

PADHRAIC SMYTH

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Professional Positions

April 1996–present: Professor, Department of Computer Science, University of California, Irvine

- Full Professor: July 2003 to present
- Associate Professor: July 1998 to June 2003
- Assistant Professor: April 1996 to June 1998

October 1988–March 1996: Member of Technical Staff and Technical Group Leader (from 1992), Jet Propulsion Laboratory, California Institute of Technology, Pasadena.

Education

PhD, 1988: California Institute of Technology, Department of Electrical Engineering.

MSEE, 1985: California Institute of Technology, Department of Electrical Engineering.

BE, 1984: National University of Ireland, University College Galway. Bachelor of Engineering (Electronic) with First-Class Honors.

Additional Professional Roles and Affiliations

Director, UCI Data Science Initiative, University of California, Irvine, July 2014–present.

Director, Center for Machine Learning and Intelligent Systems, University of California, Irvine, January 2007–July 2014.

Joint Faculty Appointment with Department of Statistics, UC Irvine, July 2008–present.

Joint Faculty Appointment with Department of Biomedical Engineering, UC Irvine, July 2001–2012.

Faculty Member, Institute for Genomics and Bioinformatics (IGB), UC Irvine, Member 2001–present.

Faculty Member, Institute for Mathematical Behavioral Sciences (IMBS), UC Irvine, 1999–present.

Faculty Member, Center for Digital Transformation, UC Irvine, 2012–present.

Faculty Member, Program for Mathematical, Computational, and Systems Biology (MCB), UC Irvine, 2007–present.

Faculty Member, Center for Research on Information Technology and Organizations (CRITO), UC Irvine, 2008–2012.

Founding Director and Executive Committee Member of the ACM Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD), 1998.

Visiting Principal Researcher, Jet Propulsion Laboratory, California Institute of Technology, Pasadena, 1996–2001.

Member of IEEE (1988–present), American Statistical Association (1997–present), and the Association for

Honors and Awards

Fellow, Association for Computing Machinery (ACM), 2013
Fellow, Association for the Advancement of Artificial Intelligence (AAAI), 2010
ACM SIGKDD Innovation Award, 2009
ACM SIGKDD Conference best paper awards (1997, 2002), runner-up best paper awards (1998, 2000),
ACM/IEEE Joint Conference on Digital Libraries (JCDDL), shortlist for best paper award, 2007.
IBM Faculty Partnership Award, 2001.
National Science Foundation CAREER award, 1997
ACM Teaching Award, UC Irvine, 1997
NASA Group Achievement award, Jet Propulsion Laboratory, 1997.
Lew Allen Award for Excellence in Research, Jet Propulsion Laboratory, 1993
17 NASA Certificates for Technical Innovation (1991–1996)

Consulting and Business Activities

Consultant/Advisor to emnos Inc (2015-2016); Frost Data Capital (2014-2015); AS&T Inc (2013-2015); Samsung (2012-2015); SOCCCD (2012-present); DigitalRisk (2010-2012); CoreLogic (2011-2014); IdentityMetrics (2010-2012); Microsoft (2010-2011); ImageCat (2010); eBay (2009-2011); DataAnalytics LLC (2009-2011); Oracle (2008-2011); Netflix (2006-2009); Topicseek LLC (2005-2008); Yahoo! (2005-2008); Strativa (2005); IET (2004-2005); JWDirect (2001-2004); Credit Sciences (2000-2004); Nokia Research (2000); First Quadrant Financial Services (1998-1999); Smith-Kline Beecham (1998); AT&T (1996-1998).

Professional Activities

Journals: Associate/Action Editor

ACM Transactions on Knowledge Discovery and Data, guest editor of special issue on best papers from ACM SIGKDD 2011 Conference, TKDD 6(4), 2012.
Journal of the American Statistical Association, 2002 to 2005.
IEEE Transactions on Knowledge and Data Engineering, 2002 to 2004.
Machine Learning Journal, July 1998 to December 2001.
Machine Learning Journal, guest editor of special issue on probabilistic learning, 1997.

Journals, Book Series, Centers: Editorial Board/Advisory Board Member

Journal of Machine Learning Research, 2000-present.
Journal of Data Mining and Knowledge Discovery, 1997-present.
Chapman and Hall: Series in Computer Science and Data Analysis, 2002-2008.
Bayesian Analysis, 2004-2007.

Journals: Reviewer

Reviewer for *IEEE Transactions on Information Theory*, *IEEE Trans. on Neural Networks*, *IEEE Trans. on Signal Processing*, *IEEE Trans. on Circuits and Systems*, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, *IEEE Trans. on Knowledge and Data Engineering*, *Statistics and Computing*, *Journal of Artificial Intelligence Research*, *Pattern Recognition Letters*, *Neural Networks*, *Machine Learning*, *Journal of Machine Learning Research*, *ACM Transactions on Knowledge Discovery from Data*, *Communications of the ACM*, *Journal of the American Statistical Association*, *Bayesian Analysis*.

Conference Program and General Chair Positions

Program Chair for the Uncertainty in Artificial Intelligence (UAI) Conference, 2013.

Program Chair for 17th ACM SIGKDD Conference, San Diego, 2011.

Program Chair for the Symposium on the Interface between Statistics and Computing, Costa Mesa, CA, June 2001.

General Chair for the Sixth International Conference on Artificial Intelligence and Statistics, January 1997.

Other Conference and Workshop Organization Roles

Workshop Co-Chair/Organizer for: Workshop on Algorithmic and Statistical Approaches for Large Social Network Data Sets, NIPS Conference, Lake Tahoe, 2012; Workshop on User-Centered Modeling, Institute for Mathematics and its Applications (IMA), University of Minnesota, 2012.; Workshop on Scientific Data Mining, Institute for Pure and Applied Mathematics (IPAM), UCLA, 2002; Workshop on Temporal and Spatial Machine Learning, International Conference on Machine Learning (ICML), 2001; Massive Datasets workshop at the 1998 Neural Information Processing Conference (NIPS).

Other Conference Organization Roles: Panels chair for ACM SIGKDD Fifth International Conference on Knowledge Discovery and Data Mining, 1999; Tutorials co-chair for National Conference on Artificial Intelligence, 1998; Tutorials chair for the ACM SIGKDD Conferences on Knowledge Discovery and Data Mining, 1997 and 1998; Publicity Chair for the ACM SIGKDD Conferences on Knowledge Discovery and Data Mining, 1995 and 1996.

Conference Reviewing and Program Committees

Neural Information Processing Conference (NIPS), International Conference on Machine Learning (ICML), Uncertainty in Artificial Intelligence Conference (UAI), Artificial Intelligence and Statistics Conference (AI-Stats), European Conference on Machine Learning (ECML/PKDD), ACM Conference on Knowledge Discovery and Data Mining (SIGKDD), WWW Conference, International Conference on Pattern Recognition (ICPR), International Joint Conference on Artificial Intelligence (IJCAI), American Association for Artificial Intelligence Conference (AAAI), Pattern Recognition in Practice Workshops.

Postdoctoral Advisees

Michal Rosen-Zvi, 2003-2004; IBM Research, Israel.

Michael Duff, 2005-2006; Assistant Professor, Genetics/Developmental Biology, University of Connecticut.

Alex Ihler, 2005-2006; Associate Professor, Department of Computer Science, UC Irvine.

Romain Thibaux, 2008-2009; Google, Mountain View, CA

Ralf Krestel, 2011-2013; Senior Researcher, Hasso-Plattner Institute, Potsdam, Germany.

Tracy Holsclaw, 2011-2014; Consultant, San Jose, CA

Graduate Students

PhD Advisees and Current Positions

Nick Navaroli, PhD 2014; Google, Irvine, CA
Jimmy Foulds, PhD 2014: Postdoc, UC San Diego
Chris DuBois, PhD 2013: Software Engineer, Dato, Seattle
America Chambers, PhD 2013: Assistant Professor, Department of Mathematics and Computer Science, University of Puget Sound
Drew Frank (co-advised with Alex Ihler), PhD 2013: Google, UK
Arthur Asuncion, PhD 2011: Google, Seattle, WA
Jon Hutchins (co-advised with Alex Ihler), PhD 2010: Google, Irvine, CA
Chaitanya Chemudugunta, PhD 2009: Manager, Data Science, Blizzard Inc., Irvine, CA
Seyoung Kim, PhD 2007: Assistant Professor, Department of Bioinformatics, CMU, Pittsburgh
Darya Chudova, PhD 2007: Senior Director of Bioinformatics, Guardant Health, Redwood City, CA
Sergey Kirshner, PhD 2005: Researcher, SkyTree Inc, San Jose, CA
Scott Gaffney, PhD 2004: VP, Search Engineering, Sunnyvale, CA
Xianping Ge, PhD 2002: Google, Mountain View, CA
Igor V. Cadez, PhD 2002: Consultant, Orange County, CA.
Dimitry Pavlov, PhD 2001: VP, Advertising Technology, Sunnyvale, CA

Current PhD Students

Advanced to Candidacy: Kevin Bache (2014), Moshe Lichman (2014), Eric Nalishnick (2015)
Pre-Candidacy: Zach Butler, Dimitris Kotzias, Jihyun Park, Chris Galbraith

PhD Thesis Committee Member

UC Irvine, Computer Science:

Sam Hallman (2015), David Keator (2015), Qiang Liu (2014), Anoop Korattikara (2014), Levi Boyles (2014), Yutian Chen (2013), Lars Otten (2013), Chaitanya Desai (2012), Hamed Pirsiavash (2012), Behzad Sajadi (2012), David Orendorff (2012), Pinaki Sinha (2011), Chloe Azencott (2010), Vibhav Gogate (2009), Radu Marinescu (2008), Robert Matescu (2007), Bozhena Bidyuk (2005), Stephen Bay (2001), Irina Rish (1999), Chris Merz (1998), Pedro Domingos (1997).

UC Irvine, Other Departments:

Sepide Sarachi (Civil and Environmental Engineering, 2015), Justin Chung (Informatics, 2015), Colene Haffke (Earth Systems Science, 2015), Kevin Heins (Statistics, 2014), Michael Salmans (Biological Chemistry, 2014), (Emma Spiro (Sociology, 2013), Zack Almquist (Sociology, 2013), Kim Aeling (Microbiology and Molecular Genetics, 2007), Bethany Knapp (Cognitive Science, 2002).

Other Universities (External Committee Member or Examiner):

Ramnath Balasubramanian (CMU, 2013), Mindaugus Norkus (National University of Ireland, Galway, 2013), Xuerei Wang (U Mass Amherst, 2009), Sangmin Oh (Georgia Tech, 2009), Carla Domencioni (UC Riverside, 2002), John Lindal (Caltech, 2000), Srinivas Aji (Caltech, 2000), David Babcock (Caltech, 2000), Gavin Horn (Caltech, 1999), Lonnie Chrisman (CMU, 1996), Michael Burl (Caltech, 1996), Barry Ambrose (Caltech, 1995), Zheng Zeng (Caltech, 1995).

PhD Candidacy/Thesis Proposal Committees

UC Irvine: Daniel Quang, 2015 (CS), Bailey Kong, 2015 (CS), Sholeh Fourazan, 2015 (CS), Coral Wheeler, 2014 (Physics), Raul Diaz, 2014 (CS), Golnaz Ghiasi, 2014 (CS), Wei Ping, 2014 (CS), Sam Hallman, 2013 (CS), Peter Sadowski, 2013 (CS), William Lam, 2013 (CS), Justin Chung, 2013 (Informatics),

(Biological Chemistry), Colene Haffke, 2011 (Earth System Sciences), Tim Rubin, 2011 (Cognitive Sciences), Brendan Rogers, 2011 (Earth System Sciences), Hamed Pirsiavash, 2011 (CS), Behzad Sajadi, 2011 (CS), Qiang Liu, 2011 (CS), Anoop Korattikara, 2011 (CS), David Keator, 2010 (CS), Kenny Daily, 2010 (CS), Yutian Chen, 2009 (CS), Lars Otten, 2009 (CS), David Orendorff, 2009 (CS), Chloe Azencott, 2009 (CS), Chaitanya Desai, 2008 (CS), Pinaki Sinha, 2007 (CS), Guy Yosiphon, 2006 (ICS), Bo Gong, 2006 (ICS), Lin Wu, 2005 (ICS), Yiming Ma, 2004 (ICS), Dawit Seid, 2004 (ICS), John Abatzoglu, 2004 (Earth System Sciences), Suman Sundaresh, 2003 (ICS), Mingliang Li, 2002 (Economics), Ye Sun, 2001 (ICS), Bethany Knapp, 2000 (Cognitive Science), Stephen Bay, 1999 (ICS), Daniel Billsus, 1998 (ICS), Pei Suen, 1998 (ECE), Chris Merz, 1997 (ICS).

Other Universities: Ramnath Balasubramanyan, 2012 (CMU), Srinivas Aji, 1999 (Caltech), Gavin Horn, 1998 (Caltech), John Lindal, 1998 (Caltech).

Masters Students Supervised

UC Irvine, Information and Computer Science: Homer Strong (2016), Scott Crawford (2012), Corey Schaninger (2012), Scott Triglia (2011), Ajay Mishra (2008), Scott White (2006), Joshua O Madadhain (2006), Vasanth Kumar (2006), Sridevi Parise (2003), Naval Verma (2002), Wagner Truppel (2001), Scott Lundgren (1997).

Royal Institute of Technology: Stefan Edlund (1997), Department of Numerical Analysis and Computing Science, Stockholm: Thesis entitled *Methods for Cluster Analysis with Applications to Large NASA Data Sets*.

University of Freiburg: Daniel Henke (2007), Department of Computer Science, MS Diplom Thesis.

Research Grants, Contracts and Gifts

62. *Development of Computational Methods for Evaluating Patient-Doctor Communication*, PCORI, \$395,745 (UCI portion), Feb 1 2017 to Jan 31st 2020, co-Investigator (PI: Zac Imel, U Utah).
61. *NRT-DESE: Team Science for Integrative Graduate Training in Data Science and Physical Science*, NSF, award number 1633631, Sep 15 2016 to Aug 31 2021, \$2,967,150, Principal Investigator.
60. *Learning Individual Predictive Choice Models*, Adobe Research Award, \$50,000, October 2016, , Principal Investigator.
59. *Transformative Computational Infrastructures for Cell-Based Biomarker Diagnostics*, NIH, award number U01TR001801-01, 09/01/16 08/31/21, \$766,000 (UCI portion), co-Investigator (PI: Richard Schueurmann, Venter Institute/UCSD).
58. *The Big DIPA: Data Image Processing and Analysis*, NIH BD2K Program, award number 1R25EB022366-01, \$486,000, Sept 30 2015 to June 30th 2018, co-Investigator (UCI PI: Charless Fowlkes).
57. *Investigating Virtual Learning Environments*, National Science Foundation, award number NSF-1535300, \$2,500,000, Oct 1 2015 to Sept 30th 2020, co-Investigator (UCI PI: Mark Warschauer).
56. *Forensic Science Center of Excellence*, National Institute of Standards and Technology (NIST), award number 70NANB15H176, \$20,000,000 (\$4,000,000 for UC Irvine), Oct 1 2015 to Sept 30th 2020, co-Investigator (UCI PI: Hal Stern).
55. *Data-Intensive Research and Education Center in Science, Technology, Engineering, and Mathematics (DIRECT-STEM)*, NASA MIRO program, award number NNX15AQ06A, \$5,000,000 (\$1,250,000 for UC Irvine), Sept 1 2015 to Aug 31st 2020, Principal Investigator.

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