Ryan Prescott Adams

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Citizenship: United States

Education

2009 Ph.D., Physics
University of Cambridge
Kernel methods for nonparametric Bayesian inference of probability densities and point processes
Supervisor: Prof. David J.C. MacKay, FRS

2004 B.S., Electrical Engineering and Computer Science
Massachusetts Institute of Technology

Academic Positions

2009-present Canadian Institute for Advanced Research Junior Fellow
Department of Computer Science, University of Toronto

2004-2009 Ph.D. Candidate, Gates Cambridge Scholar
Cavendish Laboratory (Department of Physics), University of Cambridge

2002-2004 Undergraduate Researcher
CSAIL, Massachusetts Institute of Technology

Honors & Awards

2010 Best Paper, Thirteenth International Conference on Artificial Intelligence and Statistics *(with Hanna Wallach & Zoubin Ghahramani)*

2010 Honorable Mention, International Society for Bayesian Analysis Leonard J. Savage Award for Outstanding Dissertation in Bayesian Theory and Methods

2009 Honorable Mention, Best Paper, Twenty-Sixth International Conference on Machine Learning *(with Zoubin Ghahramani)*

2009 Honorable Mention, Best Student Paper, Twenty-Sixth International Conference on Machine Learning *(with Iain Murray & David J.C. MacKay)*

Grants & Fellowships

2011 Young Investigator Travel Grant, International Society for Bayesian Analysis
2009-present Canadian Institute for Advanced Research Junior Fellowship
2004-2009 United Kingdom Overseas Research Scholarship
2004-2009 Gates Cambridge Scholarship
2008 Travel Grant, St. John's College, Cambridge

Industry Positions

2009-2010 Consultant
Saxon Cambridge Algorithmic Research, Ltd., Cambridge, United Kingdom

2006-2007 Partner
Financial Data Consultants, Ltd., Cambridge, United Kingdom

2001-2002 Contract Software Engineer
General Electric, Cleveland, Ohio

2000-2002 Founder
Vitessi Motorsports, Inc., Delaware, Ohio

1996-1998 Contract Software Engineer
NASA, Johnson Space Center, Houston, Texas

Teaching

2011 Guest Instructor, University of Toronto CSC 2535, *Advanced Machine Learning*
2010 Tutorial Lecturer, CIFAR Neural Computation and Adaptive Perception Summer School
2010 Guest Instructor, University of Toronto CSC 2515, *Graduate Intro to Machine Learning*
2009 Guest Instructor, University of Toronto CSC 411, *Undergraduate Machine Learning*
1998-2000 Head Coach, Wellesley College Water Polo Team
1997-1998 Assistant Coach, Massachusetts Institute of Technology Women's Water Polo Team

Reviewing & Service

Journals

Neural Computation
Journal of Machine Learning Research
Technometrics
IEEE Transactions on Information Theory
IEEE Transactions on Neural Networks
IEEE Transactions on Systems, Man and Cybernetics, Part B
Environmetrics
Pattern Recognition
Computers and Mathematics with Applications

Conferences

2009-2011	International Conference on Machine Learning (ICML)
2010-2011	International Conference on Artificial Intelligence and Statistics (AISTATS)
2009-2010	Advances in Neural Information Processing Systems (NIPS)
2011	ACM Conference on Knowledge Discovery and Data Mining (KDD)
2011	Conference on Uncertainty in Artificial Intelligence (UAI)

Organization Committees

2010	NIPS Workshop on Monte Carlo Methods for Bayesian Inference in Modern Applications
2010	NIPS Workshop on Transfer Learning Via Deep Generative Models
2008-2010	IEEE Robots and Automation Technical Committee on Robot Learning

Selected Talks

Research Talks

30 Mar 2011	School of Computing, University of Utah
24 Mar 2011	School of Engineering and Applied Sciences, Harvard University
10 Mar 2011	Department of Computer Science, University of Californa, Los Angeles
2 Mar 2011	Department of Computer Science, University of Massachusetts
24 Feb 2011	Department of Statistics, Stanford University
22 Feb 2011	Toyota Technological Institute; Chicago, IL
15 Feb 2011	Department of Computer Science, Johns Hopkins University
10 Feb 2011	Booth School of Business, University of Chicago
31 Jan 2011	Department of Statistics, Carnegie Mellon University
27 Jan 2011	Department of Computer Science and Engineering, The Ohio State University
25 Jan 2011	Department of Computer Science, University of Chicago
24 Jan 2011	Department of Statistics, University of Chicago
6 Jan 2011	Fourth International IMS/ISBA Joint Meeting (MCMSki III); Park City, UT
8 Dec 2010	Twenty-Fourth Conference on Neural Information Processing Systems; Vancouver, Canada
9 Jul 2010	Twenty-Sixth Conference on Uncertainty in Artificial Intelligence; Catalina Island, CA
8 Jun 2010	World Meeting of the International Society for Bayesian Analysis; Benidorm, Spain
15 Mar 2010	ECE Department, University of Texas at Austin
15 Jun 2009	Twenty-Sixth International Conference on Machine Learning; Montreal, Canada
11 Jun 2009	Gatsby Computational Neuroscience Unit, University College London
14 May 2009	RAD Lab, University of California at Berkeley
8 Apr 2009	Machine Learning Department, Carnegie Mellon University
13 Mar 2009	CSAIL, Massachusetts Institute of Technology
17 Nov 2008	School of Computer Science, University of Manchester
24 Jul 2008	CIFAR Neural Computation and Adaptive Perception Summer School; Toronto, Canada
9 Jul 2008	UAI/ICML/COLT Workshop on Nonparametric Bayes; Helsinki, Finland
1 Apr 2008	Snowbird Learning Workshop; Snowbird, Utah
16 Apr 2008	Machine Learning Department, Carnegie Mellon University
30 Jan 2008	CIS Department, University of Pennsylvania

Talks for General Audiences

9 Nov 2009 *The Next Big Question: How Do We Think?*
CIFAR Lunar Circle Dinner

17 Jun 2009 *Building Machines That Can See: Lessons From Human Vision*
IdeaCity 2009

14 Apr 2009 *Perceiving the World with Statistical Machine Learning*
CIFAR Junior Fellow Academy

Publications

Peer Reviewed Conference Papers

2010 **Ryan Prescott Adams**, Zoubin Ghahramani and Michael I. Jordan. Tree-Structured Stick Breaking for Hierarchical Data. To appear in *Advances in Neural Information Processing Systems 23 (NIPS 2010)*. (Accepted for plenary oral: 20/1219, 2%; Overall: 293/1219, 24%) arXiv:1006.1062 [stat.ME]

2010 Iain Murray and **Ryan Prescott Adams**. Slice Sampling Covariance Hyperparameters of Latent Gaussian Models. To appear in *Advances in Neural Information Processing Systems 23 (NIPS 2010)*. (Accepted for plenary oral: 20/1219, 2%; Overall: 293/1219, 24%) arXiv:1006.0868 [stat.CO]

2010 **Ryan Prescott Adams**, George E. Dahl and Iain Murray. Incorporating Side Information into Probabilistic Matrix Factorization with Gaussian Processes. In *Proceedings of the 26th Conference on Uncertainty in Artificial Intelligence (UAI 2010)*. (Accepted for plenary oral: 30/260, 12%; Overall: 88/260, 34%) arXiv:1003.4944 [stat.ML]

2010 **Ryan Prescott Adams**, Hanna M. Wallach and Zoubin Ghahramani. Learning the Structure of Deep Sparse Graphical Models. In *Proceedings of the 13th International Conference on Artificial Intelligence and Statistics (AISTATS 2010)*. (Accepted for plenary oral: 24/308, 8%; Overall: 125/308, 41%) arXiv:1001.0160 [stat.ML] **Winner of Best Paper Award**

2010 Iain Murray, **Ryan Prescott Adams** and David J.C. MacKay. Elliptical Slice Sampling. In *Proceedings of the 13th International Conference on Artificial Intelligence and Statistics (AISTATS 2010)*. (Accepted: 125/308, 41%) arXiv:1001.0175 [stat.CO]

2009 **Ryan Prescott Adams** and Zoubin Ghahramani. Archipelago: Nonparametric Bayesian Semi-Supervised Learning. In *Proceedings of the 26th International Conference on Machine Learning (ICML 2009)*. (Accepted: 160/595, 27%) **Honorable Mention for Best Paper Award**

2009 **Ryan Prescott Adams**, Iain Murray and David J.C. MacKay. Tractable Nonparametric Bayesian Inference in Poisson Processes with Gaussian Process Intensities. In *Proceedings of the 26th International Conference on Machine Learning (ICML 2009)*. (Accepted: 160/595, 27%) **Honorable Mention for Best Student Paper Award**

2009 **Ryan Prescott Adams**, Iain Murray and David J.C. MacKay. The Gaussian Process Density Sampler. In *Advances in Neural Information Processing Systems 22 (NIPS 2008)*. (Accepted

for poster spotlight: 123/1022, 12%; Overall: 250/1022, 24%)

2008 **Ryan Prescott Adams** and Oliver Stegle. Gaussian Process Product Models for Nonparametric Nonstationarity. In *Proceedings of the 25th International Conference on Machine Learning (ICML 2008)*. (Accepted: 155/583, 27%)

Invited Discussions

2011 Iain Murray and **Ryan Prescott Adams**. Discussion of "Riemann manifold Langevin and Hamiltonian Monte Carlo methods" by Mark Girolami and Ben Calderhead. To appear in *Journal of the Royal Statistical Society, Series B*.

Workshop Abstracts and Papers

2011 Jasper Snoek, **Ryan Prescott Adams** and Hugo Larochelle. Semiparametric Latent Variable Models for Guided Representation. *Snowbird Learning Workshop*.

2011 Iain Murray and **Ryan Prescott Adams**. Easy, Effective Monte Carlo Methods for Exploring Latent Gaussian Models. *Workshop on Bayesian Inference in Latent Gaussian Models*.

2011 **Ryan Prescott Adams**, Zoubin Ghahramani and Michael I. Jordan. Tree-Structured Stick Breaking Processes for Hierarchical Data. *MCMSki III*

2010 Iain Murray and **Ryan Prescott Adams**. Slice Sampling with Latent Gaussian Models. *International Society for Bayesian Analysis World Meeting*.

2009 **Ryan Prescott Adams**, Zoubin Ghahramani and Michael I. Jordan. Tree-Structured Stick Breaking Processes for Hierarchical Data. *NIPS Nonparametric Bayes Workshop*.

2009 **Ryan Prescott Adams**, Iain Murray and David J.C. MacKay. Nonparametric Bayesian Density Modeling with Gaussian Processes. *ICML/UAI/COLT Nonparametric Bayes Workshop*.

2008 **Ryan Prescott Adams**, Iain Murray and David J.C. MacKay. The Gaussian Process Density Sampler. *Snowbird Learning Workshop*

Technical Reports

2007 **Ryan Prescott Adams** and David J.C. MacKay. Bayesian Online Changepoint Detection. arXiv:0710.3742 [stat.ML].

Working Papers

2011 **Ryan Prescott Adams** and Richard S. Zemel. Ranking via Sinkhorn Propagation. Submitted.

2011 Jeroen C. Chua, Inmar E. Givoni, **Ryan Prescott Adams** and Brendan J. Frey. Bayesian Factorization of Shape and Appearance. Submitted.

2011 Jeroen C. Chua, Inmar E. Givoni, **Ryan Prescott Adams** and Brendan J. Frey. Bayesian Painting by Numbers: Flexible Priors for Colour-Invariant Object Recognition

2011 Jasper Snoek, **Ryan Prescott Adams** and Hugo Larochelle. Semiparametric Latent Variable

Models for Guided Representation. Submitted. arXiv:1102.1492 [stat.ML]

2010 **Ryan Prescott Adams**, Iain Murray and David J.C. MacKay. Nonparametric Bayesian Density Modeling with Gaussian Processes. Submitted. arXiv:0912.4896 [stat.CO]

Miscellaneous

Erdös number is 3 (David MacKay → Robert J. McEliece → Paul Erdös)
University of Cambridge, Full Blue in Water Polo
NCAA Water Polo All-American
NCAA Water Polo Academic All-American
Eagle Scout

Last updated: June 10, 2011
http://www.cs.toronto.edu/~rpa/rpa-cv.pdf