

CURRICULUM VITAE

Jeffrey S. Rosenthal

(Last updated April 20, 2010.)

BIOGRAPHICAL INFORMATION:

Personal:

Born: October 13, 1967.
Scarborough, Ontario, Canada.

Citizenship: Canadian and American (dual).

Address: Department of Statistics
University of Toronto
100 St. George Street
Toronto, Ontario
Canada M5S 3G3

Telephone: (416) 978-4594.
E-mail: jeff@math.toronto.edu
Web page: <http://probability.ca/jeff/>

Degrees:

B.Sc. (math, physics, comp. sci.), University of Toronto, June 1988.
M.A. (mathematics), Harvard University, March 1990.
Ph.D. (mathematics), Harvard University, June 1992.

Ph.D. Thesis: *Rates of convergence for Gibbs sampler and other Markov chains*

Ph.D. Supervisor: Dr. Persi Diaconis.

Employment:

1992 – 1993 Assistant Professor, University of Minnesota.
1993 – 1997 Assistant Professor, University of Toronto.

1997 – 2000	Associate Professor, University of Toronto.
2000 – present	Professor, University of Toronto.

Primary Research Interests:

Probability Theory
 Stochastic Processes
 Statistical Computation
 Markov Chain Monte Carlo (MCMC) Algorithms

Honours:

University of Toronto undergraduate scholarships: J.W. Billes Open (four years), Reuben Wells Leonard, others	1984 – 88
Faculty Scholar (undergraduate), University of Toronto	1985, 86, 87, 88
Harvard University Teaching Award	1991
Dean's Excellence Awards, University of Toronto	1994, 96, 97
Appointment to Graduate School Faculty	1994
Cross-appointment (status only) to Department of Mathematics, University of Toronto	1994
Granted tenure, University of Toronto	1997
Arts and Science Outstanding Teaching Award	1998
Premier's Research Excellence Award	2000
Elected IMS Fellow	2005
National bestselling author	2005
CRM-SSC Prize	2006
Gentry Lecturer, Wake Forest University	2007
Pierre Robillard Award (supervisor)	2007
Distinguished Lecturer in Statistics, Dalhousie	2007
COPSS Presidents' Award	2007

Plenary Speaker, MCQMC Conference, Montreal	2008
Keynote Speaker, ISBA Conference, Australia	2008
Plenary Speaker, Journées de Statistique, Bordeaux	2009
PIMS Distinguished Chair	2009

Professional Affiliations and Activities:

Society of Actuaries, Examinations 100 and 110 completed	1990
Institute of Mathematical Statistics, member	1993 – present
Session organizer, ISBA Regional Meeting, Toronto	1994
Session chair, ASA-IMS-IBS-SSC Joint Meetings, Chicago	1996
Visiting Member, Fields Institute	1998 – 1999
Co-organizer, Workshop on Monte Carlo, Fields Institute	Oct. 19–23, 1998
Statistical Society of Canada, member	2000 – present
Session organizer, SSC Annual Meeting, Ottawa	2000
Editorial Board, <i>Applied Stochastic Models in Business and Industry</i>	2001, 2002
Free Software Foundation, associate member	2003 – present
R Foundation for Statistical Computing, member	2003 – present
Local organizer, Probability Workshop, Toronto	2004
Session organizer, ASA-IMS Joint Meetings, Toronto	2004
Associate Editor, <i>Canadian Journal of Statistics</i>	2007 – 2009
Associate Editor, <i>Electronic Journal of Statistics</i>	2007 – 2009
Session organizer, SSC Annual Meeting, Ottawa	2008
Session co-organizer, MCQMC Conference, Montreal	2008

Other Work Experience:

Experienced C and Java computer programmer.
 GNU/Linux/Unix computer system administrator.

Occasional paid consultant to various companies and researchers.

Occasional consultant to various media/news organisations.

Occasional paid public speaker.

Occasional paid musical performer.

Languages spoken:

English, French.

ACADEMIC HISTORY:

Research Funding Awards:

NSERC undergraduate summer research awards	1987, 1988
Sloan Foundation doctoral dissertation fellowship	1991
NSERC postdoctoral fellowship	1992
NSF summer salary supplement (U.S. \$14,420)	1993
Connaught start-up grant (\$6,000)	1993
NSERC research grant (\$54,000 over 3 years)	1993–6
EPSRC travel award (£1,000) via G.O. Roberts	1994
NSERC research grant (\$103,822 over 4 years)	1996–00
EPSRC travel award (£3,000) via G.O. Roberts	1995
Scotia-McLeod research contracts (\$38,220)	1999.
NSERC research grant (\$175,000 over 5 years)	2000–05
Premier’s Research Excellence Award (\$100,000)	2000
MITACS grant (co-investigator, \$260,000)	2002
Research grant from Ontario Ministry of Child and Youth Services (co-investigator, \$76,000)	2006–10
NSERC research grant (\$185,000 over 5 years)	2006–12

SCHOLARLY & PROFESSIONAL WORK*:

Refereed Journal Publications:

- 1) M.D. Choi, J.S. Rosenthal, and P. Rosenthal (August 1989), “Linear-Algebraic Results Associated with Antiferromagnetic Heisenberg Chains”. *SIAM Journal of Matrix Analysis and Applications* **14**, No. **3** (1993), 830–852.
- 2) J.S. Rosenthal (April 1992), “Random Rotations: Characters and Random Walks on $SO(N)$ ”. *Annals of Probability*, Vol. **22**, No. **1** (1994), 398–423.
- 3) J.S. Rosenthal (April 1992), “Random Walks on Discrete and Continuous Circles”. *Journal of Applied Probability* **30** (1993), 780–789.
- 4) J.S. Rosenthal (April 1992), “Rates of Convergence for Data Augmentation on Finite Sample Spaces”. *Annals of Applied Probability* **3** (1993), 819–839.
- 5) J.S. Rosenthal (April 1992), “Rates of Convergence for Gibbs Sampling for Variance Components Models”. *Annals of Statistics* **23** (1995), 740–761.
- 6) J.S. Rosenthal (November 1992), “On Duality of Probabilities for Card-dealing”. *Proceedings of the American Mathematical Society*, Vol. **123** No. **2** (1995), 559–561.
- 7) J.S. Rosenthal (November 1992), “On Generalizing the Cut-off Phenomenon for Random Walks on Groups”. *Advances in Applied Mathematics* **16** (1995), 306–320.
- 8) J.R. Hoffman and J.S. Rosenthal (March 1993), “Convergence of Independent Particle Systems”. *Stochastic Processes and their Applications* **56** (1995), 295–305.
- 9) J.S. Rosenthal (April 1993), “Active-Learning Strategies in Advanced Mathematics Classes”. *Studies in Higher Education*, Vol. **20** No. **2** (1995), 223–228.

* Multiple authors are listed alphabetically throughout, except those few marked [N-A]. Dates in parentheses refer to original submission of manuscript.

- 10) J.S. Rosenthal (September 1993), “Minorization Conditions and Convergence Rates for Markov Chain Monte Carlo”. *Journal of the American Statistical Association* **90** (1995), 558–566.
- 11) J.S. Rosenthal (December 1993), “Convergence rates of Markov chains”. *SIAM Review* **37** (1995), 387–405.
- 12) J.R. Baxter and J.S. Rosenthal (January 1994), “Rates of convergence for everywhere-positive Markov chains”. *Statistics and Probability Letters* **22** (1995), 333–338.
- 13) J.S. Rosenthal (May 1994), “Analysis of the Gibbs Sampler for a model related to James-Stein Estimators”. *Statistics and Computing* **6** (1996), 269–275.
- 14) G.O. Roberts and J.S. Rosenthal (November 1994), “Shift-coupling and convergence rates of ergodic averages”. *Communications in Statistics – Stochastic Models*, Vol. **13**, No. **1** (1997), 147–165.
- 15) J.S. Rosenthal (November 1994), “Markov chain convergence: from finite to infinite”. *Stochastic Processes and their Applications* **62** (1996), 55–72.
- 16) G.O. Roberts and J.S. Rosenthal (June 1995), “Optimal scaling of discrete approximations to Langevin diffusions”. *Journal of the Royal Statistical Society, Series B* **60** (1998), 255–268.
- 17) J.S. Rosenthal (June 1995), “Faithful couplings of Markov chains: now equals forever”. *Advances in Applied Mathematics* **18** (1997), 372–381.
- 18) G.O. Roberts, J.S. Rosenthal, and P.O. Schwartz (November 1995), “Convergence properties of perturbed Markov chains”. *Journal of Applied Probability* **35** (1998), 1–11.
- 19) G.O. Roberts and J.S. Rosenthal (January 1996), “Quantitative bounds for convergence rates of continuous time Markov processes”. *Electronic Journal of Probability* **1** (1996), Paper no. 9, 1–21.
- 20) M.K. Cowles and J.S. Rosenthal (May 1996), “A simulation approach to convergence rates for Markov chain Monte Carlo algorithms”. *Statistics and Computing* **8** (1998), 115–124.

- 21) G.O. Roberts and J.S. Rosenthal (August 1996), “Geometric ergodicity and hybrid Markov chains”. *Electronic Communications in Probability* **2** (1997), Paper no. 2, 13–25.
- 22) G.O. Roberts and J.S. Rosenthal (January 1997), “Two convergence properties of hybrid samplers”. *Annals of Applied Probability* **8** (1998), 397–407.
- 23) G.O. Roberts and J.S. Rosenthal (February 1997), “Markov chain Monte Carlo: Some practical implications of theoretical results” (with discussion). *Canadian Journal of Statistics* **26** (1998), 5–31.
- 24) J.S. Rosenthal and P.O. Schwartz (May 1997), “Gambling systems and multiplication-invariant measures”. *Advances in Applied Mathematics* **22** (1999), 303–311.
- 25) G.O. Roberts and J.S. Rosenthal (June 1997), “On convergence rates of Gibbs samplers for uniform distributions”. *Annals of Applied Probability* **8** (1998), 1291–1302.
- 26) G.O. Roberts and J.S. Rosenthal (July 1997), “Convergence of slice sampler Markov chains”. *Journal of the Royal Statistical Society, Series B* **61** (1999), 643–660.
- 27) M.K. Cowles, G.O. Roberts, and J.S. Rosenthal (December 1997), “Possible biases induced by MCMC convergence diagnostics”. *Journal of Statistical Computation and Simulation* **64** (1999), 87–104.
- 28) S. Petrone, G.O. Roberts, and J.S. Rosenthal (May 1998), “A note on convergence rates of Gibbs sampling for nonparametric mixtures”. *Far East Journal of Theoretical Statistics* **3** (1999), 213–225.
- 29) D.J. Murdoch and J.S. Rosenthal (May 1998), “Efficient use of exact samples”. *Statistics and Computing* **10** (2000), 237–243.
- 30) M.J. Osborne, J.S. Rosenthal, and M.A. Turner (May 1998), “Meetings with costly participation”. *American Economic Review* **90** (2000), 927–943. [See also the “Reply”, *American Economic Review* **95** (2005), 1351–1354.]
- 31) R. Pemantle and J.S. Rosenthal (August 1998), “Moment conditions for a sequence with negative drift to be uniformly bounded in L^r ”. *Stochastic Processes and their Applications* **82** (1999), 143–155.

- 32)** G.O. Roberts and J.S. Rosenthal (November 1998), “Markov chains and de-initialising processes”. *Scandinavian Journal of Statistics* **28** (2001), 489–504.
- 33)** J.S. Rosenthal (March 1999), “Parallel computing and Monte Carlo algorithms”. *Far East Journal of Theoretical Statistics* **4** (2000), 207–236.
- 34)** J.S. Rosenthal (March 1999), “A review of asymptotic convergence for general state space Markov chains”. *Far East Journal of Theoretical Statistics* **5** (2001), 37–50.
- 35)** J.A. Fill, M. Machida, D.J. Murdoch, and J.S. Rosenthal (April 1999), “Extension of Fill’s perfect rejection sampling algorithm to general chains”. *Random Structures and Algorithms* **17** (2000), 290–316.
- 36)** G.O. Roberts and J.S. Rosenthal (May 1999), “The polar slice sampler”. *Stochastic Models* **18** (2002), 257–280.
- 37)** G.O. Roberts and J.S. Rosenthal (September 1999), “Bayesian models with infinite hierarchies”. *Bernoulli* **7** (2001), 453–471.
- 38)** R.B. Israel, J.S. Rosenthal, and J.Z. Wei (December 1999), “Finding generators for Markov chains via empirical transition matrices, with applications to credit ratings”. *Mathematical Finance* **11** (2000), 245–265.
- 39)** G.O. Roberts and J.S. Rosenthal (April 2000), “Small and Pseudo-Small Sets for Markov Chains”. *Stochastic Models* **17** (2001), 121–145.
- 40)** L. Breyer, G.O. Roberts, and J.S. Rosenthal (August 2000), “A note on geometric ergodicity and floating-point roundoff error”. *Statistics and Probability Letters* **53** (2001), 123–127.
- 41)** J.J. Lu, J.S. Rosenthal, and A.E. Shaffer (September 2000), “A case study in the meta-reasoning procedure ND”. *Journal of Experimental and Theoretical Artificial Intelligence* **15** (2003), 47–71.
- 42)** M.J. Gordon and J.S. Rosenthal (October 2000), “Capitalism’s Growth Imperative”. *Cambridge Journal of Economics* **27** (2003), 25–48.

- 43) G.O. Roberts and J.S. Rosenthal (May 2001), “One-shot coupling for certain stochastic recursive sequences.” *Stochastic Processes and their Applications* **99** (2002), 195–208.
- 44) G.O. Roberts and J.S. Rosenthal (July 2001), “Combinatorial identities associated with CFTP”. *Far East Journal of Mathematical Sciences* **13**(3) (2004), 391–404.
- 45) G.O. Roberts and J.S. Rosenthal (September 2001), “Optimal scaling for various Metropolis-Hastings algorithms”. *Statistical Science* **16** (2001), 351–367.
- 46) J.S. Rosenthal (October 2001), “Asymptotic Variance and Convergence Rates of Nearly-Periodic MCMC Algorithms”. *Journal of the American Statistical Association* **98** (2003), 169–177.
- 47) J.P. Hobert, G.L. Jones, B. Presnell, and J.S. Rosenthal (October 2001), “On the Applicability of Regenerative Simulation in Markov Chain Monte Carlo”. *Biometrika* **89** (2002), 731–743.
- 48) G. Fort, E. Moulines, G.O. Roberts, and J.S. Rosenthal (November 2001), “On the geometric ergodicity of hybrid samplers”. *Journal of Applied Probability* **40** (2003), 123–146.
- 49) A. Borodin, G.O. Roberts, J.S. Rosenthal, and P. Tsaparas (November 2001), “Link Analysis Ranking: Algorithms, Theory, and Experiments”. *ACM Transactions on Internet Technology (TOIT)* **5**(1) (2005), 231–297.
- 50) J.S. Rosenthal (February 2002), “Quantitative convergence rates of Markov chains: A simple account”. *Electronic Communications in Probability* **7** (2002), No. 13, 123–128.
- 51) T. Duchesne and J.S. Rosenthal (February 2002), “On the Collapsibility of Lifetime Regression Models”. *Advances in Applied Probability* **35** (2003), 755–772.
- 52) R. Douc, E. Moulines, and J.S. Rosenthal (March 2002), “Quantitative bounds on convergence of time-inhomogeneous Markov chains”. *Annals of Applied Probability* **14**, (2004), 1643–1665.
- 53) J.S. Rosenthal (April 2002), “Geometric Convergence Rates for Time-Sampled Markov Chains”. *Journal of Theoretical Probability* **16** (2003), 671–688.

- 54) A. Feuerverger and J.S. Rosenthal (April 2002), “Achieving Limiting Distributions for Markov Chains Using Back Buttons”. *Statistics and Computing* **14** (2004), 131–141.
- 55) S.P. Brooks, Y. Fan, and J.S. Rosenthal (May 2002), “Perfect Forward Simulation via Simulated Tempering”. *Communications in Statistics – Simulation and Computation* **35(3)** (2006), 683–713.
- 56) G.O. Roberts and J.S. Rosenthal (January 2003), “Downweighting Tightly Knit Communities in World Wide Web Rankings”. *Advances and Applications in Statistics* **3** (2003), 199–216.
- 57) O.F. Christensen, G.O. Roberts, and J.S. Rosenthal (January 2003), “Scaling Limits for the Transient Phase of Local Metropolis-Hastings Algorithms”. *Journal of the Royal Statistical Society, Series B* **67** (2005), 253–268.
- 58) Y.F. Atchadé and J.S. Rosenthal (July 2003), “On Adaptive Markov Chain Monte Carlo Algorithms”. *Bernoulli* **11(5)** (2005), 815–828.
- 59) G.O. Roberts and J.S. Rosenthal (March 2004), “General state space Markov chains and MCMC algorithms”. *Probability Surveys* **1** (2004), 20–71.
- 60) G.O. Roberts and J.S. Rosenthal (December 2004), “Harris Recurrence of Metropolis-Within-Gibbs and Trans-Dimensional Markov Chains”. *Annals of Applied Probability* **16** (2006), 2123–2139.
- 61) G.O. Roberts and J.S. Rosenthal (March 2005), “Coupling and Ergodicity of Adaptive MCMC”. *Journal of Applied Probability* **44** (2007), 458–475.
- 62) D.M. Day, I. Bevc, T. Duchesne, J.S. Rosenthal, L. Rossman, and F. Theodor (July 2005) [N-A], “Comparison of Adult Offense Prediction Methods based on Juvenile Offense Trajectories using Cross-Validation”. *Advances and Applications in Statistics* **7** (2007), 1–46.
- 63) G.O. Roberts, J.S. Rosenthal, J. Segers, and B. Sousa (September 2006), “Extremal Indices, Geometric Ergodicity of Markov Chains, and MCMC”. *Extremes* **9** (2006), 213–229.
- 64) G.O. Roberts and J.S. Rosenthal (September 2006), “Examples of Adaptive

- MCMC". *Journal of Computational and Graphical Statistics* **18(2)**, 2009, 349–367.
- 65)** G.O. Roberts and J.S. Rosenthal (September 2006), “Variance Bounding Markov Chains”. *Annals of Applied Probability* **18(3)** (2008), 1201–1214.
- 66)** J.S. Rosenthal (February 2007), “AMCMC: An R interface for adaptive MCMC”. *Computational Statistics and Data Analysis* **51** (2007), 5467–5470. [Related software available at probability.ca/amcmc, last updated March 2009.]
- 67)** J.P. Hobert and J.S. Rosenthal (February 2007), “Norm Comparisons for Data Augmentation”. *Advances and Applications in Statistics* **7** (2007), 291–302.
- 68)** J.S. Rosenthal (February 2007), “Waiting time correlations on disorderly streetcar routes”. *International Journal of Pure and Applied Mathematical Sciences*, to appear. (Accepted May 2008.)
- 69)** M. Bédard and J.S. Rosenthal (July 2007), “Optimal scaling of Metropolis algorithms: heading toward general target distributions.” *Canadian Journal of Statistics* **36(4)** (2008), 483–503.
- 70)** O. Häggström and J.S. Rosenthal (September 2007), “On Variance Conditions for Markov Chain CLTs”. *Electronic Communications in Probability* **12** (2007), 454–464.
- 71)** J.S. Rosenthal (June 2008), “Optimising Monte Carlo Search Strategies for Automated Pattern Detection”. *Far East Journal of Mathematical Sciences* **32(3)** (2009), 311–328.
- 72)** R.V. Craiu, J.S. Rosenthal, and C. Yang (July 2008), “Learn From Thy Neighbor: Parallel-Chain Adaptive MCMC”. *Journal of the American Statistical Association* **488** (2009), 1454–1466.
- 73)** J.S. Rosenthal (August 2008), “A mathematical analysis of the Sleeping Beauty problem”. *The Mathematical Intelligencer* **31(3)** (2009), 32–37.
- 74)** G.O. Roberts and J.S. Rosenthal (September 2008), “Quantitative Non-Geometric Convergence Bounds for Independence Samplers”. *Methodology and Computing in Applied Probability*, to appear. (Accepted September 2009.)

- 75) M.A. Proschan and J.S. Rosenthal (September 2009), “Beyond the Quintessential Quincunx”. *The American Statistician* **64(1)** (2010), 78–82.

Refereed Book Chapters:

- 1) J.S. Rosenthal (June 2008), “Optimal Proposal Distributions and Adaptive MCMC”. (Book chapter for *Handbook of MCMC*, ed. by S. Brooks, A. Gelman, G. Jones, and X.-L. Meng, to appear.) (Accepted April, 2010.)

Refereed Conference Proceedings:

- 1) G.O. Roberts and J.S. Rosenthal (May 1999), “Recent progress on computable bounds and the simple slice sampler”. In *Monte Carlo Methods*, N. Madras (ed.), Fields Institute Communications, AMS, Providence, R.I., 2000, 123–130.
- 2) J.A. Fill, M. Machida, D.J. Murdoch, and J.S. Rosenthal (June 1999), “Extension of Fill’s perfect rejection sampling algorithm to general chains (extended abstract)”. In *Monte Carlo Methods*, N. Madras (ed.), Fields Institute Communications, AMS, Providence, R.I., 2000, 37–52.
- 3) J.J. Lu, J.S. Rosenthal, and A.E. Shaffer (January 2000), “Crossword puzzles: a case study in compute-intensive meta-reasoning”. *Proceedings of the third International Workshop on First order Theorem Proving (FTP ’00)*, St. Andrews, Scotland, 2000.
- 4) A. Borodin, G.O. Roberts, J.S. Rosenthal, and P. Tsaparas (November 2000), “Finding Authorities and Hubs From Link Structures on the World Wide Web”. *Proceedings of the Tenth International World Wide Web Conference*, 2001. (Chosen as *Selected Area Highlight* for Hypermedia.)
- 5) T. Duchesne and J.S. Rosenthal (April 2002), “A stochastic justification of some simple reliability models”. Communications of the Third International Conference on Mathematical Methods in Reliability: Methodology and Practice, H. Langseth and B. Linqvist, Eds. (2002), 211–214.
- 6) D.M. Day, I. Bevc, J.S. Rosenthal, T. Duchesne, L. Rossman, and F. Theodor (2003) [N-A], “Predicting Adult Offenders’ Criminal Trajectories From Their Juvenile Criminal Trajectories”. Poster presented at the 111th Convention of the American Psychological Association, Toronto, Canada.

- 7) I. Bevc, T. Duchesne, J.S. Rosenthal, L. Rossman, F. Theodor, and E. Sowa (2003) [N-A], “Young Offenders’ Diagnoses As Predictors of Subsequent Adult Criminal Behaviour”. Poster presented at the 111th Convention of the American Psychological Association, Toronto, Canada.
- 8) D.M. Day, I. Bevc, T. Duchesne, J.S. Rosenthal, Y. Sun, and F. Theodor (2007) [N-A], “Criminal trajectories from adolescence to adulthood in an Ontario sample of offenders”. In G. Bourgon, R.K. Hanson, J.D. Pozzulo, K.E. Morton Bourgon, and C.L. Tanasichuk (eds.), *The Proceedings of the 2007 North American Correctional and Criminal Justice Psychology Conference (User Report)*, 143–148. Public Safety Canada, Ottawa, 2008.
- 9) J.S. Rosenthal (2008), “Markov Chain Monte Carlo Algorithms: Theory and Practice”. MCQMC’08 Conference Proceedings, published Sept 2009.

Books:

- 1) J.S. Rosenthal (2000), “A First Look at Rigorous Probability Theory” (graduate-level textbook). World Scientific Publishing Company, Singapore. 177 pages. ISBN 981-02-4303-0 / 981-02-4322-7(pbk). [Second printing, 2003; third printing, 2005; fourth printing, 2006.] Second edition (very substantial revision; 221 pages), 2006, ISBN 981-270-370-5 / 981-270-371-3(pbk). [Second printing, 2007; third printing, 2009.]
- 2) M.J. Evans and J.S. Rosenthal (2003), “Probability and Statistics: The Science of Uncertainty” (undergraduate-level textbook). W.H. Freeman Publishers, New York. 685 pages. [ISBN 0-7167-4742-1; second printing, 2004; spanish edition, Editorial Reverté, 2005. Second edition, 2010, ISBN 1-4292-2462-2.]
- 3) J.S. Rosenthal (2005), “Struck by Lightning: The Curious World of Probabilities” (book for the general public). HarperCollins Canada. 264 pages. ISBN 0-0020-0791-6. [Canadian hardcover published September 2005; six printings; made numerous bestseller lists. Canadian paperback edition (including additional 18-page “PS” section) published September 2006; two printings; made numerous bestseller lists. Also published in the United States by Joseph Henry Press, 2006; in Italy by Longanesi, 2006; in Australia and New Zealand by ABC Enterprises, 2006; in Slovenia by DMFA, 2007; in Germany and Austria and Switzerland by Eighorn, 2007; in Japan by Hayakawa, 2007; in India by Jaico, 2008; in the

United Kingdom by Granta, 2008; in the Czech Republic by Academia, 2008; in Korea by the Institute of Urban Future; and in Spain by Tusquets. Excerpt published in *The Act of Writing*, 8th ed. (R. Conrad, ed.), April 2009. For details see probability.ca/sbl.]

Non-Refereed Publications:

- 1) G. Baumgartner, J. Chan, J.S. Rosenthal (February 1988), “On Packing a Train”. Winning paper in *Competition in Mathematical Modeling*. Published in *Journal of Undergraduate Mathematics and its Applications*, Vol. **9** No. **4** (1988), 353–371.
- 2) P. Diaconis and J.S. Rosenthal (March 1992), in “Discussion on Gibbs sampler and other Markov chain Monte Carlo methods”. *Journal of the Royal Statistical Society, Series B*, Vol. **55** No. **1** (1993), 71. (Invited.)
- 3) J.S. Rosenthal (June 1992), comment on “Iterative simulation using single and multiple sequences” by A. Gelman, D. Rubin, and C. Geyer. *Statistical Science*, Vol. **7** No. **4** (1992), 498. (Invited.)
- 4) J.S. Rosenthal (June 1994), “Theoretical rates of convergence for Markov chain Monte Carlo”. *Computing Science and Statistics: Proceedings of the 26th Symposium on the Interface* (J. Sall and A. Lehman, eds.). Interface Foundation of North America, Vol. **26**, 486–489 (1994).
- 5) J.S. Rosenthal (September 1994), “Markov chain Monte Carlo algorithms”. *Proceedings of IT/STAT Workshop '94*.
- 6) J.S. Rosenthal (August 1998), “They Zapped Me with Lasers” (article about laser-eye surgery). *Outreach Connection*, September 23, 1998, p. 14.
- 7) J.S. Rosenthal (August 2002), Discussion of “Efficient construction of reversible jump Markov chain Monte Carlo proposal distributions”, by S.P. Brooks, P. Giudici, and G.O. Roberts. *Journal of the Royal Statistical Society, Series B*. (Invited.)
- 8) G.O. Roberts and J.S. Rosenthal (March 2003), “Markov chain Monte Carlo”. Article for Section 10, Probability Theory, of the *Encyclopedia of the Actuarial Sciences* (S. Asmussen, ed.), 10 pages, 2003.

- 9) J.S. Rosenthal (May 2003), Margins of error in opinion polls. At <http://probability.ca/jeff/writings/pollerror.html>
- 10) J.S. Rosenthal, Drawing of Jean Chrétien. *Fred* (Fredricton community newspaper), January 2004 issue, p. 21.
- 11) J.S. Rosenthal (March 2004), Biography of the statistician W.K. Hastings. At <http://probability.ca/hastings/>
- 12) J.S. Rosenthal (April 2005), The magical mathematics of music. *Plus Magazine* **35**, May 2005.
- 13) J.S. Rosenthal (April 2005), How probability theory nearly destroyed Canada. *Outreach Connection*, Issue #620 (October 14, 2005), pp. 8–9.
- 14) J.S. Rosenthal (April 2005), Quizzes about probabilities. Published in the *Saturday Night Magazine* issues of June – October, 2005.
- 15) J.S. Rosenthal (June 2005), “Monty Hall, Monty Fall, Monty Crawl”. *Math Horizons* (September 2008 issue), pages 5–7.
- 16) J.S. Rosenthal (September 2005), Article about the probabilities of the Toronto International Film Festival’s ticket lottery system. *National Post* (newspaper), Toronto section, p. 20, September 10, 2005.
- 17) J.S. Rosenthal (August 2006), A simple solution to the Monty Hall problem. Available at: <http://probability.ca/jeff/writings/montysimple.html>
- 18) J.S. Rosenthal (September 2006), Research Contributions of the CRM-SSC Award Winner. *Le Bulletin du CRM* **12(2)** (2006), 7–14.
- 19) J.S. Rosenthal (October 2006), Book review of *King of Infinite Space: Donald Coxeter, the Man Who Saved Geometry*. Published in the *Globe and Mail*, page D10, October 14, 2006.
- 20) J.S. Rosenthal (October 2006), Statistical analysis of “insider” Ontario lottery wins, as part of an investigation by the CBC television program *Fifth Estate*. (The investigation led to loads of media coverage, Ontario legislature debate,

an Ombudsman’s investigation, the lottery CEO’s resignation, significant lottery policy reforms, several police investigations, repayment of some customers’ lottery winnings, and at least two arrests.) More information is available at:

<http://probability.ca/sbl/#fifthestate>

- 21) J.S. Rosenthal (October 2006), Probability calculations for 27 different Discovery Channel (U.S.A.) video cell phone “What Are The Odds?” segments. (Also participated in the videotaping of them.)
- 22) J.S. Rosenthal (February 2007), Statistical analysis of lottery draw numbers and of retail seller major prize wins, for the Nova Scotia Gaming Commission (40 page report).
- 23) J.S. Rosenthal (November 2007), “Lottery fraud: Solving crimes using math”. *RCMP Gazette magazine* **70(1)** (2008), 18–19 (published in both English and French). Reprinted in *Convergence* (Association des statisticiennes et statisticiens du Québec), Volume XIII(2), July 2008, 15–16.
- 24) J.S. Rosenthal (March 2008), “I’m Biased, Your Biased”. Written for *Sublime Magazine*.
- 25) D.M. Day, I. Bevc, F. Theodor, J.S. Rosenthal, and T. Duchesne (October 2008) [N-A], “Change and continuity in criminal offending: Criminal trajectories of the ‘Toronto’ sample.” Report submitted to the Ontario Ministry of Children and Youth Services. (102 pages)
- 26) J.S. Rosenthal (October 2008), Brief statistical analysis of retail seller lottery wins in Atlantic Canada, for the Nova Scotia Gaming Corporation (NSGC).
- 27) J.S. Rosenthal (January 2009), Statistical analysis of retail seller major lottery wins in Western Canada, for CBC TV National News (7 pages).
- 28) J.S. Rosenthal (February 2009), Brief statistical analysis of second- and third-place lottery wins, for CBC national radio news.

Submitted Manuscripts:

- 1) Y. Bai, G.O. Roberts, and J.S. Rosenthal (July 2008), “On the Containment Condition for Adaptive Markov Chain Monte Carlo Algorithms”.

- 2) Y. Atchadé, G.O. Roberts, and J.S. Rosenthal (July 2009), “Optimal Scaling of Metropolis-Coupled Markov Chain Monte Carlo”.
- 3) J.S. Rosenthal and A.H. Yoon (December 2009), “Detecting Multiple Authorship of United States Supreme Court Legal Decisions Using Function Words.”
- 4) A.K. Ward, D.M. Day, I. Bevc, Y. Sun, J.S. Rosenthal, and T. Duchesne (January 2010) [N-A], “Criminal Trajectories and Risk Factors in a Canadian Sample of Offenders”.
- 5) K. Latuszynski and J.S. Rosenthal (January 2010), “Adaptive Gibbs samplers”.

Unpublished Manuscripts:

- 1) J.S. Rosenthal (January 1989), “The de Branges proof of the Bieberbach Conjecture”. Master’s Thesis, Department of Mathematics, Harvard University.
- 2) J.S. Rosenthal (April 1992), “Rates of Convergence for Gibbs Sampler and other Markov Chains”. Ph.D. thesis, Department of Mathematics, Harvard University. (Dr. Persi Diaconis, advisor.)
- 3) J.S. Rosenthal (November 1992), “Convergence of Pseudo-finite Markov Chains”.
- 4) M. Bramson, J. Quastel, and J.S. Rosenthal (May 2004), “When Can Martingales Avoid Ruin?”.
- 5) J.S. Rosenthal (April 2007), “Expressions for the Markov Chain CLT Variance”. (Superseded by joint paper with Häggström, above.)

Research Papers Completed under my Supervision:

- 1) A. Gibbs, “Bounding the convergence time of the Gibbs sampler in Bayesian image reconstruction”. *Biometrika* **87(4)** (2000), 749–66.
- 2) A. Gibbs, “Convergence in the Wasserstein metric for Markov chain Monte Carlo algorithms with applications to image restoration”. *Stochastic Models* **20(4)** (2004), 473–92.

- 3) A. Gibbs and F. Su, “On choosing and bounding probability metrics”. *International Statistical Review* **70** (2001), 419–35.
- 4) W.K. Yuen, “Generalization of discrete-time geometric bounds to the convergence rate of Markov processes on \mathbf{R}^n ”. *Stochastic Models* **18(2)** (2002), 301–331.
- 5) W.K. Yuen, “Applications of geometric bounds to the convergence rate of Markov chains on \mathbf{R}^n ”, *Stochastic Processes and their Applications* **87** (2000), 1–23.
- 6) M. Bédard, “Weak Convergence of Metropolis Algorithms for Non-iid Target Distributions”. *Annals of Applied Probability* **17** (2007), 1222–44.
- 7) M. Bédard, “Optimal Acceptance Rates for Metropolis Algorithms: Moving Beyond 0.234”. *Stochastic Processes and their Applications*, to appear.
- 8) M. Bédard, “Efficient Sampling using Metropolis Algorithms: Applications of Optimal Scaling Results”. *Journal of Computational and Graphical Statistics*, to appear.
- 9) A. Jasra and C. Yang, “A regeneration proof of the central limit theorem for uniformly ergodic Markov chains”. *Statistics and Probability Letters* **78(12)** (Sept. 1, 2008), 1649–1655.
- 10) C. Yang, “On The Weak Law of Large Numbers for Unbounded Functionals for Adaptive MCMC”. Submitted for publication, February 2008.
- 11) C. Yang, “Recurrent and Ergodic Properties of Adaptive MCMC”. Submitted for publication, February 2008.
- 12) Y. Bai, “Simultaneous drift conditions for Adaptive Markov Chain Monte Carlo algorithms”. Submitted for publication, January 2009.
- 13) Y. Bai, “An adaptive directional Metropolis-within-Gibbs algorithm”. Submitted for publication, April 2009.

Invited Research Lectures:

- 1) Harvard/MIT, Prob and Phys Seminar, February 1991, “Rates of Convergence for Data Augmentation”.

- 2) Stanford University, Stats Seminar, July 1991, "Rates of Convergence for Gibbs Sampler for Variance Component Models".
- 3) U of Ottawa, Math Colloquium, Jan. 9, 1992, "Convergence to Stationarity of Random Walks on Groups".
- 4) U of Minnesota, Prob Seminar, Jan. 31, 1992, "The Cut-off Phenomenon for Random Walks on Groups".
- 5) Carnegie-Mellon U, Stat Colloq, Feb. 12, 1992, "Rates of Convergence for the Gibbs Sampler".
- 6) University of British Columbia, Math Colloq, Feb. 14, 1992, "Convergence to Stationarity of Random Walks on Groups".
- 7) University of Victoria, Math Colloq, Feb. 18, 1992, "Convergence to Stationarity of Random Walks on Groups".
- 8) McMaster University, Math Colloq, Feb. 21, 1992, "Rates of Convergence for the Gibbs Sampler".
- 9) Queen's University, Math Colloq, Feb. 24, 1992, "Rates of Convergence for the Gibbs Sampler".
- 10) University of Toronto, Stat Colloq, Feb. 25, 1992, "Rates of Convergence for the Gibbs Sampler".
- 11) U of Minnesota, Stat Colloq, Nov. 12, 1992, "Theoretical Rates of Convergence for the Gibbs Sampler".
- 12) U of Wisconsin at Madison, Prob Seminar, Jan. 28, 1993, "Harris Recurrence, and Convergence Rates for the Gibbs Sampler".
- 13) U of Minnesota, Prob Seminar, Feb. 12, 1993, "Harris Recurrence, and Convergence Rates for the Gibbs Sampler".
- 14) U of Minnesota, Math Ed Seminar, April 28, 1993, "Classroom experiments in cooperative learning."

- 15) IMS satellite conference on Directions in Probability, Stanford, CA. Invited talk, Aug. 8, 1993, "Rates of Convergence for the Gibbs Sampler".
- 16) IMA seminar on Applied Probability, Minneapolis MN. November 3, 1993, "Coupling and minorization conditions for Markov chain Monte Carlo".
- 17) Guest lecturer, course on Teaching Preparation, University of Minnesota. November 17, 1993, "Cooperative Learning".
- 18) U of Chicago, Stats colloquium, Nov. 29, 1993, "Theoretical convergence rates for Markov chain Monte Carlo".
- 19) York University, probability seminar, March 1, 1994, "Minorization and drift conditions for Markov chain Monte Carlo".
- 20) U of Toronto, Stats colloquium, March 17, 1994, "Theoretical convergence rates for Markov chain Monte Carlo".
- 21) McMaster university, stats seminar, March 23, 1994, "The cut-off phenomenon for random walks on compact groups".
- 22) Interface '94 conference, Research Triangle Park, NC. Invited talk, June 18, 1994, "Theoretical convergence rates for Markov chain Monte Carlo".
- 23) Conference on Markov chain Monte Carlo, Mt. Holyoke, MA. Invited talk, June 26, 1994. "Theoretical convergence rates for Markov chain Monte Carlo".
- 24) Special Probability Series, Dept. of Mathematics, University of Wisconsin – Madison. Four invited talks, Sept. 6,7,8,9, 1994. "Convergence of Markov chain Monte Carlo".
- 25) IEEE-IMS Information Theory Workshop on Information Theory and Statistics. Invited talk, Oct. 29, 1994. "Markov chain Monte Carlo algorithms".
- 26) University of Miami, math colloquium, April 21, 1995, "Convergence of Markov chain Monte Carlo".
- 27) University of Minnesota, probability seminar, May 5, 1995, "Shift-coupling and minorization conditions for Markov chains".

- 28) Colorado State University, statistics colloquium, May 11, 1995, “Shift-coupling and minorization conditions for Markov chains”.
- 29) Carleton University, Workshop on Simulation and Monte Carlo Algorithms, Sept. 30, 1995, “Convergence rates for Markov chain Monte Carlo algorithms”.
- 30) York University, probability seminar, Nov. 3, 1995, “Optimal scaling for Langevin algorithms”.
- 31) University of Western Ontario, statistics colloquium, Nov. 9, 1995, “Convergence rates for Markov chain Monte Carlo algorithms”.
- 32) University of Waterloo, statistics colloquium, Feb. 8, 1996, “Convergence rates for Markov chain Monte Carlo algorithms”.
- 33) University of Toronto, math colloquium, April 3, 1996, “Convergence rates for Markov chains”.
- 34) Università di Pavia (Italy), statistics seminar, April 23, 1996, “Convergence rates for Markov chain Monte Carlo algorithms”.
- 35) Mt. Holyoke College, conference on Stochastic Inference, Monte Carlo, and Empirical Methods, June 30, 1996, “Recent results on convergence of Markov chain Monte Carlo”.
- 36) Technische Universitaet Berlin (Germany), probability colloquium, December 11, 1996, “Convergence Rates for Markov chain Monte Carlo Algorithms”.
- 37) Technische Universitaet Berlin (Germany), probability seminar, December 12, 1996, “The cutoff phenomenon for random walks on compact groups”.
- 38) Dartmouth College, mathematics colloquium, March 6, 1997, “The cutoff phenomenon for random walks on compact groups”.
- 39) Statistical Society of Canada, invited talk (with discussion), Fredericton, June 2, 1997, “Markov chain Monte Carlo: Some practical implications of theoretical results”.
- 40) Queen’s University, mathematics and statistics colloquium, “Convergence of Gibbs samplers for uniform distributions”. January 30, 1998.

- 41) University of Guelph, mathematics and statistics colloquium, “Convergence of Gibbs samplers for uniform distributions”. March 27, 1998.
- 42) Workshop on Probability Theory and Applications, Nottingham Trent University (England), “The Mathematics of Markov chain Monte Carlo algorithms”. Invited keynote afternoon talk, April 24, 1998.
- 43) University of Cambridge (England), Statistical Laboratory seminar, “Slice sampler Markov chains”. April 28, 1998.
- 44) University of Warwick (England), Workshop on Randomised Algorithms and Stochastic Stability, “A stability result for general (non-Markovian) random sequences”. July 28, 1998.
- 45) Canadian Mathematical Society, winter meeting, probability session, Kingston, Ontario, “The Mathematics of Markov chain Monte Carlo”. December 14, 1998.
- 46) University of Iowa (U.S.A.), statistics colloquium, April 15, 1999.
- 47) Fields Institute, Toronto, probability seminar, “Slice sampler Markov chains”. May 26, 1999.
- 48) Università di Pavia (Italy), Workshop on Highly Structured Stochastic Systems, main speaker, September 14–18, 1999.
- 49) Concordia University, *Université du Québec à Montréal*, and *Centre de Recherches en Mathématiques*, colloquium, “Markov chain convergence times and pseudo-small sets”. Montréal, March 10, 2000.
- 50) University of Western Ontario, seminar, “Markov chain convergence times and pseudo-small sets”. March 16, 2000.
- 51) Bernoulli Society / IMS meeting, Guanajuato, Mexico, invited speaker, “Markov chain convergence times and pseudo-small sets”. May 15–20, 2000.
- 52) University of Lancaster (England), probability seminar, “Convergence of perturbed Markov chains”. June 28, 2000.
- 53) Monte Carlo 2000 Conference, Monaco, invited speaker, “Convergence of perturbed Markov chains”. July 3–5, 2000.

- 54) Colby College (Maine), mathematics colloquium, “How Quickly Does Randomness Set In?”. October 2, 2000.
- 55) Université Laval, statistics seminar, “Convergence de l’échantillonneur de Gibbs pour les distributions uniformes” (in French). December 1, 2000.
- 56) University of Toronto, statistics seminar, “An Odd Assortment of Probability Applications”. January 18, 2001.
- 57) York university, mathematics colloquium, “Convergence of Gibbs samplers for uniform distributions”. April 5, 2001.
- 58) SSC/WNAR/IMS workshop, Simon Fraser University, invited talk, “Convergence of Gibbs samplers for uniform distributions”. June 11, 2001.
- 59) TMR Workshop on MCMC Model Choice, Spetses (Greece), invited talk, “Some Thoughts about Computable Bounds for Reversible Jump Algorithms”. August 8, 2001.
- 60) Probability seminar, University of Lancaster, “Coupling Constructions for Markov Chains”. June 13, 2002.
- 61) IMS Annual Meeting, Banff, “A simulation approach to convergence rates for Markov chain Monte Carlo algorithms”. July 29, 2002.
- 62) 4th Probability Symposium, Banff, “One-Shot Coupling for Markov Chains”. July 31, 2002.
- 63) University of Minnesota, Statistics Seminar, “Coupling Constructions for Markov Chains”. October 24, 2002.
- 64) University of Minnesota, Probability Seminar, “When Can Supermartingales Avoid Ruin?”. October 25, 2002.
- 65) University of California at Berkeley, Probability Seminar, “When Can Supermartingales Avoid Ruin?”. November 22, 2002.
- 66) EPSRC short course (11 hours, joint with G.O. Roberts), Lancaster, U.K., “Understanding MCMC”. July 21–25, 2003.

- 67) LMS Durham (U.K.) Symposium on Markov Chains, “Statistics and MCMC”. July 27, 2003.
- 68) LMS Durham (U.K.) Symposium on Markov Chains, “Optimal Scaling of Metropolis-Hastings Proposal Distributions”. August 2, 2003.
- 69) Workshop on Particle and Monte Carlo Methods, Barcelona, Spain, July 24–25, 2004. “Coupling constructions and MCMC convergence”.
- 70) *Adap’ski* Workshop on Adaptive Monte Carlo Algorithms, Bormio, Italy, January 9–11, 2005. “Coupling and Ergodicity of Adaptive MCMC”.
- 71) Statistics colloquium, Université de Montréal, “Adaptive MCMC: A Java Applet’s Perspective”. March 18, 2005.
- 72) Mathematics and Statistics colloquium, York University, “Adaptive MCMC: A Java Applet’s Perspective”. March 31, 2005.
- 73) Research lecture (in honour of CRM-SSC Prize), SSC annual meeting, University of Western Ontario, “A random walk through the big Metropolis (couples welcome)”. May 31, 2005.
- 74) Mathematics and Statistics colloquium, University of Ottawa, “Adaptive MCMC: A Java Applet’s Perspective”. November 25, 2005.
- 75) Statistics seminar, University of Florida, “Adaptive MCMC: A Java Applet’s Perspective”. February 23, 2006.
- 76) Statistics seminar, Carnegie Mellon University, “Adaptive MCMC: A Java Applet’s Perspective”. May 1, 2006.
- 77) Invited lecture, “New Developments in MCMC” workshop, Warwick (England), August 2006.
- 78) Mathematics colloquium, University of Prince Edward Island, “Probability Calculations Using Martingales”. September 27, 2006.
- 79) “Rounds” presentation about probabilities, Institute for Clinical Evaluative Sciences (ICES), January 10, 2007.

- 80) Research lecture (in honour of CRM-SSC Prize), *Centre de Recherches Mathématiques*, Montréal, “Les marches aléatoires et les algorithmes MCMC” (in French). January 12, 2007.
- 81) Colloquium, Institute for the History and Philosophy of Science and Technology, University of Toronto, “From Gambling Games to Monte Carlo Algorithms”. January 24, 2007.
- 82) Statistics seminar, University of Chicago, “Adaptive MCMC: Challenges and Opportunities”. March 5, 2007.
- 83) Gentry Lectures, Wake Forest University, North Carolina, “What is MCMC?” and “Coupling and Convergence of MCMC”, March 8–9, 2007.
- 84) Math colloquium, Colby College, “What is MCMC?”, March 19, 2007.
- 85) Tutorial about MCMC (90 mins), DIMACS (New Jersey) Workshop, “MCMC: Synthesizing Theory and Practice”, June 4, 2007.
- 86) Statistics seminar, Dalhousie University, “Adaptive MCMC: Challenges and Opportunities”, June 8, 2007.
- 87) Short course (7 hours, joint with G.O. Roberts), New Directions in Monte Carlo Methods, Fleurance, France, “Coupling and Convergence for MCMC”, June 25–29, 2007.
- 88) Statistics seminar, University of Western Ontario, “Adaptive MCMC: Challenges and Opportunities”, October 25, 2007.
- 89) Statistics seminar, Harvard University, “Adaptive MCMC: Challenges and Opportunities”, November 5, 2007.
- 90) University of Toronto, Math Graduate Students seminar, “Coupling of Markov Chains”. November 13, 2007.
- 91) Fields Institute, Grad Day talk, “What is MCMC?”. November 17, 2007.
- 92) Canada-Mexico Statistics Meeting, Guanajuato, “Adapting the Metropolis Algorithm”, February 21, 2008.

- 93) Plenary speaker, MCQMC Conference, Montreal, “Markov Chain Monte Carlo Algorithms: Theory and Practice”, July 8, 2008.
- 94) Keynote speaker, ISBA Meeting, Australia, “Adaptive Markov Chain Monte Carlo Algorithms”, July 24, 2008.
- 95) Statistics seminar, University of Michigan, “Adaptive Markov Chain Monte Carlo Algorithms”, October 3, 2008.
- 96) Statistics seminar, Michigan State University, “Adaptive Markov Chain Monte Carlo Algorithms”, October 7, 2008.
- 97) Presentation to SSC Board and Executive, “What is MCMC?”, October 18, 2008.
- 98) Statistics seminar, University of Waterloo, “Adaptive Markov Chain Monte Carlo Algorithms”, November 13, 2008.
- 99) Statistics seminar, University of Warwick (England), “Adaptive MCMC”, December 12, 2008.
- 100) Keynote speaker, Graduate Student Research Day, Fields Institute, “Adaptive Markov Chain Monte Carlo Algorithms”, May 5, 2009.
- 101) Plenary Speaker, Journées de Statistique, Bordeaux, France, “Des Résultats théoriques sur les algorithmes Monte Carlo par chaînes de Markov” (in French), May 26, 2009.
- 102) PIMS Distinguished Chair lecture series, Vancouver, June 4, 5, and 10, 2009.
- 103) Statistics seminar, University of Manitoba, “Adapting Markov Chain Monte Carlo Algorithms”, Nov 10, 2009.
- 104) Statistics seminar, Centre de recherches mathématiques, “Comment optimiser l’algorithme Metropolis?” (in French), Nov 13, 2009.
- 105) Math colloquium, McMaster University, “Optimising and Adapting the Metropolis Algorithm”. Feb 5, 2010.
- 106) Statistics seminar, University of Nevada at Las Vegas, “Optimising and Adapting the Metropolis Algorithm”. Feb 19, 2010.

- 107) Presentation to graduating math/stat students, Université Laval, “Des propriétés théoriques des algorithmes MCMC”. Apr 29, 2010.
- 108) Invited talk, SSC annual meeting, Quebec City, May 24, 2010.
- 109) Plenary speaker, “MCMSki III” IMS/ISBA joint meeting, Utah, Jan 5–7, 2011.

Invited Non-Research Lectures:

- 1) U of T Alumni Homecoming, October 5, 2002.
- 2) U of T Senior Alumni Association, Monday Series, November 10, 2003.
- 3) *Word on the Street* presentation, Vancouver, September 25, 2005.
- 4) *Talk of the Town* live interview with Hal Wake, Vancouver, September 26, 2005.
- 5) University of Toronto Bookstore reading series, November 21, 2005.
- 6) *Keep Toronto Reading* series, Toronto Reference Library, February 16, 2006.
- 7) Paid speaker, First Canadian Humour Conference, Hamilton, February 18, 2006.
- 8) University Lecture Series, Markham, March 16, 2006.
- 9) University College Senior Common Room presentation, March 20, 2006.
- 10) U of T Senior Alumni Association, Wednesday Series, March 29, 2006.
- 11) Paid speaker, Responsible Gambling Council annual conference, Toronto, April 10, 2006.
- 12) U of T Senior Alumni Association, Monday Series, April 17, 2006.
- 13) U of T Senior Alumni Association, Tuesday Series, April 18, 2006.
- 14) Paid speaker, Empire Financial Group, Maui, April 25, 2006.
- 15) U of T International Alumni Council Assembly, May 13, 2006.

- 16) After-dinner speaker, *TechKnowFile* conference, Toronto, May 16, 2006.
- 17) Paid speaker, Purchasing Management Association Canada, Calgary, May 25–26, 2006.
- 18) University College Authors reading series, June 1, 2006.
- 19) Hamilton Public Library book club, September 19, 2006.
- 20) Hamilton Public Library public reading series, September 19, 2006.
- 21) Public lecture, University of Prince Edward Island, September 25, 2006.
- 22) Talk to Natural Philosophers group at U of T, October 10, 2006.
- 23) Talk to Council of Jewish Women, Toronto, October 11, 2006.
- 24) Public lecture, University of Western Ontario, October 17, 2006.
- 25) U of T Senior Alumni Association, Tuesday Series, October 24, 2006.
- 26) U of T Scarborough Senior Alumni Association, October 26, 2006.
- 27) University Lecture Series, St. George campus, October 27, 2006.
- 28) Royal Canadian Institute Sunday Science series, October 29, 2006.
- 29) Paid speaker, Scotia-McLeod investors dinner, November 1, 2006.
- 30) Talk to high school students, Crescent School, January 19, 2007.
- 31) Paid speaker, Canadian Life Insurance Medical Officers, May 14, 2007.
- 32) Distinguished Lecture in Statistics, Dalhousie University, June 8, 2007.
- 33) Talk to Oraynu Secular Jewish Congregation, “Struck by Lightning? Improbability and Everyday Choices”. September 28, 2007.
- 34) University College Senior Common Room presentation, “Prof versus lottery: Statistics on the front page”. November 26, 2007.

- 35) Talk at Toronto Police Services fraud conference, “What are the Odds: Lottery Fraud, Risk, and Probability”. December 13, 2007.
- 36) Talk to Humanist Association of Toronto, “The Curious World of Probabilities”. January 13, 2008.
- 37) Public Talk, Perimeter Institute, Waterloo, “The Curious World of Probabilities”. April 2, 2008.
- 38) Presenter, Take Our Daughters and Sons to Work Day, U of T, “Probabilities, Games and the Law of Large Numbers”. April 24, 2008.
- 39) Special guest speaker, Ontario Association for Mathematics Education conference (high school mathematics teachers), Branksome Hall, November 20, 2008.
- 40) Presenter about probability/statistics, U of T Fall Campus Day, Oct 24, 2009.
- 41) Paid speaker, Ontario Association of Law Enforcement Planners (OALEP) symposium, Stratford, “The Curious World of Probabilities”, Nov 3, 2009.
- 42) Public talk, University of Manitoba, “The Curious World of Probabilities”, Nov 9, 2009.
- 43) Public talk, L’Université de Montréal, “Pile ou face, et autres grandes questions de probabilité” (in French), Nov 12, 2009.
- 44) Paid speaker, Community of Federal Regulators workshop, Ottawa, “The Curious World of Probabilities”, Nov 23, 2009.
- 45) University Forum Lecture Series, University of Nevada at Las Vegas, “The Curious World of Probabilities”, Feb 18, 2010.
- 46) Public talk, Centre for Inquiry – Ontario, “The Curious World of Probabilities”, Apr 16, 2010.

Contributed Lectures:

- 1) Workshop on Probability and Lie Theory, McGill University. Short talk, Sept. 10, 1992, “General lower bounds for convergence of random walks”.

- 2) Randomness and Computation Workshop, Edinburgh. Short talk, July 27, 1993.
“Convergence of Independent Particle Systems”.

TEACHING:

Undergraduate Courses (Harvard):

1989	Math 21a	Multivariable Calculus
1990	Math 21a	Multivariable Calculus

Undergraduate Courses (Minnesota):

1992	Math 5681	Probability and Stochastic Processes I
1993	Math 5682	Probability and Stochastic Processes II
1993	Math 5683	Probability and Stochastic Processes III
1993	Math 1151	Precalculus

Graduate Course (Minnesota):

1993	Math 8690	Topics in Probability
------	-----------	-----------------------

Undergraduate Courses (Toronto):

1994	STA 257S	Probability with Statistical Applications
1995	STA 257S	Probability with Statistical Applications
1996	STA 257S	Probability with Statistical Applications
1996–97	SCI 199Y	First-Year Seminar
1997–98	SCI 199Y	First-Year Seminar
1998–99	SCI 199Y	First-Year Seminar
2001	STA 447S	Stochastic Processes
2002	STA 447S	Stochastic Processes
2004	STA 261S	Probability and Statistics II
2004–05	SCI 199Y	First-Year Seminar

2005–06	SCI 199Y	First-Year Seminar
2007	STA 410F	Statistical Computation
2008	STA 447S	Stochastic Processes
2008	STA 286S	Probability and Statistics for Engineering Science
2008–09	SCI 199Y	First-Year Seminar

Graduate Courses (Toronto):

1994	STA 3047S	Stochastic Processes
1994	STA 2111F	Graduate Probability I
1995	STA 2211S	Graduate Probability II
1995	STA 2111F	Graduate Probability I
1995	STA 3077F	Research Topics in Probability
1996	STA 2211S	Graduate Probability II
1996	STA 2111F	Graduate Probability I
1997	STA 2211S	Graduate Probability II
1997	STA 2111F	Graduate Probability I
1998	STA 2211S	Graduate Probability II
1998	STA 2111F	Graduate Probability I
1999	STA 2211S	Graduate Probability II
2000	STA 2112F	Mathematical Statistics I
2001	STA 2006S	Applied Stochastic Processes
2001	STA 4247S	Research Topics in Stochastic Processes
2001	STA 3047F	Stochastic Processes
2002	STA 2006S	Applied Stochastic Processes
2002	STA 2111F	Graduate Probability I
2003	STA 2211S	Graduate Probability II
2003	STA 2111F	Graduate Probability I
2003	STA 4276F	Research Topics in Monte Carlo Methods

2004	STA 2211S	Graduate Probability II
2004	STA 2111F	Graduate Probability I
2005	STA 2211S	Graduate Probability II
2005	STA 2111F	Graduate Probability I
2006	STA 2211S	Graduate Probability II
2007	STA 2102F	Computational Techniques in Statistics
2008	STA 2006S	Applied Stochastic Processes
2009	STA 3431S	Monte Carlo Methods

Ph.D. Theses Supervised:

Alison Gibbs, 1995 – 2000.

Wai Kong Yuen, 1996 – 2001.

Mylène Bédard, 2002 – 2006.

[Winner of Pierre Robillard Award for best statistics doctoral thesis defended in Canada in 2006, and of Governor General's gold medal, 2007.]

Chao Yang, 2005 – 2008.

Yan Bai, 2007 – 2009.

Post-Doctoral Fellows & Visitors Supervised:

Qing Deng, January – March, 2002.

Bruno de Sousa, August 2002 – July 2004.

Shaojun Wang, December 2002 – June 2003.

Yves Atchadé, January 2003 – May 2003.

Ye Sun (secondary supervisor), 2007 – 2009.

Krzysztof Latuszynski, September & October 2009.

Reading / research courses:

MAT 4000L, Kar Wong, Summer 1994.

MAT 1508H, Brett Stevens, Fall 1994.
MAT 4000L, Wai Kong Yuen, Summer 1996.
STA 4000H, Martin van Driel, Summer 1996.
Graduate Research Project, Phil Reiss, 1996.
STA 496H, Shira Korman, Spring 1997.
STA 4000H, Aaron Galluzzi, Summer/Fall 2001.
STA 4000H, Daniel McFadyen, Summer 2003.
NSERC URF, David Clement, Summer 2003.
STA 4000Y, Anjali Mazumder, Summer/Fall 2003.
Graduate Research Project, Kun Zhang, Summer 2004.
Graduate Research Project, Longhai Li, Summer 2004.
Graduate Research Project, Johannes Hohendorff, Fall 2005.
Graduate Research Projects, Olga Chilina, Winter & Summer 2006.
NSERC URF, Shuheng John Zheng, Summer 2006.
Undergraduate informal readings, Daniela Takeva, Summer 2006.
Ye Sun (York University), research assistantship, Summer 2006.
Graduate Research Projects, Olga Chilina, Fall & Winter 2007–8.
STA 4000H, Zhengfei Chen, Summer 2009.
STA 4000H, Fanfu Xie, Summer 2009.
STA 496H, Christian Rudnick, Summer 2009.
STA 4000H, Jian Chen, Fall 2009.
STA 4000H, Chunyan Hao, Fall 2009.
Visiting research student, Florencia Chimard, Feb–Mar 2010.

Media Interviews:

Interview for newspaper article, Globe and Mail, p. F9, March 31, 2001.

Three television interviews (on CTV, CFMT, and CityTV)
re “Day of Symmetry” (20-02-2002), February 20, 2002.

Television panelist, Discovery Health Network, May 14, 2002.

Five interviews for Global Television News (Leslie Roberts) about probabilities, on April 2, 14, 20, and 29, and May 7, 2004.

Interview on TVOntario (Mary Ito) about randomness, October 8, 2004.

Interview on CBC Television re Serial Diners (in French), June 24, 2005.

In 2005–6, I did a huge amount of media to publicise my new book *Struck by Lightning*, including a total of 45 radio interviews, 13 television interviews (in three different cities), 8 interviews for print media, and 5 live appearances; see <http://probability.ca/sbl/#publicity>.

Panelist on TVOntario (Mary Ito) about science icons, March 6, 2006.

3 radio and one TV interview about lotteries, May 4–9, 2006.

Tabby Johnson Show, Newstalk 1010 CFRB radio, May 27, 2006.

Interview for newspaper article, National Post, May 30, 2006.

CBC Television interview about lotteries, August 9, 2006.

13 different media interviews about lotteries, October 25–31, 2006.

Interview about probabilities for Radio New Zealand, October 26, 2006.

3 different media interviews about lotteries, April 3–4, 2007.

Appearance on CBC documentary “Winning for a Living”, March 6, 2008.

3 different media interviews about movie “21”, March 27–31, 2008.

Interview about probabilities on AM800 CKLW radio (Windsor), June 23, 2008.

Interview for National Public Radio’s *Marketplace* program, August 20, 2008.

Interview for CBC Radio’s *Ideas* program of Dec. 9, 2008.

Panelist on BBC World Service *The Forum* program, Dec. 17, 2008.

Interview for CBC TV National News about Western Canada retailer lottery wins, Jan. 21, 2009.

Interview for CTV news about lottery probabilities, Jan. 24, 2009.

Interview with rem.fm radio (Spain) about probabilities, Jan. 29, 2009.

Interview with WNYC radio (New York) about “luck”, Feb. 6, 2009.

Interview for CBC TV about recent Ontario retailer lottery wins, Feb. 6, 2009.

Interview with Global Television News debunking lottery “strategies”, Feb. 17, 2009.
Interview with CBC radio Vancouver about probabilities, June 4, 2009.
Interview with 640 AM radio about lotteries and other probabilities, July 15, 2009.
Interview on CBC Radio (Mary Ito) about probabilities and Haiti, Jan 24, 2010.
Interview for Toronto Star about pedestrian deaths, Jan 28, 2010.
Interview for Discovery documentary about lightning, Feb 12, 2010.
Interview for ABC Radio, Australia (Robyn Williams), Feb 12, 2010.
Interview for Global Television News about lottery probabilities, Feb 25, 2010.
Interviews with Canadian Press and with CTV about lottery probabilities, Mar 19, 2010.

Other Teaching, Lectures, and Outreach:

Faculty speaker, MAT137 student meeting, January 1994.
Helped to re-design graduate probability program, February 1994.
Probability liaison to Math Dept, March 1994.
MASSU student-faculty seminar speaker, March 1994.
Department representative, U of T Day, October 1994.
Invited lecture, Mathematical Sciences Day, April 29, 1995.
Department representative, U of T Day, October 1995.
Short talk, interdepartmental MCMC meeting, U of T, February 1, 1996.
Short talk to high school teachers, U of T, February 16, 1996.
Presentation to high school students (2.5 hours), November 23, 1996.
Supervisor of studies, Mathematical Statistics program, 1996 – present.
Department representative, U of T Day, October 1996.
Department representative, Science Options Day, March 1997.
Judge, Metro Toronto Region Science Fair, April 11, 1997.
Presenter, Discover Science Day, U of T, April 15, 1997.
Short talk to high school students, U of T, August 15, 1997.
Department representative, U of T Day, October 1997.

Presentation to high school students (1.5 hours), October 25, 1997.

Presentation to gifted high school students (1 hour), February 19, 1998.

University of Toronto, graduate student seminar speaker, November 20, 1998.

Department representative, Science Options Day, March 1999.

Presentation to high school students (1.5 hours), May 1, 2000.

Guest lecturer, JUM 102H, November 15, 2000.

Presentation to high school teachers (3 hours), Fields Institute, April 10, 2001.

Presentation to high school students (1.5 hours), May 16, 2002.

Department representative, U of T Day, October 5, 2002.

Undergrad math student Q&A session (1 hour), April 10, 2003.

Presentation to Nelson Mandela Park elementary school, March 3, 2006.

Featured author at University College book club, February 26, 2009.

Panelist, Graduate Student Research Day, Fields Institute, May 5, 2009.

Master of Ceremonies, banquet, SSC annual meeting, June 2, 2009.

Panelist, JUMP, mathematical literacy, Fields Institute, March 5, 2010.

DEPARTMENTAL AND UNIVERSITY SERVICE:

1994–95	Graduate Committee Publicity Committee Visitors Committee
1995–96	Library Committee Seminar Committee Publicity Committee Hiring Committee Secondary School Liaison Committee
1996–97	Publicity Committee Hiring Committee Secondary School Liaison Committee

- Departmental Chair Search Committee
 Endowed Chair Proposal Committee
 Departmental Research Evaluation Committee
- 1997–98 UTFA Council Representative
 UTFA Communications Subcommittee
 UTFA Academic Freedom Subcommittee
 Publicity Committee
 Secondary School Liaison Committee
 Graduate Committee
 MCMC Seminar co-organiser
 Departmental Research Evaluation Committee
 United Way departmental canvasser
 Departmental photo board organiser & photographer
- 1998–99 UTFA Council Representative
 UTFA Technical Consultant
 Planning Committee
 Departmental Teaching Evaluation Committees (two; chair of one)
 Faculty “Mentor” Program
 Departmental photo board photographer
 Author of departmental “overview” for web page
- 1999–00 (on sabbatical research leave)
 UTFA Council Representative
- 2000–01 Associate Chair, Graduate Studies
 Chair, Graduate Committee
 SGS Division III Executive Committee
 OCGS Review Committee
 Organiser, Grad Student Non-Academic Jobs Meeting
 Organiser, Grad Student “Pizza Meetings”
 Coordinator, Ph.D. Comprehensive Exams
 Computer Committee (Chair, February–June)
 Departmental Research Evaluation Committee
 Departmental photo board photographer
 Supervisor of Studies, Statistics and Mathematics programme
 UTFA Council Representative
- 2001–02 Associate Chair, Graduate Studies

- Chair, Graduate Committee
 SGS Division III Executive Committee
 Organiser, Grad Student Non-Academic Jobs Meeting
 Organiser, Grad Student “Pizza Meetings”
 Coordinator, Ph.D. Comprehensive Exams
 Chair, Computer Committee
 OCGS Review Committee
 Promotions Committee
 Departmental photo board photographer
 Departmental Chair Search Committee
 Supervisor of Studies, Statistics and Mathematics programme
 UTFA Council Representative
- 2002–03 Associate Chair, Graduate Studies
 Chair, Graduate Committee
 SGS Division III Executive Committee
 OCGS Review Committee
 Organiser, Grad Student Non-Academic Jobs Meeting
 Organiser, Grad Student “Pizza Meetings”
 Coordinator, Ph.D. Comprehensive Exams
 Departmental photo board photographer
 Hiring Committee
 MCMC Seminar organiser
 Supervisor of Studies, Statistics and Mathematics programme
 UTFA Council Representative
- 2003–04 Hiring Committee
 Computing Committee
 Planning Committee
 Promotions Committee
 Publicity and Liaison Committee
 Probability Seminar co-organiser
 Probability Ph.D. Comprehensive Exam coordinator
 Arts & Science Faculty General Committee
 Supervisor of Studies, Statistics and Mathematics programme
- 2004–05 Hiring Committees (3)
 Computing Committee
 Publicity and Liaison Committee

U of T Discovery Day coordinator
 Probability Seminar co-organiser
 Probability Ph.D. Comprehensive Exam coordinator
 Supervisor of Studies, Statistics and Mathematics programme

2005–06 Hiring Committees (2)
 Computing Committee (chair)
 Statistics Seminar coordinator
 Promotions Committee
 Probability Ph.D. Comprehensive Exam coordinator
 Supervisor of Studies, Statistics and Mathematics programme

2006–07 (on sabbatical research leave)
 Supervisor of Studies, Statistics and Mathematics programme

2007–08 Seminar Coordinator
 Computing Committee (chair)
 Graduate Committee
 Promotions Committee
 Supervisor of Studies, Statistics and Mathematics programme

2008–09 Promotions Committee
 Hiring Committee
 Staff Reorganisation Committee
 Supervisor of Studies, Statistics and Mathematics programme

2009–10 Seminar Committee (chair)
 Promotions Committee
 PTR Committee
 IMS Nominating Committee
 Dean’s Rep, Math Dept Hiring Committee
 Supervisor of Studies, Statistics and Mathematics programme

ADMINISTRATIVE POSITIONS:

Within University:

Associate Chair (Graduate Studies), Department of Statistics, 2000–03