Recognition, International Joint Conference on Artificial Intelligence, Pasadena, CA, July 11, 2009.

Integrating Learning and Reasoning in CALO, Invited Talk, Next Generation Reasoning and Learning - Theory and Applications, AFRL, Vernon, NY, May 27, 2009.

Complete Intelligence: Results from CALO, Keynote Address, DARPA Workshop on Complete Intelligence, Tucson, AZ, February 25, 2009.

Machine Learning in Ecosystem Informatics, Departmental Seminar, Pomona College, October 16, 2008.

Machine Learning in Ecosystem Informatics, Departmental Seminar, Oberlin College, November 21, 2008.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Seminar, Department of Computer Science, University of Alberta, June 19, 2008.

Learning in an Integrated Intelligent System: Examples from the CALO System, Keynote Address, IBM Haifa Machine Learning Workshop, Haifa, Israel, May 25, 2008.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Machine Learning Seminar, University of Massachusetts, Amherst, April 23, 2008.

Machine Learning in Ecosystem Informatics, Keynote Address, Discovery Science 2007, October 1, 2007.

Applying Generic Object Recognition Methods to Environmental Monitoring and Ecological Science, INRIA Project Lear, Grenoble, France, April 24, 2007.

Experience with Markov Logic Networks in a Large AI System, Dagstuhl Seminar on Relational, Logistical, and Statistical Learning, Dagstuhl, Germany, April 16, 2007.

Survey of Planning Under Uncertainty, ISAT Study Group, Marina del Rey, CA, March 23, 2007.

TaskTracer: Toward a Task-Oriented Desktop Interface, Harvey Mudd College, March 21, 2007.

Machine Learning in the User Interface: Experience in TaskTracer and CALO, NIPS Workshop on User-Adaptive Systems, Whistler, CA, December 8, 2006.

Deployed Adaptive Systems, NIPS Workshop on Testing of Deployable Learning and Decision Systems, Whistler, CA, December, 8, 2006.

ISAT Study Briefing, Presentation to Dr. Tony Tether, Director, DARPA, Arlington, VA, September, 19, 2006.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Department of Computer Science, University of Rochester, Rochester, NY, September 20, 2006.

Hierarchical Reinforcement Learning, Air Force Research Laboratory, Rome, NY, September 21, 2006.

Intelligent Systems Research at Oregon State University, Early Stage Investment Forum, Seattle, WA, April 26, 2006.

TaskTracer: Toward an Activity-Oriented Desktop Interface, School of Computing, Georgia Institute of Technology, April 6, 2006.

TaskTracer: Toward an Activity-Oriented Desktop Interface, School of Computer Science, Carnegie Mellong University, February 15, 2006.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Department of Computer Science, University of New South Wales, February 4, 2006.

Transfer Learning in the CALO Project (Cognitive Assistant that Learns and Organizes), Workshop on Inductive Transfer 10 Years Later, NIPS Workshops, Whistler, BC, December 9, 2006.

Human-Level AI: Challenges for Machine Learning, Workshop on Human-Level AI, NIPS Workshops, Whistler, BC, December 9, 2006.

TaskTracer and CALO: Activity Recognition for the Desktop, Workshop on Activity Recognition and Discovery, NIPS Workshops, Whisler, BC, December 10, 2006.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Department of Computer Science, University of Maryland, November 17, 2005.

TaskTracer: Toward an Activity-Oriented Desktop Interface, Department of Computer Science, Brigham Young University, November 3, 2005.

Sequential Supervised Learning, Department of Computer Science, Notre Dame University, North Bend, IN, March 17, 2005.

Three Challenges for Machine Learning Research, IBERAMIA-2004 (Iberian-American Artificial Intelligence Conference), Puebla, Mexico, November 24, 2004.

Three Challenges for Machine Learning Research, Department of Computer Sciences, UT Austin, November 19, 2004.

Fitting Conditional Random Fields via Gradient Boosting, Department of Computer Science and Engineering, Oregon Graduate Institute, May 7, 2003.

Fitting Conditional Random Fields via Gradient Boosting, Department of Computer and Information Sciences, University of Pennsylvania, April 21, 2003.

Fitting Conditional Random Fields via Gradient Boosting, ALADDIN Workshop on Graph Partitioning in Vision and Machine Learning January 9-11, 2003, Carnegie Mellon University.

Learning and Prior Knowledge, Future of AI Workshop, IBM Amagi Homestead, Japan. December 14, 2002.

Ensembles for Cost-Sensitive Learning and *Bias-Variance Analysis of Ensemble Learning*, Ensemble Methods for Learning Machines (International School on Neural Nets "E.R. Caianiello" 7th Course). IIASS, 22-28 September 2002 Vietri sul Mare, Salerno, Italy.

Machine Learning for Sequential Data: A Review, International Workshop on Statistical Techniques in Pattern Recognition, Windsor, Ontario, Canada, August 6–9, 2002.

Making Data Active with Machine Learning. Forsythe Memorial Lecture, Department of Computer Science, Stanford University, March 18–19, 2002.

Support Vector Methods for Reinforcement Learning. Invited Speaker. Joint meeting of *Principles of Data Mining and Knowledge Discovery (PKDD-2001)* and *Twelfth European Conference on Machine Learning (ECML-2001)*. Freiburg, Germany. September 3–7, 2001.

The Divide-and-Conquer Manifesto. Invited Speaker. *Algorithmic Learning Theory (ALT-2000)*. Sydney, Australia. December, 11–13, 2000.

Sharing and Abstraction in Hierarchical Reinforcement Learning. Invited Speaker. *Symposium on Abstraction, Reformulation and Approximation (SARA-2000)*, Austin, Texas. July 26, 2000.

Why Ensemble Learning Works. Invited Speaker. *First International Workshop on Multiple Classifier Systems*, Santa Margherita di Pula, Cagliari, Italy, June 21–23, 2000.

Why Adaboost Works. Invited Speaker. *Workshop on Selecting and Combining Models with Machine Learning Algorithms.* Montreal, Canada. April 14, 2000.

Hierarchical Reinforcement Learning. Tutorial. *International Conference on Machine Learning.* Bled, Slovenia. June 26, 1999.

Learning for Sequential Decision Making. Invited Speaker. *Conference on Automated Learning and Discovery.* Carnegie Mellon University. June 11, 1998.

Recent Research in Machine Learning. Invited Speaker. *20th Symposium on the Interface.* Minneapolis, MN. May 15, 1998.

Five Topics in Machine Learning Research. Keynote Speaker. Quantitative Analysis Colloquium. AT&T Research. December 9, 1997.

Finding Good Job-Shop Schedules with Reinforcement Learning. Departmental Colloquium. Departments of Math and Computer Science, Rensaleer Polytechnic University, September 26, 1997.

Ensemble Methods in Machine Learning. Departmental Colloquium. Department of Computer Science, Cornell University, September 25, 1997.

Hierarchical Reinforcement Learning with the MAXQ Value Function Decomposition. Carnegie-Mellon University, September 24, 1997.

Current Directions in Machine Learning Research. Invited talk. The Third International Conference on Knowledge Discovery and Data Mining (KDD-97). Newport Beach, California, August 14, 1997.

Learning to Solve Combinatorial Optimization Problems. Invited talk. Ninth Conference on Computational Learning Theory (COLT-96). Desenzano del Garda, Italy, June 28, 1996.

Learning to Solve Combinatorial Optimization Problems. AT&T Bell Laboratories, May 17, 1996.

Statistical Test for Comparing Learning Algorithms. AT&T Bell Laboratories, May 16, 1996.

Finding Good Job-Shop Schedules by Reinforcement Learning. Joint OSU/UO Computer Science Colloquium, November, 1995.

Why I Like Reinforcement Learning, USC Information Sciences Institute, September, 1995.

Machine Learning and Drug Activity Prediction, Joint CS-Statistics Colloquium, UC Berkeley, November 16, 1994.

Connectionist Supervised Learning: An Engineering Approach. Tutorial (co-authored with Andreas S. Weigend), *Eleventh International Conference on Machine Learning (ML-91)*, New Brunswick, NJ, July 10, 1994.

Machine Learning and Drug Activity Prediction, Cognitive Science Colloquium, Georgia-Tech, January 7, 1994.

Calibrating Ecosystem Models by Machine Learning and Supercomputing, Invited talk *Supercomputing '93*, Portland, Oregon, November, 1993.

Solving the Multiple Instance Problem in Machine Learning, Neural Network Colloquium, Oregon Graduate Institute, October 8, 1993.

Scaling Up Machine Learning: Practical and Theoretical Issues, Invited Keynote Lecture, *Computational Learning and Natural Learning (CLNL'93)*, Provincetown, MA, September 10, 1993.

Machine Learning: Issues, Answers, and Quandaries, Invited Speech, *Ninth National Conference on Artificial Intelligence (AAAI-91)*, July, 1991.

Boosting the Performance of Inductive Learning Programs via Error Correcting Output Codes, Beckmann Distinguished Lecture, Beckmann Institute, University of Illinois, Urbana, IL, October 22, 1990.

Research in Engineering Design, Boeing Computer Services, Seattle, WA, April 29, 1990.

Introduction to Machine Learning, Stanford University, Stanford, CA, April 3, 1990.

A Comparative Study of ID3 and Backpropagation for English Text-to-Speech Mapping, Carnegie-Mellon University, Pittsburgh, PA, January 15, 1990.

Challenges for Machine Learning, Invited address, Sixth International Workshop on Machine Learning, Cornell University, Ithaca, NY. June, 29, 1989.

Limits of Inductive Learning, Naval Center for Artificial Intelligence Research, Washington D.C. May 8, 1989.

Scheduling via EBG, Simplification, and Reformulation, DARPA Workshop on Applications of Machine Learning, Snowbird, UT, April 12, 1989.

Machine Learning: Problems and Prospects, Department of Computer Science, University of Washington, Seattle, WA. February 16, 1989.

Experiments on Experimentation, Symposium on Scientific Theory Formation, Stanford University, Stanford, CA, January 8, 1989.

Experiments on Experimentation, Sandia National Laboratories, Albuquerque, NM, September 9, 1988.

How Good is Scientific Experimentation?, Tenth Annual Meeting of the Cognitive Science Society, Montreal, Canada, August, 1988.

Recent Progress in Machine Learning, AAAI-88 panel participant, St. Paul, MN, August, 1988.

Machine Learning, Tutorial (with Paul Rosenbloom), AAAI-87, Seattle, WA, July, 1987.

Problems and Methods in Machine Learning, Tutorial, Artificial Intelligence Workshop, Oregon Center for Advanced Technology Education, Rock Creek, Oregon, November, 1986.

Empirical Studies of the Mechanical Design Process, Workshop on AI and Design, AAAI-86, Philadelphia, PA, August, 1986.

Problems and Methods in Machine Learning, Tutorial, AAAI-86, Philadelphia, PA, August, 1986.

Learning at the Knowledge Level, Third International Workshop on Machine Learning, Rutgers University, June 26, 1985.

Artificial Intelligence Models of Design, NORTHCON 85, Portland, OR, October 23, 1985.

Principles and Methods of Machine Learning, MACHINE LEARNING 1985, The Knowledge-based Systems Centre, London, November 11, 1985.

Courses Developed:
Trustable Machine Learning (Short Course at Tsinghua University, Fall 2018)
CS519: Ecosystem Informatics I, II, III (2004-2005)
CS361: Software Engineering I (Fall 2001)
CS519/539: Research Methods in Computer Science (Winter 1988)
CS430/530: Introduction to Artificial Intelligence (Fall 1985)

CS532: Advanced Artificial Intelligence (representation theory, planning, machine learning, natural language, vision) (Fall 1985)
CS533: Applied Artificial Intelligence for Engineers (Fall 2000)
CS533: Principles of Expert Systems (Winter 1987)
CS534: Machine Learning (Fall 1986)
CS539: Special Topics in Artificial Intelligence: Probabilistic Agents (Winter 2000)
CS539: Special Topics in Artificial Intelligence: Non-Monotonic Reasoning and Truth Maintenance Systems (Winter 1986)
CS539: Special Topics in Artificial Intelligence: Speedup Learning (Fall 1989)
CS539: Probabilistic Relational Models (Fall 2003)
CS450/550: Computer Graphics (Spring 1995)

Other Courses Taught:
CS161: Introduction to CS I
CS162: Introduction to CS II
CS318: Data Structures

Committee Assignments:
Math Head Search Committee, 2014
Scientific Advisory Board, Center for Genome Research and Biocomputing, 2013-2015
Faculty Recruiting for Biological Sequences Positions, 2012-2013
School of EECS Business Plan Committee, 2010
College of Engineering Research Council, 2009-2014
OSU Venture Fund, 2008-2010
OSU Innovation Task Force, 2007-08
Faculty Recruiting, 1985-86, 1987-90, 2003-05, 2007-08
Promotion and Tenure, 2002-2011 (chair for 3rd year reviews, 2004; chair, 2006-7)
Promotion and Tenure Dossier Committee, 2011-2016
Graduate Admissions (2002-2005), coordinator for Intelligent Systems
New ENGR Courses, 2002-2003
Post-Tenure Review Committee, 2001-2002
University Search Committee: Dean, College of Science, 2001
Faculty Recruiting (chairman), 1999-2001 (hired 5 new assistant professors)
Graduate Study (member) 1986-91, 1993-95, 1999-2000, 2001-2003 (coordinated the twice-annual Comprehensive Exam)
Graduate Study (chairman), 1997-98, 1993-96, 1986-87
Space Committee (chairman), 1989-91
Equipment, 1990-91
Graduate Programs, College of Engineering, 1990-91, 1994-98
Research Advisory Committee, College of Engineering, 1990-91