# Mark Huber | Curriculum Vitae

+1 909 607 0938 • mhuber@cmc.edu
markhuberdatascience.org

Data Scientist specializing in computational probability, with a focus on Monte Carlo simulation for statistical applications, approximation algorithms, and numerical integration in high dimensions.

## Education

**Harvey Mudd College**
*Bachelors of Science in Mathematics* — *1994*

**Cornell University**
*Masters in Operations Research and Industrial Engineering* — *1997*

**Cornell University**
*PhD in Operations Research and Industrial Engineering* — *1999*

## Experience

**Chemistry Animation Project** — **California Inst. of Technology**
*Computer Animator* — *1991, 1992*

**ONR Graduate Fellowship** — **Naval Undersea Warfare Center**
*Visiting Researcher* — *1995*

**Data Mining Group** — **IBM Almaden**
*Visiting Researcher* — *1996*

**School of Operations Research and Industrial Engineering** — **Cornell University**
*Teaching Assistant* — *1999*

**Department of Statistics** — **Stanford University**
*NSF Postdoc in the Mathematical Sciences* — *1999-2001*

**Joint appointment in Mathematics and Statistical Science** — **Duke University**
*Assistant Professor* — *2001-2009*

**Department of Mathematical Sciences** — **Claremont McKenna College**
*Associate Professor* — *2009-2012*

**Department of Mathematical Sciences** — **Claremont McKenna College**
*Fletcher Jones Foundation Associate Professor of Mathematics and Statistics and George R. Roberts Fellow* — *2012-present*

**Department of Mathematical Sciences** — **Claremont McKenna College**
*Chair* — *2016-2019*

**Computer Science Sequence** — **Claremont McKenna College**
*Director* — *2016-present*

**Data Science Sequence** — **Claremont McKenna College**
*Director* — *2018-present*

**Department of Mathematical Sciences** — **Claremont McKenna College**
*Fletcher Jones Foundation Professor of Mathematics and Statistics and George R. Roberts Fellow* — *2018-present*

**Summer Undergraduate Research** — **Claremont McKenna College**
*Director* — *2019-2020*

**Data Science and Computer Science** **Claremont McKenna College**
*Program Director* *2020-present*

# Publications

## Book length works

[1] M. Huber. *Probability Adventures*. Independent, 2021.

[2] Mark Huber. *Probability: Lectures and Labs (2020)*. Learning College Mathematics. Independent, 2020.

[3] Mark Huber. *Probability: Lectures and Labs*. Learning College Mathematics. Independent, 2019.

[4] Mark L. Huber. *Perfect Simulation*. Number 148 in Chapman & Hall/CRC Monographs on Statistics & Applied Probability. CRC Press, 2015.

[5] M. L. Huber. *Perfect Sampling with Bounding Chains*. PhD thesis, Cornell University, 1999.

## Published and accepted articles

[6] M. Huber. Generating from the Strauss process using stitching. In Alexander Keller, editor, *Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing 2020*. arXiv: 2012.08665, to appear.

[7] I. Shapiro and M. Huber. Markov chains for computer music generation. *Journal of Humanistic Mathematics*, 11:167–195, July 2021.

[8] M. Huber. A probabilistic approach to the Fibonacci sequence. *The Mathematical Intelligencier*, 42:29–33, September 2020.

[9] M. Huber. Halving the bounds for the Markov, Chebyshev, and Chernoff inequalities through smoothing. *American Mathematical Monthly*, 126:915–927, 2019. arXiv:1803.06361.

[10] M. Huber. An optimal $(\epsilon, \delta)$-approximation scheme for the mean of random variables with bounded relative variance. *Random Structures Algorithms*, 55:356–370, 2019.

[11] M. Huber. Adaptive Markov chain Monte Carlo algorithms. In N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri, and J. L. Teugels, editors, *Wiley StatsRef-Statistics Reference Online*. Wiley, 2019. doi:10.1002/9781118445112.stat07851.

[12] M. Huber and Nevena Marić. Admissible Bernoulli correlations. *Journal of Statistical Distributions and Applications*, 6(2), 2019.

[13] M. Huber and B. Jones. Faster estimates of the mean of bounded random variables. *Mathematics and Computers in Simulation*, 161:93–101, 2019.

[14] J. Banks, S. Garrabrant, M. Huber, and A. Perizzolo. Using TPA for approximating the number of linear extensions. *J. Discrete Algorithms*, 51:1–11, 2018. arXiv:1010.4981.

[15] M. Huber. Adaptive Monte Carlo integration. In N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri, and J. L. Teugels, editors, *Wiley StatsRef-Statistics Reference Online*. Wiley, 2018. doi:10.1002/9781118445112.stat08070.

[16] J. Feng, M. Huber, and Y. Ruan. Monte Carlo with user-specified relative error. In P. W. Glynn and A. Owen, editors, *Proceedings in Mathematics & Statistics: Monte Carlo and Quasi-Monte Carlo methods*, volume 241, chapter 12. Springer, 2018.

[17] M. Huber. Optimal linear Bernoulli factories for small mean problems. *Methodology and Computing in Applied Probability*, 19:631–645, 2017. arXiv:1507.00843. doi:10.1007/s11009-016-9518-3.

[18] K. Cloud and M. Huber. Fast perfect simulation of Vervaat perpetuities. *J. Complexity*, 42:19–30, 2017. arXiv:1510.01780.

[19] M. Huber. A Bernoulli mean estimate with known relative error distribution. *Random Structures Algorithms*, 50:173–182, 2017. arXiv:1309.5413.

[20] M. Huber. Nearly optimal Bernoulli factories for linear functions. *Combin. Probab. Comput.*, 25(4):577–591, 2016. arXiv:1308.1562.

[21] M. Huber and N. Marić. Simulation of multivariate distributions with fixed marginals and correlations. *J. Appl. Probab.*, 52(2):602–608, 2015. arXiv:1311.2002.

[22] M. Huber. Approximation algorithms for the normalizing constant of Gibbs distributions. *Ann. Appl. Probab.*, 51(1):92–105, 2015. arXiv:1206.2689.

[23] M. L. Huber and S. Schott. Random construction of interpolating sets for high dimensional integration. *Journal of Applied Probability*, 51(1):92–105, 2014. arXiv:1112.3692.

[24] Mark Huber. Near-linear time simulation of linear extensions of a height-2 poset with bounded interaction. *Chic. J. Theoret. Comput. Sci.*, 2014.

[25] M. Huber and N. Marić. Minimum correlation for any bivariate Geometric distribution. *ALEA Lat. Am. J. Probab. Math. Stat.*, pages 459–470, 2014. arXiv:1406.1779.

[26] M. Huber, E. Villella, D. Rozenfeld, and J. Xu. Bounds on the artificial phase transition for perfect simulation of the hard core Gibbs processes. *Involve*, 5(3):247–255, 2012.

[27] M. Huber. Spatial birth-death swap chains. *Bernoulli*, 18(3):1031–1041, 2012. arXiv:1006.5934.

[28] M. L. Huber and J. Law. Simulation reduction of the Ising model to general matchings. *Electronic Journal of Probability*, 17:1–15, 2012. Article 33, arXiv:0907.0477v1.

[29] M. L. Huber. Simulation reductions for the Ising model. *J. Stat. Theory Pract.*, 5(3):413–424, 2011. arXiv:0908.2151v1.

[30] Faheem Mitha and Mark L. Huber. Monotonic multigamma coupling for perfect sampling. *Journal of Statistical Computation and Simulation*, 82(4):603–622, 2012.

[31] M. Huber. Spatial point processes. In S. Brooks, A. Gelman, G. Jones, and X. Meng, editors, *Handbook of MCMC*, pages 227–252. Chapman & Hall/CRC Press, 2011.

[32] J. Møller, M. L. Huber, and R. L. Wolpert. The stationary Matérn hard core process of type III. *Stochastic Process. Appl.*, 120:2142–2158, 2010.

[33] M. L. Huber and S. Schott. Using TPA for Bayesian inference. *Bayesian Statistics 9*, pages 257–282, 2010.

[34] J. A. Fill and M. L. Huber. Perfect simulation of Vervaat perpetuities. *Electron. J. Probab.*, 15:96–109, 2010.

[35] D. B. Woodward, S. C. Schmidler, and M. Huber. Conditions for rapid mixing of parallel and simulated tempering on multimodel distributions. *Ann. of Appl. Prob.*, 19(2):617–640, 2009.

[36] D. B. Woodward, S. C. Schmidler, and M. Huber. Sufficient conditions for torpid mixing of parallel and simulated tempering. *Electron. J. Probab.*, 14:780–804, 2009.

[37] M. L. Huber and R. L. Wolpert. Likelihood-based inference for Matérn type-III repulsive point processes. *Adv. Appl. Prob.*, 41(4):958–977, 2009.

[38] M. Huber. Perfect simulation with exponential tails. *Random Structures Algorithms*, 33(1):29–43, 2008.

[39] M. Huber and J. Law. Fast approximation of the permanent for very dense problems. In *Proc. of 19th ACM-SIAM Symp. on Discrete Alg.*, pages 681–689, 2008.

[40] M. Huber. Perfect simulation for image restoration. *Stochastic Models*, 23(3):475–487, 2007.

[41] D. Hearn and M. Huber. The ancestral distance test: A topdown approach to detect correlated evolution in large lineages with missing character data and incomplete phylogenies. *Systematic Biology*, 55(5):803–817, 2006.

[42] M. Huber, Y. Chen, I. Dinwoodie, A. Dobra, and M. Nicholas. Monte Carlo algorithms for Hardy-Weinberg proportions. *Biometrics*, 62:49–53, Mar 2006.

[43] M. Huber. Fast perfect sampling from linear extensions. *Discrete Mathematics*, 306:420–428, 2006.

[44] M. Huber. Exact sampling from perfect matchings of dense regular bipartite graphs. *Algorithmica*, 44:183–193, 2006.

[45] B.P. Tighe, J.E.S. Socolar, D.G. Schaeffer, W.G. Mitchener, and M.L. Huber. Force distributions in a trigonal lattice of rigid bars. *Physical Review E*, 72(031306), 2005.

[46] Y. Chen, I. Dinwoodie, A. Dobra, and M. Huber. Lattice points, contingency tables, and sampling. *Contemporary Mathematics*, 374:65–78, 2005.

[47] M. Huber and G. Reinert. The stationary distribution in the Antivoter model: exact sampling and approximations. In *Stein's Method: Expository Lectures and Applications*, pages 79–94. IMS Lecture Notes 46, 2004.

[48] M. Huber. Perfect sampling using bounding chains. *Annals of Applied Probability*, 14(2):734–753, 2004.

[49] M. L. Huber. A bounding chain for Swendsen-Wang. *Random Structures Algorithms*, 22(1):43–59, 2003.

[50] A. T. Benjamin, M. T. Fluet, and M. L. Huber. Optimal token allocations in Solitaire Knock 'm Down. *The Electronic Journal of Combinatorics*, 8(2):1–8, 2001.

[51] J. A. Fill and M. L. Huber. The Randomness Recyler approach to perfect sampling. In *Proc. 53rd Session of the ISI*, pages 69–72, 2001.

[52] J. A. Fill and M. L. Huber. The Randomness Recycler: A new approach to perfect sampling. In *Proc. 41st Sympos. on Foundations of Comp. Sci.*, pages 503–511, 2000.

[53] M. L. Huber. A faster method for sampling independent sets. In *Proc. 11th ACM-SIAM Sympos. on Discrete Algorithms*, pages 625–626, 2000.

[54] M. L. Huber. Exact sampling and approximate counting techniques. In *Proc. 30th Sympos. on the Theory of Computing*, pages 31–40, 1998.

[55] M. L. Huber. Exact sampling using Swendsen-Wang. In *Proc. 10th Sympos. on Discrete Algorithms*, pages 921–922, 1999.

## Preprints and Technical Reports

[56] M. Huber. Tail inequalities for restricted classes of discrete random variables. 2021. arXiv: 2101.03452.

[57] M. Huber. Robust estimation of the mean with bounded relative standard deviation. arXiv:1908.05386, 2019.

[58] M. Huber. Designing perfect simulation algorithms using local correctness. arXiv:1907.06748, 2019.

[59] M. Huber. The Fundamental Theorem of perfect simulation. arXiv:1704.03561., 2017.

[60] M. Huber. Partially recursive acceptance rejection. arXiv:1701.00821, 2016.

[61] M. Huber. An estimator for Poisson means whose relative error distribution is known. arXiv:1605.09445., 2016.

[62] S. R. Garcia, M. Huber, and B. Lutz. Algebraic properties of Heilbronn's exponential sum: supercharacters, Fermat congruences, and Heath-Brown's bound. arXiv:1312.1034v2, 2015.

[63] C. Evans, J. Hardin, M. Huber, D. Stoebel, and G. Wong. Differential expression analysis for multiple conditions. arXiv:1410.3370., 2014.

## External funding and awards

**Postdoctoral Fellow in the Mathematical Sciences**
*National Science Foundation* *1999–2001*
Perfect simulation techniques

**CAREER award**
*National Science Foundation* *2005–2011*
Perfect sampling techniques for high-dimensional integration

**DMS grant**
*National Science Foundation* *2014-2018*
Improved Monte Carlo methods for high dimensional sums and integrals

## Book Reviews

**Ten great ideas about chance** **P. Diaconis and B. Skyrms**
*M. Huber, AMS Notices, 917:921, 2019*

**Probability Theory: An Analytic View (2nd ed.)** **D. W. Stroock**
*M. Huber, JASA, 107:853, 2012*

**Monte Carlo and Quasi-Monte Carlo Sampling** **C. Lemieux**
*M. Huber, JASA, 105:876, 2010*

**An Introduction to Optimization (3rd ed.)** **E. K. P. Chong and S. H. Zak**
*M. Huber, JASA, 104:421, 2009*

**Introduction to Stochastic Calculus Applied to Finance (2nd ed.)** **D. Lamberton and B. Lapeyre**
*M. Huber, JASA, 104:1726, 2009*

## Selected Videos

**The Alternating Series Test** `https://www.youtube.com/watch?v=svPB4L__EC8&t=85s`
*M. Huber* *Dec 2016*

**Properties of expected value** `https://www.youtube.com/watch?v=XuAzQZ66TpM&t=21s`
*M. Huber* *Oct 2016*

**Convergence of random variables** `https://www.youtube.com/watch?v=XuAzQZ66TpM&t=21s`
*M. Huber* *Oct 2016*

**Swapping limits and expectation** `https://www.youtube.com/watch?v=jpxBJITM9i4&t=2s`
*M. Huber* *Oct 2016*

**Rigorous limits** `https://www.youtube.com/watch?v=vmSyC33jRbE`
*M. Huber* *Oct 2016*

**Sets, logic, and proofs** `https://www.youtube.com/watch?v=0ya83f_kfRU&t=21s`
*M. Huber* *Oct 2016*

**Antidifferentiation of Linear Over Quadratic** `https://www.youtube.com/watch?v=7FSsUZJ4xVY`
*M. Huber* *Apr 2014*

**Factorials** `https://www.youtube.com/watch?v=BuaUQrRHOTc`
*M. Huber* *Apr 2014*

**Exponential Growth and Separation of Variables** `https://www.youtube.com/watch?v=KB2iHuoqpB8`
*M. Huber* *Feb 2014*

**For all and there exists** https://www.youtube.com/watch?v=qni0TKd0DgU
*M. Huber* *Feb 2014*

**Supremum and Infimum** https://www.youtube.com/watch?v=Bl2G6ZGsBvk&t=1s
*M. Huber* *Feb 2014*

**Six Derivatives to Memorize** https://www.youtube.com/watch?v=lRyrewyC2xs
*M. Huber* *Mar 2013*

**Antidifferentiation of a function of a line** https://www.youtube.com/watch?v=qm-tXwmQpKQ
*M. Huber* *Mar 2013*

**Probability for continuous random variables** https://www.youtube.com/watch?v=rBRkEuU4SNI
*M. Huber* *Feb 2013*

**Indicator Functions** https://www.youtube.com/watch?v=V3pnr5gmJC8&t=35s
*M. Huber* *Feb 2013*

**Antidifferentiation with the Chain Rule** https://www.youtube.com/watch?v=9-ftis8vrXg
*M. Huber* *Dec 2012*

**Integration by Parts** https://www.youtube.com/watch?v=NkAkVWtbRZw
*M. Huber* *Nov 2012*

## Selected invited and contributed talks

**Joint Mathematics Meetings** **Virtual Meeting**
*Panel:Lessons Gleaned from Transitioning to Online Teaching* *January 2021*

**Operations Research and Information Engineering** **Cornell University, Ithaca, New York**
*Adaptive Estimation for Monte Carlo Data* *December 2020*

**Monte Carlo and Quasi-Monte Carlo methods** **Virtual Meeting**
*Generating from the Strauss Process using Stitching* *August 2020*

**Applied Mathematics Seminar** **Claremont, California**
*Robust Estimation for Monte Carlo Data* *February 2020*

**Southern California Probability Symposium** **IPAM-UCLA, Los Angeles, California**
*Bernoulli factories and local correctness* *December 2019*

**California Mathematics Project** **Cal Poly - Pomona, California**
*Data Visualization Tools* *December 2019*

**Statistics Colloquium** **Stanford University, California**
*Robust Estimation for Monte Carlo data* *October 2019*

**University of California - Riverside, Statistics Colloquium** **Riverside, California**
*Robust Estimation for Monte Carlo data* *October 2019*

**Algebra, Number Theory, and Combinatorics Seminar** **Claremont, California**
*Bounds on matrix multiplication: history and questions* *March 2019*

**13th International Conference on Monte Carlo and Quasi Monte Carlo Methods** **Rennes, France**
*Improved light tailed sample averages for robust estimation of the mean* *July 2018*

**LMS Invited Lecture Series on Computational Statistics** **University of Warwick, UK**
*Perfect Simulation Short course* *July 2018*

**The 2017 IISA International Conference on Statistics** **Hyderabad, India**
*Estimates for Monte Carlo data with user-specified error bounds* *Dec 2017*

**LMS-EPSRC Symp. on Markov Processes, Mixing Times, and Cutoff** **University of Durham, UK**
*Cutoff phenomena in perfect simulation* *Aug 2017*

**International Statistical Institute World Congress** **Marrakech, Morocco**
*Linear time perfect simulation for Markov random fields* *Jul 2017*

**Monte Carlo Methods and Applications (MCM 2017)** — **Montréal, Canada**
*Faster estimates with user-specified error for $[0,1]$ random variables* — *Jul 2017*

**Southern California Applied Mathematics Symposium** — **UC Irvine, California**
*Faster Monte Carlo with fewer samples (Plenary Speaker)* — *Jun 2017*

**Statistics Seminar Duke University** — **Durham, North Carolina**
*Fast user-specified relative error estimates* — *Mar 2017*

**Atul Vyas Memorial Lecture** — **Claremont, California**
*How to roll a five sided die* — *Nov 2016*

**Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing** — **Stanford University, Calif.**
*Monte Carlo with user-specified error* — *Aug 2016*

**Retrospective Monte Carlo Workshop** — **University of Warwick, UK**
*A Bernoulli Factory using the Fundamental Theorem of Perfect Simulation* — *Jul 2016*

**Statistics Seminar** — **Technische Universität Dortmund, Germany**
*The Fundamental Theorem of Perfect Simulation* — *Jun 2016*

**CPET Landscape of Educational Technology for Liberal Arts Education** — **Claremont, USA**
*Using video for classes* — *Feb 2016*

**Claremont Colleges Library Discourse Series** — **Claremont, USA**
*Humanistic Mathematics: A Philsophy, a Journal, and a Community* — *Nov 2015*

**George Mason University Statistics Colloquium** — **Fairfax, USA**
*Bounded variance Monte Carlo estimates* — *Oct 2015*

**AMS Fall Western Sectional Meeting** — **Fullerton, USA**
*Fast approximation algorithms for partition functions of Gibbs distributions* — *Oct 2015*

**Stochastic Processes and their Applications** — **Oxford, UK**
*Better rigorous tail bounds for general Monte Carlo estimation* — *Jul 2015*

**CRISM Seminar** — **University of Warwick, UK**
*Optimal linear Bernoulli factories for small mean problems* — *Jul 2015*

**Statistics Seminar** — **University of Minnesota, Minnesota**
*Bounding relative error of Monte Carlo estimates* — *Mar 2015*

**Mathematics Seminar** — **University of Wisconsin, Wisconsin**
*Understanding relative error in Monte Carlo simulations* — *Mar 2015*

**UFL Statistics Colloquium** — **Gainesville, Florida**
*Obtaining relative error of estimates without the Central Limit Theorem* — *Oct 2014*

**USC Mathematics Colloquium** — **Los Angeles, California**
*Building a better Bernoulli Factory* — *Sep 2014*

**Strategic Educational Technology Summit** — **Claremont, USA**
*Using Instructional Videos in and out of the classroom* — *Apr 2014*

**Fifth IMS-ISBA joint meeting: MCMSki IV** — **Chamonix, France**
*Perfect simulation for image analysis* — *Jan 2014*

**Gateways to Exploring Mathematical Sciences (GEMS)** — **Claremont, USA**
*The Monty Hall Problem* — *Nov 2013*

**AMS Western Sectional Meeting** — **Riverside, USA**
*Fast approximation algorithms for partition functions of Gibbs distributions* — *Nov 2013*

**Statistics Seminar** — **University of Kentucky, USA**
*An unbiased estimator heads with relative error independent of $p$* — *Oct 2013*

**JSM 2013 Annual Meeting** — **Montreal, Canada**
*Controlling error for combinatorial structures* — *Aug 2013*

**ISBA 2012 World Meeting** — **Kyoto, Japan**
*Fast approximation algorithms for partition functions of Gibbs distributions* — *June 2012*

**Department of Statistics Seminar** — **The Ohio State UniversityUSA**
*Fast approximation algorithms for Gibbs partition functions* — *May 2012*

**Statistics Speakers Series** — **UCLA Department of Statistics**
*Perfect Simulation of Repulsive Point Processes* — *Nov 2011*

**Mathematical and Computer Science Colloquium** — **University of Missouri-St. Louis**
*Partially Recursive Acceptance Rejection* — *Oct 2011*

**Greek stochastics $\gamma$** — **Crete, Greece**
*The Paired Product Estimator for normalizing constants of Gibbs distributions* — *June 2011*

**Natural Science Colloquium** — **Pepperdine University**
*Adative Monte Carlo Methods for Numerical Integration* — *Mar 2011*

**Fall Western Sectional AMS meeting** — **UCLA**
*Near linear time perfect simulation of corrugated surfaces* — *Oct 2010*

**Monte Carlo and Quasi-Monte Carlo Methods** — **Warsaw, Poland**
*Using TPA for Monte Carlo Integration* — *Aug 2010*

**9th Valencia International Meeting on Bayesian Statistics, (invited talk)** — **Alicante, Spain**
*Using TPA for Bayesian Inference* — *Jun 2010*

**Applied Mathematics and Statistics Department Seminar** — **UC Santa Cruz**
*Approximation of Normalizing Constants Using Random Cooling Schedules* — *Apr 2010*

**Statistics Department Seminar** — **UC Riverside, CA, USA**
*Approximation of Normalizing Constants Using Random Cooling Schedules* — *Feb 2010*

**Joint Mathematics Meetings** — **San Francisco, CA, USA**
*Spatial Birth-Death-Swap Chains* — *Jan 2010*

**Claremont Colleges Mathematics Colloquium** — **Claremont, CA, USA**
*Better numerical integration through randomness* — *Nov 2009*

**AMS Fall Western Meeting (invited talk)** — **UC Riverside, CA, USA**
*Simulation reductions for the Ising model* — *Nov 2009*

**Joint Statistical Meetings (invited talk)** — **Washington D.C.**
*Speeding up the product estimator using random temperatures* — *Aug 2009*

**Department of Statistics Colloquium** — **University of Aalborg, Denmark**
*Perfect simulation of repulsive point processes* — *May 2009*

**EPSRC Symposium Workshop on Markov Chain-Monte Carlo** — **Warwick, UK**
*Perfect simulation of Matérn type III processes* — *Mar 2009*

**Computational Algebraic Statistics, Theories and Applications** — **Kyoto, Japan**
*Sampling linear extensions for inference* — *Dec 2008*

**Department of Applied Mathematics and Statistics Seminar** — **The Johns Hopkins University**
*Perfect simulation of Matérn type III point processes* — *Oct 2008*

**Department of Mathematics Probability Seminar** — **Duke University, North Carolina**
*Conditions for Parallel and Simulated Tempering to be fast or slow* — *Oct 2008*

**Stochastics Seminar, School of Mathematics** — **Georgia Institute of Technology, USA**
*Perfect simulation of Matérn type III point processes* — *Oct 2008*

**School of Operations Research and Industrial Engineering Colloquium** — **Cornell University**
*Dealing with Matérn type III point processes* — *Sep 2008*

**Advances in Analysis of Monte Carlo Methods workshop** — **Harvard University, Massachusetts**
*An Overview of Perfect Sampling Methods* — *Dec 2007*

**School of Statistics Seminar** — **University of Minnesota**
*Perfect simulation of repulsive point processes* — *Oct 2007*

**New Developments in MCMC (invited talk)** — **Warwick, UK**
*Perfect simulation with the Randomness Recycler for arbitrary state spaces* — *Aug 2006*

**Department of Mathematics** — **UC Davis**
*Advanced Acceptance/Rejection Methods for Monte Carlo Algorithms* — *Mar 2006*

**Joint Statistical Meetings (contributed talk)** — **Toronto, Canada**
*Time Dependent Update Functions for Perfect Sampling* — *Aug 2004*

**IMS meeting (invited talk)** — **Singapore**
*Time dependent update functions for perfect sampling* — *Mar 2004*

**Mathematics Colloquium** — **University of Ulm, Germany**
*Perfect Sampling: techniques and challenges* — *Dec 2003*

**Mathematisches Forschungsinstitut Oberwolfach (plenary lecture)** — **Oberwolfach, Germany**
*Perfect sampling* — *Dec 2003*

**Opening conference Stochastic Computation program SAMSI (contributed talk)** — **Durham, NC**
*Perfect sampling for some mixtures of distributions* — *Sep 2003*

**Electrical and Computer Engineering Seminar** — **NC State**
*Bounding chain techniques for perfect sampling* — *Feb 2003*

**Undergraduate workshop in the Stochastic Computation Program, SAMSI** — **Durham, NC**
*Stochastic Computation Techniques* — *Feb 2003*

**First Cape Cod workshop on Monte Carlo methods (invited talk)** — **Cape Cod, MA**
*Introduction to the Randomness Recycler* — *Sep 2002*

**Statistics Colloquium** — **University of North Carolina at Chapel Hill**
*Using the Randomness Recycler* — *Feb 2002*

**53rd Annual Meeting of the International Statistical Institute (invited talk)** — **Seoul, South Korea**
*The Randomness Recycler approach to perfect simulation* — *Aug 2001*

**Seminar** — **IBM Research-Almaden**
*A new approach to perfect sampling from nasty distributions* — *Sep 2000*

**Department of Statistics Colloquium** — **Stanford University**
*A new approach to perfect sampling from nasty distributions* — *Jul 2000*