

M. Beatrix Jones

Contact Information:

Institute of Information and Mathematical Sciences
Massey University, Auckland Campus
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Education:

2000, PhD University of Washington, Statistics
Dissertation: "Likelihood Inference for Parametric Dispersal Models"
Advisor: Elizabeth Thompson.
1997, MS University of Washington, Statistics
1995, BS Johns Hopkins University, Mathematical Sciences

Professional Experience:

2010-current Massey University, Auckland, New Zealand. Senior Lecturer, Institute of Information and Mathematical Sciences.
2004-2009 Massey University, Auckland, New Zealand. Lecturer, Institute of Information and Mathematical Sciences.
2002-2004 Duke University, Durham, North Carolina. Visiting Assistant Professor, Institute of Statistics and Decision Sciences, and Postdoctoral Research Fellow, Statistics and Applied Mathematical Sciences Institute
2000-2002 Penn State University, University Park, Pennsylvania. Assistant Professor, Department of Statistics.

Awards and Distinctions

2006-2007 Marsden Fund Fast Start Award "Design of parentage analysis experiments: a case study for understanding uncertainty in models with latent (unobserved) variables." \$140,000 NZD
2005 Massey University Research Fund Award "Design of parentage analysis experiments: understanding uncertainty in models with latent (unobserved) variables" \$5,000 NZD
1995-2000 Lucent Technologies Graduate Research Program for Women Grant, \$10,000 USD
1995-1999 U.S. National Science Foundation Graduate Research Fellowship \$42,000 USD
1995-1998 Achievement Rewards for College Scientists Fellowship \$15,000 USD
1995 Johns Hopkins Department of Mathematical Sciences Achievement Award

Journal Articles

1. Stockin, K. A., R. J. Law, W. D. Roe, E. Martinez, L. Meynier, P. Bridgen, and **B. Jones**, RCBs and organochlorine pesticides in Hector's (*Cephalorhynchus hectori hectori*) and Maui's (*Cephalorhynchus hectori maui*) dolphins. *Marine Pollution Bulletin* (In Press).
2. Rodley, C. D. M., F. Bertels, **B. Jones**, J. M. OSullivan (2009) Global identification of yeast chromosome interactions using Genome conformation capture. *Fungal Genetics and Biology* **46**:879-886.
3. O'Sullivan, J., D.M. Sontam, R. Grierson, and **B. Jones** (2009) "Repeated element coordinate the spatial organization of the yeast genome." *Yeast* **26**:125-138.
4. **Jones, B.**, D. Walsh, L. Werner, and A. Fiumera (2009) "Using blocks of linked single nucleotide polymorphisms as highly polymorphic genetic markers for parentage analysis." *Molecular Ecology Resources* **9**: 487-497
5. Fitch, A. M. and **M. B. Jones** (2009). "Shortest path analysis using partial correlations for classifying gene functions from gene expression data." *Bioinformatics* **25**:42-47.
6. **Jones, B.**, G. D. Grossman, D. C. I. Walsh, B. A. Porter, J. C. Avise, and A. C. Fiumera (2007). "Estimating differential reproductive success from nests of related individuals, with application to a study of the mottled sculpin, *Cottus bairdi*." *Genetics* **176**: 2427-2439.
7. **Jones, B.**, and M. West (2005). "Covariance decomposition in undirected Gaussian graphical models." *Biometrika* **59**: 779-786.
8. **Jones, B.**, C. Carvalho, A. Dobra, C. Hans, C. Carter, and M. West (2005). "Experiments in stochastic computation for high dimensional graphical models." *Statistical Science* **20**: 388-400
9. Rich, J. N., C. Hans, **B. Jones**, E. S. Iversen, R. E. McClendon, B. K. A. Rasheed, A. Dobra, H. K. Dressman, D. D. Bigner, J. R. Nevins and M. West (2005). "Gene expression profiling and analysis in graphical association studies in glioblastoma survival." *Cancer Research* **65**: 4051-4058.
10. Dobra, A., C. Hans, **B. Jones**, J. R. Nevins, G. Yao, M. West (2004). "Sparse graphical models for exploring gene expression data." *Journal of Multivariate Analysis* **90**: 196-212.
11. **Jones, B.** (2003). "Balancing genetic information and population size in parentage analysis studies." *Biometrics* **59**: 694-700.

12. **Jones, B.** (2003). "Maximum likelihood inference for seed and pollen dispersal distributions." *Journal of Agricultural, Biological and Environmental Statistics* **8**: 170-183.
13. **Jones, B.** and A. G. Clark (2003). "Bayesian sperm competition estimates." *Genetics* **163**: 1193-1199.
14. McGhee, G. C., E. L. Schnabel, K. Maxson-Stein, **B. Jones**, V. K. Stromberg, G. H. Lacy, and A. L. Jones (2002). "Relatedness of chromosomal and plasmid DNAs of *Erwinia pyrifoliae* and *Erwinia amylovora*." *Applied and Environmental Microbiology* **68**: 6182-6192.

Student Supervision

Current PhD Student: Marie Fitch, Insha Ullah

Completed Masters students: Florian Heller (Massey, 2009), Shweta Baldawa (Massey, 2009) Lillian Werner (Massey, 2007); Marie Fitch (Massey 2007); Ayako Yajima (Penn State, 2001), Mihaela Ugarcovici (Penn State, 2001)

Classroom Teaching

Penn State:

Statistical Computing (Stat 540, 2001); Genometrics (Stat 597D, 2002); Honors Elementary Statistics (Stat 200H, 2000), Biostatistics (Stat 250, 2001)

Summer Institute in Statistical Genetics (North Carolina State):

Co-Taught module "Markov Chain Monte Carlo for Genetics Applications" (2002, 2003)

Massey: (paper 1/paper 2 indicates papers that share lectures)

Principles of Statistics (161.100, 2004 & 2006-2009); Introduction to Statistics/Biometrics (161.120/161.130, 2004-2005); Probability Modelling (161.230, 2009); Multivariate Analysis/Multivariate Methods for Researchers (161.323/161.772, 2005-2008); Statistics for Business (161.110, 2008, new number 115.101, 2009)

Professional Service

Membership: Institute of Mathematical Statistics, New Zealand Statistical Association, International Society for Bayesian Analysis (ISBA)

Editorial Service: Associate editor for the *ISBA Bulletin*. Reviewing for *Australian & New Zealand Journal of Statistics*, *Bayesian Analysis*, *Biostatistics*, *Genetics*, *Journal of Agricultural Biological & Environmental Statistics*, *Journal of Applied Mathematics & Decision Sciences*, *Journal of Ecology*, *Journal of Statistical Planning & Inference*, *Neuro-Oncology*, *Mathematical Medicine & Biology*, *Molecular Ecology*, *Science*, and *Statistics & Probability Letters*.

Conference Organization:

2006 Joint New Zealand and Australian Statistics Conference, program committee

2005 Workshop on Random Graphs and Stochastic Computation held at the Statistics and Applied Mathematical Sciences Institute (SAMSI), organizing committee

2005 International Workshop on Matrices and Statistics, local arrangements committee

University Service

2008-2009 Development of the Industrial Mathematics and Statistics program within the Master of Information Sciences Degree

2008-2009 Coordinator for undergraduate projects (161.38x papers)

2007-2008 Development of the case to hire a professor in statistics, and publicity for the position once advertised.