Curriculum Vitae

Mark Huber

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Education

Doctorate of Philosophy Cornell University 1999
B.S. in Mathematics at Harvey Mudd College, 1994
Masters in Operations Research at Cornell University, 1997
Ph.D. in Operations Research at Cornell University, 1999

Areas of Research

Monte Carlo simulation and stochastic computation

Professional Service

Selected Recent Invited Talks

Time Dependent Update Functions for Perfect Sampling, Joint Statistical Meetings, August, 2004
Time dependent update functions for perfect sampling, IMS meeting Singapore, March 11, 2004
Perfect Sampling: techniques and challenges, University of Ulm, 09 December 2003
Perfect sampling, Mathematisches Forschungsinstitut Oberwolfach, 05 December 2003
Markov chain moves for generating contingency tables with fixed weighted row sums, SAMSI, 29 July 2003
Bounded chain techniques for perfect sampling, Electrical and Computer Engineering seminar at NC State, 14 February 2003

Publications

Papers Published

1. Mark Huber, *Perfect sampling using bounding chains*, The Annals of Applied Probability, vol. 14 no. 2 (August, 2004), pp. 734−−753, Institute of Mathematical Sciences.
2. Mark L. Huber, *A bounding chain for the Swendsen−Wang process*, Random Structures and Algorithms, vol. 22 no. 1 (2002), pp. 53−−59.
3. Mark L. Huber, *The Randomness Recycler approach to perfect sampling*, 53rd Annual Meeting of the ISI .
4. A. Benjamin, M. Huber, M. Fluet, *Optimal Token Allocations in Solitaire Knock 'm Down*, The Electronic Journal of Combinatorics, vol. 8, no. 2, 2001, pp. 1−8 .
5. James A. Fill, Mark L. Huber, *The Randomness Recycler: A new technique for perfect sampling*, Proceeding of the 41th Annual IEEE Symposium on the Foundations of Computer Science .
6. Mark L. Huber, *Exact Random Sampling from Independent Sets*, Proceedings of the 11th Annual ACM−SIAM Symposium on Discrete Algorithms .
7. Stephen Ahearn, Mark L. Huber, Gary Sherman, *Finite groups can be arbitrarily Hamiltonian*, Communications in Algebra, vol. 27, no. 3, (1999), pp. 1013−1016 .
8. Mark L. Huber, *Exact sampling and approximate counting techniques*, Proceedings of the 30th Annual Symposium on the Theory of Computing, (1998), pp. 31−40 .

Papers Accepted

1. M. Huber, G. Reinert, *The Stationary Distribution in the Antivoter Model: Exact Sampling and Approximations*, in Stein's Method and Monte Carlo Markov chains (2004) (to appear.).
2. Y. Chen, I. Dinwoodie, A. Dobra and M. Huber, *Lattice Points, Contingency Tables, and Sampling*, Contemporary Mathematics (2004) (to appear.).
3. Y. Chen, I. Dinwoodie, A. Dobra, and M. Huber, *Lattice points, contingency tables, and sampling*, 6th SIAM Conference on Dynamical Systems (2003).

Papers Submitted

1. M. Huber, *Exact sampling from perfect matchings in nearly regular graphs*, Algorithmica (October, 2003).
2. M. Huber, Y. Chen, I. Dinwoodie, A. Dobra, and M. Nicholas, *Generating from Hardy−Weinberg Proportions*, Biometrika (2003).
3. Mark L. Huber, *Fast perfect sampling from linear extensions*, Discrete Mathematics , submitted 2002.

Papers In Preparation

1. J. Fill, M. Huber, *Perfect sampling from the Dickman distribution* (2004).

Preprints

1. M. Huber, *Birth−Death−Swap chains for perfect simulation of repulsive point processes* (2003).
2. I. Dinwoodie, A. Dobra, Y. Chen, M. Huber, M. Nicholas, *Generating from Hardy−Weinberg proportions* , preprint 2002.
3. James A. Fill, Mark L. Huber, *Linear expected time perfect generation of proper colorings of low degree graphs* , preprint 2001.

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