

## Andrew C. Thomas

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### CONTACT INFORMATION

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### CITIZENSHIP

Canadian citizen by birth; dual citizenship with United Kingdom.

### PROFESSIONAL EXPERIENCE

Visiting Research Scientist, Department of Statistics, Carnegie Mellon University. September 2009-present.

### EDUCATION

Doctor of Philosophy, Harvard University, Department of Statistics (pending). Defended August 20, 2009.

Master of Arts, Harvard University, Department of Statistics, June 2005.

Bachelor of Science, Massachusetts Institute of Technology, February 2004. Physics, with a minor in Biology.

### RESEARCH

**Dissertation: [Hierarchical Models for Relational Data](#)**

Advisor: Joseph K. Blitzstein

Readers: Edoardo M. Airoidi, Xiao-Li Meng, Carl N. Morris

Modelling data sets whose observations are relations between individual units. Binary, discrete and continuous outcomes.

CONTRIBUTED TALK Joint Statistical Meetings, August 2009.

INVITED TALK University of Chicago, May 2009.

CONTRIBUTED TALK New England Statistical Symposium, April 2009.

INVITED TALK Carnegie-Mellon University, April 2009.

INVITED TALK RAND Statistics Group, March 2009.

INVITED TALK Virginia Tech, March 2009.

INVITED TALK American University, January 2009.

CONTRIBUTED TALK Joint Statistical Meetings, August 2008.

POSTER 25th Meeting of the Society of Political Methodology, July 9-12, 2008, "[Generative Models for Random Graphs with Weighted Edges, with Applications in Political Methodology](#)".

### **Properties of Two-Party Election Systems**

Much of this work was pursued in my role as a Graduate Associate of the [Institute for Quantitative Social Science](#).

- PAPER Andrew C. Thomas, Andrew Gelman, Gary King, Jonathan N. Katz. “Partisan Bias of the Electoral College Under Proposed Changes in Elector Apportionment,” in progress. [2008]
- SOFTWARE Andrew Gelman, Gary King, Andrew C. Thomas. “JudgeIt II: A Program for Evaluating Electoral Systems and Redistricting Plans,” package for R statistical software. [Available at CRAN](#). [2007]
- WORKING PAPER Andrew C. Thomas and Scott Lesowitz. “[Measuring The Impact of Independent Redistricting Commissions on State Legislative Elections](#)”. [2007]
- INVITED TALK Research Workshop in Applied Statistics, Harvard University, October 2007.
- CONTRIBUTED TALK useR!, Iowa State University, August 2007.
- CONSULTING Roland J. Fryer, Assistant Professor of Economics, Harvard University, 2006-2007. Consulting regarding [redistricting algorithms and analyses of the resulting electoral plans](#).

### **Perfect Sampling Routines for Applied Probability Models**

- PAPER Blanchet, Jose H. and Thomas, Andrew C. “[Exact Simulation and Error-Controlled Sampling via Regeneration and a Bernoulli Factory](#)”. Presented at New England Statistics Symposium 2007. Winner of IBM T.J. Watson Student Paper Award.
- INVITED TALK New England Statistics Symposium, April 2007.
- POSTER MCMSki II: Markov Chain Monte Carlo in Theory and Practice, January 9-11, 2008.
- POSTER Harvard University Department of Statistics 50th Anniversary Symposium, October 26-27, 2007.

### **Quantitative Analysis of Sports**

- PAPER Thomas, Andrew C. “[Inter-Arrival Times of Goals in Ice Hockey](#)”. *Journal of Quantitative Analysis in Sports*, 3(3). [2007]
- PAPER Thomas, Andrew C. “[The Impact of Puck Possession and Location on Ice Hockey Strategy](#)”. *Journal of Quantitative Analysis in Sports*, (2)1. [2006]
- INVITED TALK Statistics Graduate Student Seminar, Columbia University, October 2006.
- INVITED TALK Research Workshop in Applied Statistics, Harvard University, October 2005.
- CONTRIBUTED TALK Joint Statistical Meetings, August 2005,
- CONTRIBUTED TALK New England Statistics Symposium, April 2005 (honourable mention for best student paper).
- CONSULTING Alan Schwarz, sportswriter. Consulted for article “[KEEPING SCORE; The Goal Rush and the Prospect of More Penalties](#)”, New York Times, December 25, 2005.

### **Miscellaneous**

- CONSULTING Michael C. McCormack and Edwin Kwon, visiting scholars, Massachusetts General Hospital. Provided guidance for *ad hoc* methods of reducing local dependence in tissue damage estimation procedures. [2005]

- PAPER Michael C. McCormack, Edwin Kwon, Kyle R. Eberlin, Mark Randolph, Dan S. Friend, Andrew C. Thomas, Michael T. Watkins, William G. Austen Jr. "Development of Reproducible Histologic Injury Severity Scores: Skeletal Muscle Reperfusion Injury". *Surgery*, 143(1), 126-133. [2008]
- ARTICLE "From Student to student: Reflecting on 100 years of history, in one Saturday", with Kari Lock and Yves Chretien. *Amstat News*, November 2008.
- PROFESSIONAL SERVICE Contributed Session Chair, Joint Statistical Meetings, August 2009.
- Referee, *Journal of Statistical Software*. (2007)
- Referee, *Journal for Quantitative Analysis in Sports*. (2006-2009)
- TEACHING EXPERIENCE Teaching Assistant/Fellow at Harvard University:
- Statistics 101: Introduction to Quantitative Methods for Psychology and the Behavioral Sciences. Fall 2008 (with Alan Agresti).
- Statistics 221: Applied Bayesian Statistical Computing. Spring 2008 (with Andrew Gelman).
- Statistics 110: Introduction to Mathematical Probability. Fall 2005 (with Jose Blanchet), Fall 2007 (with Joseph Blitzstein).
- Statistics 111: Introduction to Mathematical Statistics. Head Teaching Fellow. Spring 2007 (with Samuel Kou).
- Government 2003: Hierarchical Bayesian Modeling. Fall 2006 (with Jeff Gill).
- Statistics 171: Stochastic Processes. Spring 2006 (with Erol Pekoz).
- Lecturer, 8.02: Introduction to Electricity and Magnetism. February-May 2004, MIT Experimental Study Group.
- Teaching assistant, 8.01T: Introduction to Mechanics (Technology Enabled). September-December 2004, MIT Physics Department.
- CONFERENCE COMMITTEES "Quintessential Contributions: Celebrating Major Birthdays of Statistical Ideas and Their Inventors", September 27, 2008, Harvard University.
- "Advances in Analysis of Monte Carlo Methods", December 1-2, 2007, Harvard University.
- PROFESSIONAL MEMBERSHIPS [American Statistical Association](#)
- [Institute of Mathematical Statistics](#)
- [Statistical Society of Canada](#)
- [American Political Science Association](#)
- DEPARTMENT SERVICE Member, Faculty Seminar and Social Committee, CMU Statistics Department, 2009-present.
- Convenor, Qualifying Exam Seminar, Harvard Statistics Department. (weekly, spring 2007)
- Founder/Convenor, Sports Analysis Workshop, Harvard Statistics Department, 2006-2007.

Member, Department Computing Committee, Harvard Statistics Department, 2005-2009.

Member, Department Social Committee, Harvard Statistics Department, 2004-2009.

MISCELLANEOUS  
SERVICE

Trivia host, [Cambridge Queen's Head pub](#), Harvard University. February-December 2008.

Canadian Chemistry and Physics Olympiad. Annual training camp assistant/lecturer, 2000-2003.  
Co-leader of Canadian team to XXXIII International Physics Olympiad, Indonesia, 2002.

POPULAR MEDIA  
WRITING

"A long-time Blue Jays fan pays his respects", Facts and Arguments, The (Toronto) Globe and Mail; October 8, 2004.

[Op-ed pieces written](#) for [The Tech](#) between 2001 and 2004, during which time I served as writer, columnist and/or opinion editor.