

## Dawn B. Woodard

Cornell University • Operations Research and Information Engineering  
206 Rhodes Hall • Ithaca, NY 14853

URL: <http://people.orie.cornell.edu/woodard>

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### CURRENT POSITION

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<b>Assistant Professor</b> <b>Cornell University</b> <b>School of Operations Research and Information Engineering</b>	8/08 - Current
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### EDUCATION

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<b>Duke University – Department of Statistical Science</b> <i>Ph.D. in Statistics.</i> Thesis: “Conditions for rapid and torpid mixing of parallel and simulated tempering on multimodal distributions.” Advised by Scott Schmidler.	12/07
<b>Duke University – Department of Statistical Science</b> <i>M.S. in Statistics</i>	6/04
<b>Stanford University – Mathematical and Computational Science</b> <i>B.S., with distinction</i>	6/01

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### AWARDS

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<b>Gertrude M. Cox Scholar, American Statistical Association</b>	2003
<b>University Scholar, Duke University</b>	2002
<b>James B. Duke Fellow, Duke University</b>	2002
<b>Honors, Stanford University</b> “Decision making under uncertainty.”	2001

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### ARTICLES

Woodard, D.B. and Goldszmidt, M. Model-based clustering for online crisis identification in distributed computing. Submitted, *Journal of the American Statistical Association*.

Bodik, P., Goldszmidt, M., Fox, A., Woodard, D.B., and Andersen, H. Fingerprinting the datacenter: automated classification of performance crises. Submitted, *EuroSys 2010*.

Woodard, D.B., Wolpert, R.L., O’Connell, M.A. Spatial inference of nitrate concentrations in groundwater. In press, *Journal of Agricultural, Biological, and Environmental Statistics*.

Woodard, D.B., Schmidler, S.C. and Huber, M. (2009). Sufficient conditions for torpid mixing of parallel and simulated tempering. *Electronic Journal of Probability* 14, 780-804.

Woodard, D.B., Schmidler, S.C. and Huber, M. (2009). Conditions for rapid mixing of parallel and simulated tempering on multimodal distributions. *Annals of Applied Probability* 19, 617-640.

Woodard, D.B. (2008). Detecting poor mixing of posterior samplers due to multimodality. Technical report, Duke University.

Woodard, D.B., Gelfand, A.E., Barlow, W.E. and Elmore, J.G. (2007). Performance assessment for radiologists interpreting screening mammography. *Statistics in Medicine* 26, 1532-1551.

O’Connell, M., Woodard, D.B., Hoffman, J. and Jack, A. (2007). Bayesian modeling with S-PLUS and the S+flexBayes library. *Pharmaceutical Users Software Exchange Proceedings*.

Woodard, D.B. and Schmidler, S.C. Lower bounds on the mixing time of adaptive Monte Carlo methods. In preparation.

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## GRANTS

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NSF PI: "Statistical Analysis of Emergency Services Data," with co-PIs Shane Henderson and David Matteson, 2009-2012. Total award: \$329,936.

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## PROFESSIONAL SERVICE

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<b>Cornell Field of Statistics</b>	2009
<i>PhD Admissions Committee</i>	
<b>Biometrics</b>	2009
<i>Referee</i>	
<b>Biometrika</b>	2009
<i>Referee</i>	
<b>Journal of Computational and Graphical Statistics</b>	2009
<i>Referee</i>	
<b>Medical Decision Making</b>	2007
<i>Referee</i>	
<b>Statistical Methodology</b>	2004
<i>Referee</i>	

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## INDUSTRY POSITIONS

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<b>Tibco Corp. (Makers of S-PLUS statistical software)</b>	5/06 - Current
<i>Statistical Consultant</i>	
<b>Microsoft Research</b>	2/09 - Current
<i>Statistical Consultant</i>	
<b>SAS Institute</b>	Summer 2005
<i>Statistician</i>	
<b>Hewlett-Packard Laboratories</b>	Summer 2003
<i>Researcher</i>	
<b>Rockwell Science Center (now Teledyne Scientific)</b>	6/99 - 6/00
<i>Statistical Software Developer</i>	
<b>Peakstone Corp.</b>	6/00 - 6/01
<i>Statistician</i>	

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## PRESENTATIONS

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<b>Dept. of Statistics, University of Washington</b>	Nov. 2009
<i>Speaker</i>	
"Model-based clustering for online crisis identification in distributed computing."	
<b>Dept. of Statistics, University of Toronto</b>	Sept. 2009
<i>Speaker</i>	
"Lower bounds on the mixing time of adaptive Monte Carlo methods."	
<b>Dept. of Statistics, Cornell University</b>	Sept. 2009
<i>Speaker</i>	
"Model-based clustering for online crisis identification in distributed computing."	
<b>Econometrics Seminar, Dept. of Economics, Cornell University</b>	Sept. 2009
<i>Speaker</i>	
"Model-based clustering for online crisis identification in distributed computing."	

<b>Meeting of the Eastern North American Region of the International Biometrics Society</b>	March 2009
<i>Speaker</i>	
“Performance assessment for radiologists interpreting screening mammography.”	
<b>Johns Hopkins School of Public Health, Dept. of Biostatistics</b>	Apr. 2009
<i>Speaker</i>	
“Physician performance assessment / Spatial inference of pollutant concentrations.”	
<b>Symposium on Optimization in MCMC, Univ. of Warwick</b>	June 2009
<i>Speaker</i>	
“Lower bounds on the mixing time of adaptive Monte Carlo methods.”	
<b>Joint Statistical Meetings</b>	Aug. 2009
<i>Speaker</i>	
“Multi-scale spatial inference of pollutant concentrations.”	
<b>Cornell Univ. School of Operations Research and Info. Eng.</b>	Sept. 2008
<i>Seminar Speaker</i>	
“Spatial inference of nitrate concentrations in groundwater.”	
<b>Cornell Univ. Department of Mathematics</b>	Oct. 2008
<i>Probability Seminar Speaker</i>	
“Bounds on the mixing time of a class of adaptive Monte Carlo methods.”	
<b>U. of California at Berkeley Department of Statistics</b>	Feb. 2008
<i>Neyman Seminar Speaker</i>	
“Conditions for rapid and torpid mixing of parallel and simulated tempering.”	
<b>Carnegie Mellon Univ. Department of Statistics</b>	Feb. 2008
<i>Seminar Speaker</i>	
“Conditions for rapid and torpid mixing of parallel and simulated tempering.”	
<b>Cornell Univ. School of Operations Research and Info. Eng.</b>	Feb. 2008
<i>Seminar Speaker</i>	
“Performance assessment for physicians / mixing time bounds for parallel and simulated tempering.”	
<b>Univ. of Massachusetts at Amherst Dept. of Mathematics and Statistics</b>	Feb. 2008
<i>Seminar Speaker</i>	
“Conditions for rapid and torpid mixing of parallel and simulated tempering.”	
<b>Univ. of Florida Dept. of Statistics</b>	Feb. 2008
<i>Seminar Speaker</i>	
“Conditions for rapid and torpid mixing of parallel and simulated tempering.”	
<b>Univ. of Iowa Dept. of Statistics</b>	Feb. 2008
<i>Seminar Speaker</i>	
“Conditions for rapid and torpid mixing of parallel and simulated tempering.”	
<b>Bayesian Biostatistics Conference (MD Anderson Cancer Center)</b>	2008
<i>Poster presenter</i>	
“Validation of Bayesian computational methods for clinical trials.”	
<b>Third Institute of Mathematical Statistics-International Society for Bayesian Analysis Joint Meeting (Bormio, Italy)</b>	2008
<i>Poster presenter</i>	
“Validation of Bayesian computational methods for clinical trials.”	
<b>Case Studies in Bayesian Statistics 9 (Carnegie-Mellon University)</b>	2007
<i>Poster presenter</i>	
“Detecting lack of convergence of Markov chain Monte Carlo due to posterior multimodality.”	
<b>Third Workshop on Monte Carlo Methods (Harvard University)</b>	2007
<i>Poster presenter</i>	

“Bounding the convergence rate of parallel tempering and conditions for rapid mixing.”  
**International Society of Bayesian Analysis Meetings (Chile and Spain)** 2004, 2006  
*Poster presenter*  
 “A hierarchical modeling approach to explaining accuracy differences between radiologists in mammogram interpretation,” and  
 “Computational complexity of simulated tempering for multimodal distributions.”  
**Breast Cancer Surveillance Consortium Meeting (Vancouver, B.C.)** 2005  
*Invited speaker*  
 “Quantifying uncertainty in performance assessment for radiologists.”  
**Duke University – Department of Statistical Science** 2004, 2006, 2007  
*Student seminar speaker*  
 “Assessing predictor importance in generalized linear mixed models,” “Computational complexity of tempering for multimodal distributions,” and “Bounding the convergence rate of parallel tempering on multimodal distributions.”

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#### PROFESSIONAL SERVICE

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**Cornell Field of Statistics** 2009  
*PhD Admissions Committee*  
**Biometrics** 2009  
*Referee*  
**Biometrika** 2009  
*Referee*  
**Journal of Computational and Graphical Statistics** 2009  
*Referee*  
**Medical Decision Making** 2007  
*Referee*  
**Statistical Methodology** 2004  
*Referee*

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#### INDUSTRY EXPERIENCE

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**Tibco Corp. (Makers of S-PLUS statistical software)** 5/06 - Current  
*Statistical Consultant*  
**Microsoft Research** 2/09 - Current  
*Statistical Consultant*  
**SAS Institute** Summer 2005  
*Statistician*  
**Hewlett-Packard Laboratories** Summer 2003  
*Researcher*  
**Rockwell Science Center (now Teledyne Scientific)** 6/99 - 6/00  
*Statistical Software Developer*  
**Peakstone Corp.** 6/00 - 6/01  
*Statistician*