

## 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

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.<sup>1</sup>

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.

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.

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

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<sup>1</sup>Could not receive award due to delays in obtaining U.S. permanent resident status.

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

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

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

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

2016: Nvidia gift, \$150,000 (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  
Christopher Clark  
Abram Friesen  
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).

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**

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-15 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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## REFEREED WORKSHOP PUBLICATIONS

1. R. Gens and P. Domingos, “Compositional Kernel Machines,” in *Proceedings of the Fifth International Conference on Learning Representations*, Toulon, France, 2017.
2. A. Friesen and P. Domingos, “Unifying Sum-Product Networks and Submodular Fields,” in *Proceedings of the ICML-17 Workshop on Principled Approaches to Deep Learning*, Sydney, Australia, 2017.
3. A. Nath and P. Domingos, “Learning Tractable Probabilistic Models for Fault Localization,” in *Proceedings of the Fifth International Workshop on Statistical Relational Artificial Intelligence*, Amsterdam, Netherlands, 2015.
4. C. Kiddon and P. Domingos, “Symmetry-Based Semantic Parsing,” in *ACL-2015 Workshop on Semantic Parsing*, Baltimore, MD, 2014.
5. M. Niepert, P. Domingos and J. Bilmes, “Generalized Conditional Independence and Decomposition Cognizant Curvature: Implications for Function Optimization,” in *NIPS-2014 Workshop on Discrete and Combinatorial Problems in Machine Learning*, Montréal, Canada, 2014.
6. A. Nath and P. Domingos, “Learning Tractable Statistical Relational Models,” in *Proceedings of the Fourth International Workshop on Statistical Relational Artificial Intelligence*, Québec City, Canada, 2014.
7. A. Nath and P. Domingos, “Automated Debugging with Tractable Probabilistic Programming,” in *Proceedings of the Fourth International Workshop on Statistical Relational Artificial Intelligence*, Québec City, Canada, 2014.
8. M. Niepert and P. Domingos, “Tractable Probabilistic Knowledge Bases: Wikipedia and Beyond,” in *Proceedings of the Fourth International Workshop on Statistical Relational Artificial Intelligence*, Québec City, Canada, 2014.

9. A. Friesen and P. Domingos, “Exploiting Structure for Tractable Nonconvex Optimization,” in *Proceedings of the ICML-2014 Workshop on Learning Tractable Probabilistic Models*, Beijing, China, 2014.
10. A. Nath and P. Domingos, “Learning Tractable Statistical Relational Models,” in *Proceedings of the ICML-2014 Workshop on Learning Tractable Probabilistic Models*, Beijing, China, 2014.
11. M. Niepert and P. Domingos, “Exchangeable Variable Models,” in *Proceedings of the ICML-2014 Workshop on Learning Tractable Probabilistic Models*, Beijing, China, 2014.
12. R. Peharz, R. Gens and P. Domingos, “Learning Selective Sum-Product Networks,” in *Proceedings of the ICML-2014 Workshop on Learning Tractable Probabilistic Models*, Beijing, China, 2014.
13. C. Kiddon and P. Domingos, “Symmetry-Based Semantic Parsing,” in *ACL-2014 Workshop on Semantic Parsing*, Baltimore, MD, 2014.
14. A. Friesen and P. Domingos, “Nonconvex Optimization Is Combinatorial Optimization,” in *NIPS-2013 Workshop on Optimization for Machine Learning*, Lake Tahoe, CA, 2013.
15. R. Gens and P. Domingos, “Learning the Structure of Sum-Product Networks,” in *ICML-2013 Workshop on Interactions between Inference and Learning*, Atlanta, GA, 2013.
16. W. Webb and P. Domingos, “Tractable Probabilistic Knowledge Bases with Existence Uncertainty,” in *Proceedings of the Third International Workshop on Statistical Relational Artificial Intelligence*, Bellevue, WA, 2013.
17. V. Gogate and P. Domingos, “Probabilistic Theorem Proving: A Unifying Approach for Inference in Probabilistic Programming,” in *NIPS-2012 Workshop on Probabilistic Programming*, Lake Tahoe, CA, 2012.
18. P. Domingos and W. Webb, “Tractable Markov Logic,” in *Proceedings of the Seventh International Workshop on Statistical Relational Learning*, Edinburgh, United Kingdom, 2012.
19. A. Nath and P. Domingos, “Learning Multiple Hierarchical Relational Clusterings,” in *Proceedings of the Seventh International Workshop on Statistical Relational Learning*, Edinburgh, United Kingdom, 2012.
20. C. Kiddon and P. Domingos, “Knowledge Extraction and Joint Inference Using Tractable Markov Logic,” in *Proceedings of the NAACL-HLT 2012 Joint Workshop on Automatic Knowledge Base Construction and Web-Scale Knowledge Extraction*, Montréal, Canada, 2012.
21. H. Poon and P. Domingos, “Sum-Product Networks: A New Deep Architecture,” in *NIPS-2010 Workshop on Deep Learning and Unsupervised Feature Learning*, Whistler, Canada, 2010.
22. C. Kiddon and P. Domingos, “Towards a General Framework for Coarse-to-Fine Inference and Learning,” in *NIPS-2010 Workshop on Coarse-to-Fine Learning and Inference*, Whistler, Canada, 2010.
23. V. Gogate and P. Domingos, “Exploiting Logical Structure in Lifted Probabilistic Inference,” in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 19-24), Atlanta, GA, 2010.
24. C. Kiddon and P. Domingos, “Leveraging Ontologies for Lifted Probabilistic Inference and Learning,” in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 40-45), Atlanta, GA, 2010.

25. S. Kok and P. Domingos, "Using Structural Motifs for Learning Markov Logic Networks," in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 46-51), Atlanta, GA, 2010.
26. A. Nath and P. Domingos, "Efficient Lifting for Online Probabilistic Inference," in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 64-69), Atlanta, GA, 2010.
27. H. Poon and P. Domingos, "Machine Reading: A 'Killer App' for Statistical Relational AI," in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 76-81), Atlanta, GA, 2010.
28. P. Singla, A. Nath and P. Domingos, "Approximate Lifted Belief Propagation," in *Proceedings of the AAAI-2010 Workshop on Statistical Relational Artificial Intelligence* (pp. 92-97), Atlanta, GA, 2010.
29. Hoifung Poon, Janara Christensen, Pedro Domingos, Oren Etzioni, Raphael Hoffmann, Chloe Kiddon, Thomas Lin, Xiao Ling, Mausam, Alan Ritter, Stefan Schoenmackers, Stephen Soderland, Dan Weld, Fei Wu and Congle Zhang, "Machine Reading at the University of Washington," in *Proceedings of the NAACL/HLT-2010 Workshop on Formalisms and Methodology for Learning by Reading*, Los Angeles, 2010.
30. H. Poon and P. Domingos, "Deep Learning for Semantic Parsing," in *NIPS-2009 Workshop on Deep Learning for Speech Recognition and Related Applications*, Whistler, Canada, 2009.
31. R. Gens and P. Domingos, "Competitive Learning for Deep Temporal Networks," in *NIPS-2009 Workshop on Deep Learning for Speech Recognition and Related Applications*, Whistler, Canada, 2009.
32. A. Nath and P. Domingos, "Relational Decision Theory," in *Proceedings of the Sixth International Workshop on Statistical Relational Learning*, Leuven, Belgium, 2009.
33. S. Kok and P. Domingos, "Hypergraph Lifting for Structure Learning in Markov Logic Networks," in *Proceedings of the Sixth International Workshop on Statistical Relational Learning*, Leuven, Belgium, 2009.
34. P. Domingos, "What We Can Do with Markov Logic Today," in *NIPS-2008 Workshop on Probabilistic Programming*, Whistler, Canada, 2008.
35. J. Davis and P. Domingos, "Deep Transfer via Second-Order Markov Logic," in *Proceedings of the AAAI-2008 Workshop on Transfer Learning for Complex Tasks* (pp. 13-18), Chicago, IL, 2008.
36. D. Lowd, C. Meek and P. Domingos, "Foundations of Adversarial Machine Learning," in *NIPS-2007 Workshop on Machine Learning in Adversarial Environments for Computer Security*, Whistler, Canada, 2007.
37. D. Lowd and P. Domingos, "Recursive Random Fields," in *Proceedings of the ICML-2006 Workshop on Open Problems in Statistical Relational Learning*, Pittsburgh, PA, 2006.
38. S. Kok and P. Domingos, "Toward Statistical Predicate Invention," in *Proceedings of the ICML-2006 Workshop on Open Problems in Statistical Relational Learning*, Pittsburgh, PA, 2006.
39. P. Domingos and M. Richardson, "Markov Logic: A Unifying Framework for Statistical Relational Learning," in *Proceedings of the ICML-2004 Workshop on Statistical Relational Learning and its Connections to Other Fields* (pp. 49-54), Banff, Canada, 2004.



40. Parag and P. Domingos, "Multi-Relational Record Linkage," in *Proceedings of the Third International Workshop on Multi-Relational Data Mining* (pp. 31-48), Seattle, WA, 2004.
41. X. Dong, A. Halevy, E. Nemes, S. Sigurdsson and P. Domingos, "SEMEX: Mining for Personal Information Integration," in *Proceedings of the International Workshop on Mining for and from the Semantic Web* (pp. 44-55), Seattle, WA, 2004.
42. X. Dong, A. Halevy, E. Nemes, S. Sigurdsson and P. Domingos, "SEMEX: Toward On-the-Fly Personal Information Integration," in *Proceedings of the VLDB-2004 Workshop on Information Integration on the Web* (pp. 58-63), Toronto, Canada, 2004.
43. P. Domingos, Y. Abe, C. Anderson, A. Doan, D. Fox, A. Halevy, G. Hulten, H. Kautz, T. Lau, L. Liao, J. Madhavan, Mausam, D. Patterson, M. Richardson, S. Sanghai, D. Weld and S. Wolfman, "Research on Statistical Relational Learning at the University of Washington," in *Proceedings of the IJCAI-2003 Workshop on Learning Statistical Models from Relational Data* (pp. 43-47), Acapulco, Mexico, 2003.
44. G. Hulten, P. Domingos and Y. Abe, "Mining Massive Relational Databases," in *Proceedings of the IJCAI-2003 Workshop on Learning Statistical Models from Relational Data* (pp. 53-60), Acapulco, Mexico, 2003.
45. C. Anderson, P. Domingos and D. Weld, "Web Site Personalizers for Mobile Devices," in *Proceedings of the IJCAI-2001 Workshop on Intelligent Techniques for Web Personalization* (pp. 7-12), Seattle, WA, 2001.
46. P. Domingos and G. Hulten, "Catching Up with the Data: Research Issues in Mining Data Streams," in *Proceedings of the 2001 Workshop on Research Issues in Data Mining and Knowledge Discovery* (pp. 47-51), Santa Barbara, CA, 2001.
47. T. Lau, P. Domingos and D. Weld, "Learning How to Edit Text," in *Proceedings of the AAAI 2000 Fall Symposium on Learning How to Do Things* (pp. 41-46), Cape Cod, MA, 2000.
48. A. Doan, P. Domingos and A. Halevy, "Learning Mappings between Data Schemas," in *Proceedings of the AAAI-2000 Workshop on Learning Statistical Models from Relational Data* (pp. 1-6), Austin, TX, 2000.
49. A. Doan, P. Domingos and A. Levy, "Learning Source Descriptions for Data Integration," in *Proceedings of the Third International Workshop on the Web and Databases* (pp. 81-86), Dallas, TX, 2000.
50. T. Lau, P. Domingos and D. Weld, "Intelligent macros for text-editing," in *Proceedings of the IUI-2000 Workshop on Using Plans in Intelligent User Interfaces* (pp. 4-6), New Orleans, LA, 2000.
51. P. Domingos, "Data Pre-Processing for Cost-Sensitive Learning," in *Proceedings of the ICML-99 Workshop: From Machine Learning to Knowledge Discovery in Databases* (pp. 17-25), Bled, Slovenia, 1999.
52. P. Domingos, "Process-Oriented Evaluation: The Next Step," in *Proceedings of Uncertainty '99: The Seventh International Workshop on Artificial Intelligence and Statistics* (pp. 51-58), Ft. Lauderdale, FL, 1999.
53. P. Domingos, "How to Get a Free Lunch: A Simple Cost Model for Machine Learning Applications," in *Proceedings of the AAAI-98/ICML-98 Workshop on the Methodology of Applying Machine Learning* (pp. 1-7), Madison, WI, 1998.

54. P. Domingos, "Multimodal Inductive Reasoning: Combining Rule-Based and Case-Based Learning," in *Proceedings of the AAAI 1998 Spring Symposium on Multimodal Reasoning* (pp. 135-140), Stanford, CA, 1998.
55. P. Domingos, "Bayesian Model Averaging in Rule Induction," in *Preliminary Papers of the Sixth International Workshop on Artificial Intelligence and Statistics* (pp. 157-164), Ft. Lauderdale, FL, 1997.
56. P. Domingos, "Using Partitioning to Speed Up Specific-to-General Rule Induction," in *Proceedings of the AAAI-96 Workshop on Integrating Multiple Learned Models for Improving and Scaling Machine Learning Algorithms* (pp. 29-34), Portland, OR, 1996.
57. P. Domingos, "Exploiting Context in Feature Selection," in *Proceedings of the ICML-96 Workshop on Learning in Context-Sensitive Domains* (pp. 15-20), Bari, Italy, 1996.
58. P. Domingos, "From Instances to Rules: A Comparison of Biases," in *Proceedings of the Third International Workshop on Multistrategy Learning* (pp. 147-154), Harpers Ferry, WV, 1996.

## INVITED AND UNREFEREED PUBLICATIONS

1. P. Domingos, D. Lowd, S. Kok, A. Nath, H. Poon, M. Richardson and P. Singla, "Unifying Logical and Statistical AI," in *Proceedings of the Thirty-First ACM-IEEE Symposium on Logic in Computer Science*, New York, NY, 2016.
2. R. Gens and P. Domingos, "Discriminative Learning of Sum-Product Networks," in *Proceedings of the Twenty-Seventh Snowbird Learning Workshop*, Snowbird, UT, 2012.
3. H. Poon and P. Domingos, "Sum-Product Networks: A New Deep Architecture," in *Proceedings of the Second International Workshop on Stochastic Image Grammars*, Barcelona, Spain, 2011.
4. H. Poon and P. Domingos, "Sum-Product Networks for Deep Learning," in *Proceedings of the Twenty-Sixth Snowbird Learning Workshop*, Ft. Lauderdale, FL, 2011.
5. P. Domingos, "Markov Logic Networks: A Step Towards a Unified Theory of Learning and Cognition," in *Proceedings of the Twenty-Fifth Snowbird Learning Workshop*, Snowbird, UT, 2010.
6. J. Davis and P. Domingos, "Deep Transfer: A Markov Logic Approach," in *Proceedings of the Twenty-Fifth Snowbird Learning Workshop*, Snowbird, UT, 2010.
7. H. Poon and P. Domingos, "Unsupervised Language Learning: Semantic Parsing and Beyond," in *Proceedings of the Twenty-Fifth Snowbird Learning Workshop*, Snowbird, UT, 2010.
8. P. Domingos, "Markov Logic: A Unifying Language for Knowledge and Information Management," in *Proceedings of the Seventeenth ACM Conference on Information and Knowledge Management* (p. 519), Napa Valley, CA, 2008.
9. P. Singla and P. Domingos, "Markov Logic in Infinite Domains," in *Proceedings of the Dagstuhl Seminar on Probabilistic, Logical and Relational Learning – A Further Synthesis*, Schloss Dagstuhl, Germany, 2007.
10. P. Domingos, S. Kok, H. Poon, M. Richardson and P. Singla, "Unifying Logical and Statistical AI," in *Proceedings of the Twenty-First National Conference on Artificial Intelligence* (pp. 2-7), Boston, MA, 2006.
11. P. Domingos, "Learning, Logic, and Probability: A Unified View," in *Proceedings of the Ninth Pacific Rim International Conference on Artificial Intelligence* (p.2), Guilin, China, 2006.

12. P. Domingos, "Learning, Logic, and Probability: A Unified View," in *Proceedings of the Tenth Ibero-American Conference on Artificial Intelligence* (p. 3), Ribeirão Preto, Brazil, 2006.
13. P. Domingos, "Learning, Logic, and Probability: A Unified View," in *Proceedings of the Fifteenth International Conference on Knowledge Engineering and Knowledge Management* (p.2), Pödebrady, Czech Republic, 2006.
14. P. Domingos, "Learning, Logic, and Probability: A Unified View," in *Proceedings of the Fourteenth International Conference on Inductive Logic Programming* (p. 359), Porto, Portugal, 2004.
15. P. Domingos, "Learning, Logic, and Probability: A Unified View," in *Proceedings of the Fifteenth International Conference on Algorithmic Learning Theory* (p. 53), Padova, Italy, 2004.
16. P. Domingos, "Real-World Learning with Markov Logic Networks," in *Proceedings of the Eighth European Conference on Principles and Practice of Knowledge Discovery in Databases* (p. 17), Pisa, Italy, 2004.
17. P. Domingos, "Real-World Learning with Markov Logic Networks," in *Proceedings of the Fifteenth European Conference on Machine Learning* (p. 17), Pisa, Italy, 2004.
18. P. Domingos and M. Richardson, "Learning from Networks of Examples," in *Proceedings of the Eleventh Portuguese Conference on Artificial Intelligence* (p. 5), Beja, Portugal, 2003.
19. P. Domingos, "Prospects and Challenges for Multi-Relational Data Mining," *SIGKDD Explorations*, vol. 5 (pp. 80-83), 2003.
20. D. Weld, C. Anderson, P. Domingos, O. Etzioni, K. Gajos and T. Lau, "Automatically Personalizing User Interfaces," in *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence* (pp. 1613-1619), Acapulco, Mexico, 2003.
21. P. Domingos and G. Hulten, "A General Framework for Mining Massive Data Streams," in *Proceedings of the National Academies Workshop on Statistical Analysis of Massive Data Streams*, Washington, DC, 2002.
22. P. Domingos and M. Richardson, "Data Mining for Viral Marketing," in *Proceedings of the Thirty-Fourth Symposium on the Interface of Computing Science and Statistics* (on CD), Montréal, Canada, 2002.
23. P. Domingos, "When and How to Subsample: Report on the KDD-2001 Panel," in *SIGKDD Explorations*, vol. 3 (pp. 74-75), 2002.
24. P. Domingos, "Beyond Occam's Razor: Process-Oriented Evaluation" (abstract), in *Proceedings of the Eleventh European Conference on Machine Learning* (p. 3), Barcelona, Spain, 2000.
25. P. Domingos, "Research Directions in MetaCost" (abstract), in *Proceedings of the ICML-2000 Workshop on Cost-Sensitive Learning* (p. 59), Stanford, CA, 2000.
26. P. Domingos, "Why Do Model Ensembles Work?" (abstract), in *Proceedings of the ICML-2000 Workshop on What Works Well Where* (p. 1), Stanford, CA, 2000.
27. A. Doan, P. Domingos and A. Levy, "Data Integration: A 'Killer App' for Multistrategy Learning," in *Proceedings of the Fifth International Workshop on Multistrategy Learning* (pp. 129-135), Guimarães, Portugal, 2000.

28. P. Domingos, "Occam's Two Razors: The Sharp and the Blunt," in *Proceedings of the Thirty-First Symposium on the Interface of Computing Science and Statistics* (pp. 182-189), Schaumburg, IL, 1999.
29. P. Domingos, "When (and How) to Combine Predictive and Causal Learning" (abstract), in *NIPS-98 Workshop on Integrating Supervised and Unsupervised Learning*, Breckenridge, CO, 1998.
30. P. Domingos, "We Still Don't Know Why Model Ensembles Work" (abstract), in *NIPS-98 Workshop on Turnkey Algorithms for Improving Generalizers*, Breckenridge, CO, 1998.
31. P. Domingos, "Data Mining with RISE and CWS," in *Proceedings of the Fourth International Workshop on Multistrategy Learning* (pp. 1-12), Desenzano del Garda, Italy, 1998.
32. P. Domingos, "A Unified Approach to Concept Learning," Technical Report UCI-ICS 97-27, Department of Information and Computer Science, University of California, Irvine, CA, 1997.
33. P. Domingos, "Cases or Rules? The Case for Unification" (abstract), in *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society* (p. 756), San Diego, CA, 1996.
34. P. Domingos, "Playing Go by Search-Embedded Pattern Recognition" (abstract), in *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society* (p. 757), San Diego, CA, 1996.
35. P. Domingos, "The RISE 2.0 System: A Case Study in Multistrategy Learning," Technical Report UCI-ICS 95-2, Department of Information and Computer Science, University of California, Irvine, CA, 1995.
36. P. Domingos, "Design and Evaluation of the RISE 1.0 Learning System," Technical Report UCI-ICS 94-34, Department of Information and Computer Science, University of California, Irvine, CA, 1994.
37. P. Domingos, "Competitive Recall: A Memory Model for Real-Time Reasoning" (in Portuguese), Technical Report GIA 92/05, Artificial Intelligence Group, Instituto Superior Técnico, Lisbon, Portugal, 1992.
38. P. Domingos, R. Casteleiro and P. Diniz, "Design and Development of the GEAR Computer Animation System" (in Portuguese), in *Second Portuguese Workshop on Computer Graphics*, Porto, Portugal, 1989.
39. P. Domingos, "Towards Artificial Realities" (in Portuguese), *Expresso*, supplement on the Second National Conference on Computer-Aided Design, Planning and Production (pp. 14-15), 1989.
40. P. Domingos, R. Casteleiro and P. Diniz, "Introduction to the GEAR Computer Animation System," in *First Luso-German Workshop on Computer Graphics*, Lisbon, Portugal, 1988.

## ESSAYS

1. P. Domingos, "The Race for the Master Algorithm Has Begun," *Wired*, 2016.
2. P. Domingos, "The Business Opportunity of the Century," *The Globe and Mail*, 2016.
3. P. Domingos, "A Mystery in the Machine," *OECD Yearbook*, 2016.
4. P. Domingos, "Ten Myths about Machine Learning," *Medium*, 2016.
5. P. Domingos, "How to Train Your AI," *Medium*, 2016.

6. P. Domingos, “Get Ready for Your Digital Model,” *Wall Street Journal*, 2015.
7. P. Domingos, “Five Profound Ways that AI Will Change the Way You Live,” *Omnivoracious: The Amazon Book Review*, 2015.
8. P. Domingos, “Solving AI: We Need a New Language for Artificial Intelligence,” *MIT Technology Review*, vol. 112, no. 2 (pp. 10-11), 2009.

## TUTORIALS

(See invited talks section for invited tutorials.)

1. P. Domingos, *The Secrets of Machine Learning Revealed*, South by Southwest Interactive Festival, Austin, TX, 2016.
2. E. Amir, P. Domingos, L. Getoor, K. Kersting, B. Milch, S. Natarajan, D. Poole, L. de Salvo Braz and P. Sen, *Lifted Inference in Probabilistic Logical Models*, Twenty-Second International Joint Conference on Artificial Intelligence, Barcelona, Spain, 2011.
3. P. Domingos, *Statistical Modeling of Relational Data*, Thirteenth Intl. Conf. on Knowledge Discovery and Data Mining, San Jose, CA, 2007.
4. P. Domingos, *Practical Statistical Relational Learning*, Twenty-Fourth International Conference on Machine Learning, Corvallis, OR, 2007.
5. P. Domingos, *Practical Statistical Relational AI*, Twenty-Second National Conference on Artificial Intelligence, Vancouver, Canada, 2007.