PEDRO M. DOMINGOS

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INTERESTS

Artificial intelligence, machine learning and data science.

EDUCATION

1997: Ph.D. in Information and Computer Science, University of California, Irvine. Dissertation title: *A Unified Approach to Concept Learning*. Advisor: Dennis Kibler. Committee members: Michael Pazzani, Padhraic Smyth and J. Ross Quinlan.

1994: Master of Science in Information and Computer Science, University of California, Irvine.

1992: Master of Science in Electrical Engineering and Computer Science, specialization in Computers, Instituto Superior Técnico, Technical University of Lisbon, Portugal. Thesis title: *Competitive Recall: A Memory Model for Real-Time Reasoning*.

1988: *Licenciatura* (a 5-year degree) in Electrical Engineering and Computer Science, specialization in Systems and Computers, Instituto Superior Técnico, Technical University of Lisbon, Portugal.

SCHOLARSHIPS, HONORS AND AWARDS

2019: IJCAI John McCarthy Award.

2019: Datanami Person to Watch.

2018: Nvidia Pioneer Award.

2017: Counselor of Portugal in the World.

2016: AMiner Most Influential Scholar.

2015: KDD Test of Time Award.

2015: Distinguished Paper Award at the Twenty-Fourth International Joint Conference on Artificial Intelligence.

2014: ACM SIGKDD Innovation Award.

2012: Outstanding Student Paper Award at the 2012 Conference on Neural Information Processing Systems. (First author: Robert Gens.)

2011: Co-winner of the PASCAL Probabilistic Inference Challenge.

2011: Best Paper Award at the Twenty-Seventh Conference on Uncertainty in Artificial Intelligence.

2010: Fellow of the Association for the Advancement of Artificial Intelligence.

2010: Co-winner of the UAI Approximate Inference Challenge.

2009: Best Paper Award at the 2009 Conference on Empirical Methods in Natural Language Processing.

2007: Kavli Frontiers Fellow (National Academy of Sciences).

2005: Best Paper Award at the Ninth European Conference on Principles and Practice of Knowledge Discovery in Databases.

2003: Sloan Research Fellowship.

2002: Selected to win ONR Young Investigator Award.[1]

2001: Selected to participate in the National Academy of Engineering Symposium on Frontiers of Engineering.

2000: NSF CAREER Award.

2000: IBM Faculty Partnership Award.

1999: Best Paper Award for Fundamental Research at the Fifth International Conference on Knowledge Discovery and Data Mining.

1998: Best Paper Award for Fundamental Research at the Fourth International Conference on Knowledge Discovery and Data Mining.

1997: Ph.D. thesis nominated by UCI for ACM Doctoral Dissertation Award.

1996–97: NATO Scholarship.

1992–97: Fulbright Scholarship. Awarded by the United States to 20 out of approximately 3000 candidates in Portugal.

1997: Recognized as an outstanding reviewer by the program committee of the Fifteenth International Joint Conference on Artificial Intelligence (one of fewer than 10% of the reviewers).

1996: Selected for the SIGART/AAAI Doctoral Consortium.

1996: University of California Regents' Dissertation Fellowship. Awarded to approximately 30 students campuswide.

1992–96: Scholarship from JNICT, Portugal's national scientific and technological research agency.

1995: Two papers nominated for the C.V. Ramamoorthy Best Paper Award, Seventh IEEE International Conference on Tools with Artificial Intelligence.

1990: Honorable mention in the Descartes Award, given annually to a Portuguese civil servant for original and innovative work in information technology.

1989: Winner of the IEEE Region 8 (Europe, Africa and Middle East) Student Paper Contest.

PROFESSIONAL EXPERIENCE

2012–present: Professor of Computer Science and Engineering at the University of Washington.

2018–19: Head of Machine Learning Research at D. E. Shaw.

2012–13: Visiting Scientist at the MIT Computer Science and Artificial Intelligence Laboratory.

2004–12: Associate Professor of Computer Science and Engineering at the University of Washington. Courses introduced: Machine Learning (undergraduate). Other courses taught: Foundations of Computing II (undergraduate), and see below.

[1] Could not receive award due to delays in obtaining U.S. permanent resident status.

2008–09: Visiting Associate Professor of Machine Learning at Carnegie Mellon University. Courses taught: Markov Logic Networks (graduate).

2005–06: Visiting Associate Professor of Computer Science at Stanford University.

1999–2004: Assistant Professor of Computer Science and Engineering at the University of Washington. Courses introduced: Data Mining (graduate), Machine Learning (graduate), Statistical Methods in Computer Science (graduate). Other courses taught: Artificial Intelligence I and II (graduate), Applications of Artificial Intelligence (graduate), Introduction to Artificial Intelligence (undergraduate).

1997–99: Assistant Professor at Instituto Superior Técnico, Lisbon, Portugal. Courses taught: Machine Learning, Natural Language Processing (undergraduate); co-taught: Intelligent Systems (graduate).

1994: Consultant for the Irvine Research Corporation.

1987–92: Teaching and research assistant at Instituto Superior Técnico, Lisbon, Portugal. Courses taught: Probability and Statistics, Applied Mathematics (instructor), Introduction to Computer Science, Artificial Intelligence.

1990–92: Author of a regular column on the future of music technology in the Portuguese magazine *Music, Instruments and Technology*.

1989–90: Developer of an AI-based system for personnel selection and job assignment at the Portuguese Army's Center for Psychotechnical Studies.

1986–89: Intern and then researcher at INESC – Institute for Systems and Computer Engineering, Lisbon, Portugal, first in the digital signal processing and speech recognition group, and then in the computer graphics group.

1987–88: Teacher of continuing education courses in digital electronics, telecommunications, and introduction to microcomputing.

PROFESSIONAL SERVICE

2001–present: Editorial board member, *Machine Learning*.

2020: Contributor, ISAT Study on DARPA's Third Wave of AI.

2019: Program co-chair, ICML-2019 Workshop on Tractable Probabilistic Modeling.

2013–18: Board member, International Machine Learning Society.

2018: Program co-chair, ICML/IJCAI/ECAI-2018 Workshop on Tractable Probabilistic Models.
PC Member, Eighth Intl. Wkshp. on Statistical Relational Artificial Intelligence.

2017: Program co-chair, ICML-2017 Workshop on Principled Approaches to Deep Learning.
Member, SIGKDD Awards Committee.
Member, Financial Services Roundtable Technology Advisory Council.

2016: PC member, Sixth Intl. Wkshp. on Statistical Relational Artificial Intelligence.
PC member, White House Workshop on Artificial Intelligence: Law and Policy.
Member, SIGKDD Awards Committee.
Reviewer, *Communications of the ACM*.

2015: PC member, Fifth Intl. Wkshp. on Statistical Relational Artificial Intelligence.

Member, SIGKDD Awards Committee.

2014: Program co-chair, ICML-2014 Workshop on Learning Tractable Probabilistic Models.
PC member, Fourth Intl. Wkshp. on Statistical Relational Artificial Intelligence.
Reviewer, Army Research Office.
Reviewer, Office of Naval Research.

2013: PC member, NIPS-2013 Deep Learning Workshop.
PC member, Third Intl. Wkshp. on Statistical Relational Artificial Intelligence.

2012: Area chair, 2012 Annual Conf. on Neural Information Processing Systems.
Area chair, Twenty-Sixth AAAI Conf. on Artificial Intelligence.
Area chair, Twenty-Ninth Intl. Conf. on Machine Learning.
Senior PC member, Twenty-Eighth Conf. on Uncertainty in Artificial Intelligence.
PC member, Second Intl. Wkshp. on Statistical Relational Artificial Intelligence.
PC member, Seventh Intl. Wkshp. on Statistical Relational Learning.

2011: Area chair, Twenty-Second Intl. Joint Conf. on Artificial Intelligence.

2010: Co-organizer, ONR Machine Reasoning Workshops I-IV.
PC member, AAAI-2010 Wkshp. on Statistical Relational Artificial Intelligence.
Reviewer, GULP Award for Best Dissertation on Computational Logic.

2009: Program co-chair, Sixth Intl. Wkshp. on Statistical Relational Learning.
Reviewer, U.S.-Israel Binational Science Foundation.

2005–2008: Advisory board member, *Journal of Artificial Intelligence Research*.

2008: Senior PC member, Twenty-Third AAAI Conf. on Artificial Intelligence.
Senior PC member, Twenty-Fifth Intl. Conf. on Machine Learning.
Senior PC member, Fourteenth Intl. Conf. on Knowledge Discovery and Data Mining.
Reviewer, Army Research Office.

2007: Senior PC member, Twenty-Second Natl. Conf. on Artificial Intelligence (AAAI-2007).
Program committee member, Twentieth Intl. Joint Conf. on Artificial Intelligence.

2001–2006: Founding board member, International Machine Learning Society.

2006: PC member, ICML-2006 Wkshp. on Open Problems in Statistical Relational Learning.
PC member, Third Intl. Wkshp. on Knowledge Discovery from Data Streams.
Reviewer, Senior Member Track, 21st Natl. Conf. on Artificial Intelligence (AAAI-2006).

1998–2005: Editorial board member, *Evaluation of Intelligent Systems*.

2005: Senior PC member, Twentieth Natl. Conf. on Artificial Intelligence (AAAI-2005).
Program committee member, Nineteenth Intl. Joint Conf. on Artificial Intelligence.
Area chair, Twenty-Second Intl. Conf. on Machine Learning.
Organizing committee member, AAAI Spring Symposium on Knowledge Collection from Volunteer Contributors.
Program committee member, KDD-2005 Wkshp. on Multi-Relational Data Mining.
PC member, ECML/PKDD-2005 Wkshp. on Knowledge Discovery in Data Streams.
Reviewer, Eleventh Intl. Conf. on Knowledge Discovery and Data Mining.
Area reviewer, National Science Foundation.

2002–2004: Associate editor, *Journal of Artificial Intelligence Research*.

2000–2004: Editorial board member, *Intelligent Data Analysis*.

2004: Program committee member, 2004 ACM SIGMOD Intl. Conf. on Management of Data.
Program committee member, ICML-2004 Wkshp. on Statistical Relational Learning.
Program committee member, KDD-2004 Wkshp. on Multi-Relational Data Mining.
PC member, ECML/PKDD-2004 Wkshp. on Knowledge Discovery in Data Streams.
Reviewer, Twenty-First Intl. Conf. on Machine Learning.
Wkshp. proposal reviewer, Nineteenth Natl. Conf. on Artificial Intelligence (AAAI-2004).

2003: Program co-chair, Ninth Intl. Conf. on Knowledge Discovery and Data Mining.
Program committee member, KDD-2003 Wkshp. on Multi-Relational Data Mining.
PC member, IJCAI-2003 Wkshp. on Learning Statistical Models from Relational Data.
Best paper selection committee member, *Machine Learning*.

2001–02: Reviewer, *Journal of Machine Learning Research*.

2000–02: Editorial board member, *Journal of Artificial Intelligence Research*.

2000–02: Reviewer, Lawrence Livermore Natl. Lab. University Collaborative Research Program.

2002: Program committee member, Nineteenth Intl. Conf. on Machine Learning.
Program committee member, Eleventh Intl. World Wide Web Conf.
Program committee member, KDD-2002 Wkshp. on Multi-Relational Data Mining.

1997–2001: Editorial board member, *Applied Intelligence*.

1993–2001: Reviewer, *Machine Learning*.

2001: Area chair, Eighteenth Intl. Conf. on Machine Learning.
Panels chair, Seventh Intl. Conf. on Knowledge Discovery and Data Mining.
Best paper awards committee, Seventh Intl. Conf. on Knowledge Discovery and Data Mining.
Reviewer, 2001 ACM SIGMOD Intl. Conf. on Management of Data.
Panelist, 2001 SIGART Doctoral Consortium.

1997–2000: Reviewer, *Data Mining and Knowledge Discovery*.

2000: Program committee member, Seventeenth Natl. Conf. on Artificial Intelligence (AAAI-2000).
Program committee member, Seventeenth Intl. Conf. on Machine Learning.
Program committee member, Eleventh European Conf. on Machine Learning.
Program committee member, Fifth Intl. Wkshp. on Multistrategy Learning.
Reviewer, 2000 Annual Conf. on Neural Information Processing Systems.
Panel member, National Science Foundation.

1999: Program committee member, Fifth Intl. Conf. on Knowledge Discovery and Data Mining.
Program committee member, Sixteenth Intl. Joint Conf. on Artificial Intelligence.
Program committee member, Sixteenth Natl. Conf. on Artificial Intelligence (AAAI-99).
Program committee member, Sixteenth Intl. Conf. on Machine Learning.
Advisory committee member, 2nd. Intl. Wkshp. on Extraction of Knowledge from Databases.
Reviewer, *IEEE Intelligent Systems*.
Reviewer, *IEEE Computer*.

1997–99: Reviewer, *Journal of Artificial Intelligence Research*.

1998: Program committee member, Fourth Intl. Conf. on Knowledge Discovery and Data Mining.
Program committee member, Fifteenth Natl. Conf. on Artificial Intelligence (AAAI-98).
Program committee member, Fifteenth Intl. Conf. on Machine Learning.
Reviewer, Twentieth Annual Meeting of the Cognitive Science Society.
Reviewer, *Intelligent Data Analysis*.

1997: Program committee member, Fourteenth Natl. Conf. on Artificial Intelligence (AAAI-97). Reviewer, Fifteenth Intl. Joint Conf. on Artificial Intelligence.

1996: Program committee member, ICML-96 Wkshp. on Learning in Context-Sensitive Domains.

1995: Reviewer, *Artificial Intelligence Review*.

1990: Co-founder of the Computer Division of the IST Student Union.

PROFESSIONAL MEMBERSHIPS

Association for Computing Machinery.
ACM Special Interest Group on Artificial Intelligence.
ACM Special Interest Group on Knowledge Discovery and Data Mining.
ACM Special Interest Group on Management of Data.
Association for the Advancement of Artificial Intelligence.
Institute of Electrical and Electronics Engineers.
IEEE Computer Society.
International Machine Learning Society.
Association for Computational Linguistics.
Cognitive Science Society.
American Association for the Advancement of Science.
New York Academy of Sciences.
American Association of University Professors.
Portuguese Association for Artificial Intelligence.
Portuguese Association for Pattern Recognition.
Portuguese Informatics Association.
Portuguese Engineering Society.

GRANTS AND OTHER FUNDING

2018: *Vector Space Logic: A Unified Representation for Neural and Symbolic Knowledge*, Office of Naval Research, $1,200,000 (PI; with Hannaneh Hajishirzi).

2016-18: Nvidia gifts, $300,000 (with Ali Farhadi and Dieter Fox).

2013: *Multiscale Learning for Integrated Scene Understanding*, Office of Naval Research, $2,420,000 (PI; with Ali Farhadi, Dieter Fox, Carlos Guestrin and Ben Taskar).

2012: *Composing Information Extraction, Semantic Parsing and Tractable Inference for Deep NLP*, Defense Advanced Research Projects Agency, $4,450,000 (with Oren Etzioni, Mausam, Daniel Weld and Luke Zettlemoyer).

2012: *Knowledge-Rich Machine Learning*, Office of Naval Research, $380,000.

2012: *Scaling Up Open-Domain Semantic Parsing*, Defense Advanced Research Projects Agency, $250,000 (with Luke Zettlemoyer).

2011-14: Yahoo! Inc. gifts, $25,000.

2009: *FAUST: Flexible Acquisition and Understanding System for Text*, Defense Advanced Research Projects Agency, $250,000.

2008: *A Unified Approach to Abductive Inference*, Multidisciplinary University Research Initiative, Army Research Office, $6,250,000 (of which $3,750,000 for subawards to other institutions).

2008: *Reading the Web: Utilizing Markov Logic in Open Information Extraction*, National Science Foundation, $900,000 (with Oren Etzioni).

2008: *Algorithms for Collective Knowledge Acquisition*, Office of Naval Research, $330,000.

2008: *Ontology Evolution with Markov Logic*, Defense Advanced Research Projects Agency, $200,000.

2007: *PLATO: Phased Learning through Analyzing Teaching and Observation*, Defense Advanced Research Projects Agency, $520,000.

2007: *DIESEL: Data Integration and Exploitation System that Learns*, Defense Advanced Research Projects Agency, $500,000.

2006: Eastman Kodak Company gift, $20,000.

2005: *Transfer Learning in Integrated Cognitive Systems*, Defense Advanced Research Projects Agency, $790,000.

2005: *CALO: Cognitive Assistant that Learns and Organizes*, Defense Advanced Research Projects Agency, $360,000.

2005: *Möbius: Learning by Reading with Markov Logic*, Defense Advanced Research Projects Agency, $90,000.

2005: *Learning from Interdependent Examples*, National Science Foundation, $300,000.

2005: *An Approach to Large-Scale Knowledge Acquisition*, Office of Naval Research, $320,000.

2004: *Adversarial Classification*, Google, Inc., $80,000.

2004: *Beowulf Cluster Supercomputing for Artificial Intelligence, Data Mining, and Database Research*, Defense University Research Instrumentation Program, $140,000 (with other UW AI faculty).

2003: Sloan Research Fellowship, $40,000.

2002: *Learning and Inference in Collective Knowledge Bases*, Office of Naval Research, $300,000.

2000: *Ubiquitous, Large-Scale Machine Learning*, NSF CAREER Award, $310,000.

2000: Ford Motor Co. gift, $170,000.

2000: IBM Faculty Partnership Award, $40,000.

1998: *Algorithms for Data Mining*, Portuguese Science Foundation, PTE 3,500,000.

STUDENTS

Ph.D. supervisor (current)
William Agnew
Octavian Murad

Ph.D. supervisor or co-supervisor (graduated)

Corin Anderson (with Daniel Weld), software engineer, Google, Inc.
Dissertation: *Personalizing Web Sites with Machine Learning and Data Mining* (2002).

AnHai Doan (with Alon Halevy), associate professor, University of Wisconsin, Madison.
Dissertation: *Learning to Map between Structured Representations of Data* (2002).

Abram Friesen, research scientist, DeepMind.
Dissertation: *The Sum-Product Theorem and its Applications* (2017).

Robert Gens, research scientist, Google, Inc.
Dissertation: *Learning Robust Tractable Models for Vision* (2016).

Geoff Hulten, principal applied research manager, Microsoft Corp.
Dissertation: *Mining Massive Data Streams* (2005).

Stanley Kok, assistant professor, Singapore University of Technology and Design.
Dissertation: *Structure Learning in Markov Logic Networks* (2010).

Tessa Lau (with Daniel Weld), research staff member, IBM Almaden Research Center.
Dissertation: *Programming by Demonstration: A Machine Learning Approach* (2001).

Daniel Lowd, assistant professor, University of Oregon.
Dissertation: *Efficient Learning and Inference in Rich Statistical Representations* (2010).

Aniruddh Nath, software engineer, Google, Inc.
Dissertation: *Learning and Exploiting Relational Structure for Efficient Inference* (2015).

Hoifung Poon, researcher, Microsoft Research.
Dissertation: *Markov Logic for Machine Reading* (2011).

Matt Richardson, researcher, Microsoft Research.
Dissertation: *Learning and Inference in Collective Knowledge Bases* (2004).

Parag Singla, assistant professor, Indian Institute of Technology, Delhi.
Dissertation: *Markov Logic: Theory, Algorithms and Applications* (2009).

Post-doctoral supervisor
Jesse Davis (2007-10)
Vibhav Gogate (2009-11)
Xu Miao (2011-12)
Mathias Niepert (2013-15)

INVITED TALKS

2020: Artificial General Intelligence Summit (San Francisco, CA).

2019: International Joint Conference on Artificial Intelligence (Macau).
Institute for Advanced Study (Princeton, NJ).
Milken Institute Global Conference (Los Angeles, CA).
Conference on Machine Learning and the Market for Intelligence (Toronto, Canada).
C2 Conference (Montréal, Canada).
Pioneer Works (New York, NY).
Data Driven NYC (New York, NY).
New York University (New York, NY).

2018: ACM SIGMOD International Conference on Management of Data (Houston, TX).
Aspen Institute Conference on Artificial Intelligence (Berlin, Germany).
The Economist Innovation Summit (Chicago, IL).
University of California, Irvine.
Science on the Hill (Washington, DC).

Rubin Museum (New York, NY).
Beaumont Health Retreat (Southfield, MI).
StarHub Speaker Series (Singapore).
Splunk Executive Summit (Orlando, FL).
Santa Fe Institute Risk Meeting (New York, NY).
Money 20/20 (Las Vegas, NV).
Siebel Scholars Conference (Palo Alto, CA).
NeurIPS-2018 Workshop on Relational Representation Learning (Montréal, Canada).

2017: University of California, Berkeley.
Georgia Institute of Technology (Atlanta, GA).
AI for Good Global Summit (Geneva, Switzerland).
Milken Institute Global Conference (Los Angeles, CA).
NABE Tech Economics Conference (Seattle, WA).
SIGCSE Technical Symposium (Seattle, WA).
EmTech Digital (San Francisco, CA).
Army Science Planning and Strategy Meeting (Adelphi, MD).
Global Information Exchange (Bellevue, WA).
CLSA Investors' Forum (Hong Kong).
Smart Cloud Show (Seoul, South Korea).
Deloitte Digital Conference (New York, NY).
Cisco CIO Exchange (La Jolla, CA).
Naspers Product and Technology Summit (Budapest, Hungary).
Healthcare Institute (Chicago, CA).
Warburg Pincus (Laguna Niguel, CA).

2016: SIAM International Conference on Data Mining (Miami, FL).
Thirty-First ACM-IEEE Symposium on Logic in Computer Science (New York, NY).
OECD Forum (Paris, France).
World Knowledge Forum (Seoul, South Korea).
Stanford University (Stanford, CA).
University of California, Berkeley.
Massachusetts Institute of Technology (Cambridge, MA).
Vanderbilt University (Nashville, TN).
Instituto Superior Técnico (Lisbon, Portugal).
Porto Business School (Porto, Portugal).
White House Workshop on Artificial Intelligence: Law and Policy (Seattle, WA).
Open Data Science Conference (Santa Clara, CA).
Data Science Summit (San Francisco, CA).
Predictive Analytics World (San Francisco, CA).
Young Presidents' Organization (Vancouver, Canada).
Credit Suisse Thought Leader Forum (Tarrytown, NY).
Santa Fe Institute/Morgan Stanley Annual Risk Meeting (New York, NY).
Intel Machine Learning Summit (Hillsboro, OR).
Intel Analytics Summit (San Francisco, CA).
Wells Fargo Analytics Conference (San Francisco, CA).
Technology Executive's Peer Group (Seattle, WA).
WORKTECH16 (New York, NY).
TEDxLA (Los Angeles, CA).

TEDxUofW (Seattle, WA).
Technology Executive's Peer Group (Seattle, WA).
Madrona ML/AI Summit (Seattle, WA).
Amazon (Seattle, WA).
Bloomberg Beta (San Francisco, CA).
Microsoft (Bellevue, WA).
Uber (Seattle, WA).
Vicarious (Union City, CA).
Sonae (Porto, Portugal).
Annual Meeting of the World Portuguese Network (Cascais, Portugal).
AI with the Best (webinar).

2015: European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (Porto, Portugal).
Simon Fraser University (Vancouver, Canada).
University of Texas at Dallas.
New York Academy of Sciences.
University of Pittsburgh (Pittsburgh, PA).
Smart Data Conference (San Jose, CA).
MLconf (Atlanta, GA).
SAS Analytics Conference (Las Vegas, NV).
NIPS-2015 Workshop on Cognitive Computation (Montréal, Canada).
DoD Workshop on Future Directions of Visual Common Sense and Reasoning (Arlington, VA).
NSF Workshop on Learning Perception and Control (Arlington, VA).
SIGKDD Seattle Chapter (Seattle, WA).
Microsoft Research (Redmond, WA).
Amazon (Seattle, WA).
Facebook (Seattle, WA).
Google (Mountain View, CA).
Noblis (Falls Church, VA).
Seattle Town Hall (Seattle, CA).
Commonwealth Club (San Francisco, CA).
Conference on Machine Learning and the Market for Intelligence (Toronto, Canada).
ACM Learning Webinar.
Boeing Data Analytics Community of Excellence (webinar).
Momentous: Virtual Summit on Programmatic Marketing (webinar).
United Nations System ICT Network (webinar).

2014: Twentieth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (New York, NY).
Thirtieth Conference on Uncertainty in Artificial Intelligence (Québec City, Canada; invited tutorial, with Daniel Lowd).
Second International Conference on Learning Representations (Banff, Canada).
First IKDD Conference on Data Sciences (Delhi, India).
Twenty-Fifth Machine Learning Summer School (Beijing, China).
NIPS-2014 Workshop on Learning Semantics (Montréal, Canada).
NIPS-2014 Workshop on Human-Propelled Machine Learning (Montréal, Canada).
Duke University (Durham, NC).
Allen Institute for Artificial Intelligence (Seattle, WA).

Microsoft Research (Redmond, WA).
Google (Mountain View, CA).

2013: Twenty-Seventh AAAI Conference on Artificial Intelligence (Bellevue, WA; invited tutorial, with Kristian Kersting).
Twelfth International Conference on Machine Learning and Applications (Miami Beach, FL).
Eighth Workshop on Graph-Based Methods for Natural Language Processing (Seattle, WA).
University of Florida, Gainesville.
Microsoft Research (Cambridge, MA).

2012: Massachusetts Institute of Technology (Cambridge, MA).
Harvard University (Cambridge, MA).
Twenty-First Machine Learning Summer School (Kyoto, Japan; invited tutorial).
ICML-2012 Workshop on Interactions between Inference and Learning (Edinburgh, UK).
2012 Spring Workshop on Mining and Learning (Bad Neuenahr, Germany).
UW/MSR Joint Machine Learning Workshop (Redmond, WA).
University of Rochester (Rochester, NY).

2011: Twenty-Seventh Conference on Uncertainty in Artificial Intelligence (Barcelona, Spain; invited tutorial, with Kristian Kersting).
Tenth International Conference on Machine Learning and Applications (Honolulu, HI; invited tutorial).
Second International Workshop on Stochastic Image Grammars (Barcelona, Spain).
ICML-2011 Workshop on Learning Architectures, Representations, and Optimization for Speech and Visual Information Processing (Bellevue, WA).
Department of Defense Workshop on Future Directions in Mathematics (Los Angeles, CA).
Summer School on Probabilistic Models of Cognition (Los Angeles, CA).
University of Texas, Austin.
University of Memphis (Memphis, TN).
Swiss Federal Institute of Technology (ETH; Zurich, Switzerland).
Google Faculty Summit (Zurich, Switzerland).

2010: Georgia Institute of Technology (Atlanta, GA).
IBM Thomas J. Watson Research Center (Yorktown Heights, NY).
Twenty-Fifth Snowbird Learning Workshop (Snowbird, UT).
Sixth International Workshop on Neural-Symbolic Learning and Reasoning (Atlanta, GA).
Los Alamos National Laboratory (Los Alamos, NM).
Seattle Robotics Society (Renton, WA).

2009: University of Edinburgh (Scotland).
Johns Hopkins University (Baltimore, MD).
Xerox Palo Alto Research Center (Palo Alto, CA).
MITACS 2009 Annual Conference (Fredericton, Canada).
Re: Learning Conference (Washington, DC).
Workshop on Information in Networks (New York University).
NIPS-2009 Workshop on Approximate Learning of Large-Scale Graphical Models: Theory and Applications (Whistler, Canada).
ONR Machine Reasoning Workshop (Los Angeles, CA).
CALO 2009 Annual Meeting (SRI International, Menlo Park, CA).

2008: Carnegie Mellon University (Pittsburgh, PA).

Cornell University (Ithaca, NY).
University of Granada (Spain).
Defense Advanced Research Projects Agency (Arlington, VA).
Twenty-Fourth International Conference on Logic Programming (Udine, Italy).
Seventeenth ACM Conf. on Information and Knowledge Management (Napa Valley, CA).
Twelfth International Workshop on Structural and Syntactic Pattern Recognition and Seventh International Workshop on Statistical Techniques in Pattern Recognition (joint invited talk; Orlando, FL).
ICML-2008 Workshop on Prior Knowledge for Text and Language (Helsinki, Finland).
NIPS-2008 Workshop on Speech and Language: Learning-based Methods and Systems (Whistler, Canada).
NIPS-2008 Workshop on Beyond Search: Computational Intelligence for the Web (Whistler, Canada).
ONR Workshop on Research Directions in Information Integration (Monterey, CA).

2007: University of Illinois, Urbana-Champaign.
Massachusetts Institute of Technology (Cambridge, MA).
Tufts University (Medford, MA).
University of Alberta (Edmonton, Canada).
Nineteenth Annual NAS Kavli Frontiers of Science Symposium (Irvine, CA).
Pacific Northwest National Laboratory (Richland, WA).
Dagstuhl Seminar on Probabilistic, Logical and Relational Learning – A Further Synthesis (Schloss Dagstuhl, Germany).
DIMACS Workshop on Recent Advances in Mathematics and Information Sciences for Analysis and Understanding of Massive and Diverse Sources of Data (Piscataway, NJ).
ARO Workshop on Abductive Reasoning (Adelphi, MD).
KDD-2007 Workshop on Knowledge Discovery from Sensor Data (San Jose, CA).
Third Workshop on Combining Probability and Logic (Canterbury, UK).
Nineteenth Belgian-Dutch Conference on Artificial Intelligence (Utrecht, Netherlands).

2006: Twenty-First National Conference on Artificial Intelligence (AAAI-2006) (Boston, MA).
Ninth Pacific Rim International Conference on Artificial Intelligence (Guilin, China).
IBERAMIA/SBIA/SBRN International Joint Conference 2006 (Ribeirão Preto, Brazil).
Fifteenth International Conference on Knowledge Engineering and Knowledge Management (Podebrady, Czech Republic).
Fifth Mexican International Conference on Artificial Intelligence (Apizaco, Mexico).
Thirty-Eighth Symposium on the Interface of Statistics, Computing Science, and Applications (Pasadena, CA).
Workshop on Search and Diffusion on Networks (Ithaca, NY).
Brigham Young University (Provo, UT).
Hong Kong University of Science and Technology.
Federal University of Rio de Janeiro (Brazil).
University of California, Irvine.
Hewlett-Packard Laboratories (Palo Alto, CA).
IBM Almaden Research Center (San Jose, CA).
Yahoo! Research (Santa Clara, CA).

2005: Stanford University (Stanford, CA).
University of Wisconsin, Madison.

Google (Mountain View, CA).
Ricoh California Research Center (Menlo Park, CA).
AAAI-2005 Workshop on Human-Comprehensible Machine Learning (Pittsburgh, PA).
Dagstuhl Seminar on Probabilistic, Logical and Relational Learning – Towards a Synthesis (Schloss Dagstuhl, Germany).

2004: Fifteenth International Conference on Algorithmic Learning Theory and Seventh International Conference on Discovery Science (joint invited talk; Padova, Italy).
Fifteenth European Conference on Machine Learning and Eighth European Conference on Principles and Practice of Knowledge Discovery in Databases (joint inv. talk; Pisa, Italy).
ECML/PKDD-2003 Workshop on Knowledge Discovery in Data Streams (Pisa, Italy).
Fourteenth International Conference on Inductive Logic Programming (Porto, Portugal).
Ninth Conference of the International Federation of Classification Societies (Chicago, IL).
NIPS-2004 Wkshp. on Calibration and Probabilistic Prediction (Whistler, Canada).
New York University.
Cornell University (Ithaca, NY).
IBM Thomas J. Watson Research Center (Yorktown Heights and Hawthorne, NY).
Workshop on Web Structure and Algorithms (Carnegie Mellon University, Pittsburgh, PA).
Amazon (Seattle, WA).
USC Information Sciences Institute (Marina del Rey, CA).

2003: University of Illinois, Urbana-Champaign.
International Workshop on Data Mining and Adaptive Modelling Methods for Economics and Management (Porto, Portugal).
Eleventh Portuguese Conference on Artificial Intelligence (Beja, Portugal).

2002: Natl. Academies Wkshp. on Statistical Analysis of Massive Data Streams (Wash., DC).
Carnegie Mellon University (Pittsburgh, PA).
University of Texas, Austin.
University of Michigan, Ann Arbor.
Boeing Phantom Works (Bellevue, WA).
Thirty-Fourth Symposium on the Interface of Comp. Sci. and Statistics (Montréal, Canada).
University of California, Irvine.

2001: NIPS-2001 Workshop on Foundations of Occam's Razor and Parsimony in Learning (Whistler, Canada).
Oregon State University (Corvallis, OR).
DIMACS Summer School Tutorial on New Frontiers in Data Mining (Piscataway, NJ).
Microsoft Research (Redmond, WA).

2000: IBM Thomas J. Watson Research Center (Yorktown Heights and Hawthorne, NY).
Eleventh European Conference on Machine Learning (Barcelona, Spain).
ICML-2000 Workshop on Cost-Sensitive Learning (Stanford, CA).
ICML-2000 Workshop on What Works Well Where (Stanford, CA).
Fifth International Workshop on Multistrategy Learning (Guimarães, Portugal).
Hewlett-Packard Laboratories (Palo Alto, CA).
University of Porto (Portugal).

1999: IJCAI-99 Workshop on Support Vector Machines (Stockholm, Sweden).
Thirty-First Symposium on the Interface of Comp. Sci. and Statistics (Schaumburg, IL).

1998: NIPS-98 Workshop on Turnkey Algorithms for Improving Generalizers (Breckenridge, CO).

Intl. Summer School on Knowledge Discovery and Data Mining (Caminha, Portugal).
Fourth International Workshop on Multistrategy Learning (Desenzano del Garda, Italy).
Microsoft Research (Redmond, WA).
University of California, Irvine.

1997: Intl. Wkshp. on Stochastic Model Building & Var. Selection (Duke Univ., Durham, NC).
George Mason University (Fairfax, VA).
AT&T Laboratories (Murray Hill, NJ).

1996: University of California, San Diego.
Daimler-Benz Research Center (Ulm, Germany).

1995: University of Porto (Portugal).
Naval Research Laboratory (Washington, DC).

SOFTWARE RELEASED

RDIS: A nonconvex optimizer based on recursive decomposition
https://github.com/afriesen/rdis

SPN: Algorithms for learning sum-product networks
http://spn.cs.washington.edu

Alchemy: Algorithms for statistical relational AI
http://alchemy.cs.washington.edu

VFML: A toolkit for mining massive data sources
http://www.cs.washington.edu/dm/vfml/

NBE: A Bayesian learner with very fast inference
http://www.cs.washington.edu/ai/nbe

BVD: A bias-variance decomposition for zero-one loss
http://www.cs.washington.edu/homes/pedrod/bvd.c

RISE: A unified rule- and instance-based learner
http://www.cs.washington.edu/homes/pedrod/rise.c

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