

Curriculum vitæ of

Stephen Erickson, PhD

Post-Doctoral Fellow

University of Alabama at Birmingham
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Education

University of Alabama at Birmingham

Post-Doctoral Fellow, Section on Statistical Genetics.
September 2006 to present.

University of California, Los Angeles

PhD Statistics, September 2006.

— Dissertation: *Hierarchical empirical Bayes analysis of genomic microarrays*

— Advisor: Chiara Sabatti

MA Statistics, May 2001.

University of California, Berkeley

BA Mathematics, May 1991, with high honors and with high distinction in general scholarship.
Minor in American Literature.

Awards

Postdoctoral Career Enhancement Award, UAB Office of Postdoctoral Education, 2008.

NIH Post-Doctoral Fellowship (T32 HL072757), 2006 to present.

NIH Genomic Analysis Training Program (T32 HG02536), 2003 to 2006.

Edwin Pauley Fellowship, UCLA, 1999 to 2003.

Phi Beta Kappa, UC Berkeley, 1991.

Chancellor's Scholarship, UC Berkeley, 1987 to 1991.

Publications

Bruder, Carl E.G., Arkadiusz Piotrowski, Antoinet A.C.J. Gijbbers, Robin Andersson, **Stephen Erickson**, Teresita Diaz de Ståhl, Uwe Menzel, Johanna Sandgren, Desiree von Tell, Andrzej Poplawski, Michael Crowley, Chiquito Crasto, E. Christopher Partridge, Hemant Tiwari, David B. Allison, Jan Komorowski, Gert-Jan B. van Ommen, Dorret I. Boomsma, Nancy L. Pedersen, Johan T. den Dunnen, Karin Wirdefeldt, Jan P. Dumanski.

“Phenotypically Concordant and Discordant Monozygotic Twins Display Different DNA Copy-Number-Variation Profiles.” *American Journal of Human Genetics* 82:1–9 (2008).

Erickson, Stephen. “A likelihood-ratio test of twin zygosity using molecular genetic markers.” *Twin Research and Human Genetics* 11(1):41–43 (2008).

Musani, Solomon K., **Stephen Erickson**, David B. Allison. “EDITORIAL: Obesity—still highly heritable after all these years.” *American Journal of Clinical Nutrition* 87(2):275–276 (2008).

Erickson, Stephen and Chiara Sabatti. “Empirical Bayes Estimation of a Sparse Vector of Gene Expression Changes.” *Statistical Applications in Genetics and Molecular Biology* 4(1):art22 (2005).

Goodarzi, Mark O., **Stephen Erickson**, Sidney C. Port, Robert I. Jennrich, Stanley G. Korenman. “ β -Cell Function: A Key Pathological Determinant in Polycystic Ovary Syndrome.” *Journal of Clinical Endocrinology & Metabolism* 90(1):310–315 (2005).

Goodarzi, Mark O., **Stephen Erickson**, Sidney C. Port, Robert I. Jennrich, Stanley G. Korenman. “Relative Impact of Insulin Resistance and Obesity on Cardiovascular Risk Factors in Polycystic Ovary Syndrome.” *Metabolism* 52(6):713–719 (2003).

Pending manuscripts

Wineinger, Nathan E., Richard E. Kennedy, **Stephen W. Erickson**, Mary K. Wojcynski, Carl E. Bruder, Hemant K. Tiwari. “Statistical Issues in the Analysis of DNA Copy Number Variations.” Manuscript in submission (2008).

Beasley, T. Mark, **Stephen Erickson**, David B. Allison. “Rank-Based Inverse Normal Transformations Are Increasingly Used, But When Are They Merited?” Manuscript in submission (2008).

Guimbello, Jennifer S., **Stephen Erickson**, Tapan Mehta, Hui Wen, Grier P. Page, Eric J. Sorscher, Jeong S. Hong. “Correlation of microRNA Levels During Hypoxia With Predicted Target mRNAs Through Genome-wide Microarray Analysis.” Manuscript in submission (2008).

Presentations

“Inferring Genomic Copy Number from CGH Arrays.” Joint Statistical Meetings, Salt Lake City, Utah. 29 Jul 2007.

“‘Integrating copy number polymorphisms into array CGH analysis using a robust HMM,’ Shah, *et al* (2006).” UAB Section on Statistical Genetics journal club. 05 Apr 2007.

“‘Regional copy number-independent deregulation of transcription in cancer,’ Stransky, *et al* (2006).” UAB Department of Genetics journal club. 10 Jan 2007.

“Inferring regions of genomic loss using high-density genotyping microarrays.” UCLA Genomic Analysis Training Program Research Seminar & Luncheon. 16 Jun 2006.

“Topics in gene microarray analysis.”

— Section on Statistical Genetics, Department of Biostatistics, University of Alabama at Birmingham. 17 Feb 2006.

— Statistical and Applied Mathematical Sciences Institute, Research Triangle Park, North Carolina. 6 Mar 2006.

“A low-level analysis of genotyping array data.” UCLA Genomic Analysis Training Program Research Seminar & Luncheon. 15 Jun 2005.

“The \mathcal{L}_1 Thresholding Estimator: A coherent approach to estimation and hypothesis testing in cDNA-spotted microarrays.” UCLA Genomic Analysis Training Program Research Seminar & Luncheon. 4 Jun 2004.

“Hierarchical Bayes De-Noising of Microarray Experiments.” Joint Statistical Meetings, New York City. 14 Aug 2002.

“Blood Pressure and Cardiovascular Disease: A Reevaluation of Their Relationship Using Multiple Spline Regression.” UCLA Graduate Student Outreach Seminar. 15 Nov 2000.

Professional activities

Reviewer

— *Conference on Computational Systems Bioinformatics*, 2008.

— *Human Heredity*, 2008.

— *International Journal of Epidemiology*, 2007, 2008.

— *Obesity Reviews*, 2007.

— *Bioinformatics*, 2007, 2008.

— *Annals of Human Genetics*, 2007.

— *Pharmacogenomics*, 2007.

— *Computational Statistics and Data Analysis*, 2006–2008.

— *Systems and Synthetic Biology*, 2006.

— *Wiley Encyclopedia of Biomedical Engineering*, 2005.

— *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2005, 2006.

Organizing committee, StatGen Software Workshop Series, UAB, 2008.

Continuing education

— New Insights into Mixed Model Methodology with Applications to Genomics and Biostatistics, INRA, La-Londes-les-Maures, France, 21 to 25 May 2007.

— Advanced Practical and Theoretical Course in Array-based Analysis, Howell and Elizabeth Heflin Center for Human Genetics, UAB, 23 to 31 Jan 2007.

Attendee, Gordon Research Conference on Quantitative Genetics and Genomics, 18 to 23 Feb 2007.

Attendee, Third Seattle Symposium in Biostatistics, 21 to 22 Nov 2005.

Member, American Statistical Association, 2004 to present.

Teaching

High School Student Summer Program

UCLA Institute for Cell Mimetic Space Exploration (CMISE)

Summer 2003

Mentored a high school student during an individual research project, which included an introduction to data analysis and statistics, a historical survey of writings on biology and mathematics, and an analysis of a set of gene expression array data.

Reader, UCLA

Spring 2002 and 2003

Served as reader in two graduate statistics courses: applied regression analysis and statistical methods in computational biology.

Teaching Assistant, UCLA

April 2000 to December 2001

Over two quarters, TA'd four sections of upper-division undergraduate statistics courses. Received very positive evaluations from instructors and students.

Employment

Research Assistant, UCLA

March 2000 to July 2003

Provide SAS programming and other miscellaneous support for Prof. Sidney Port's research on heart disease risk factors.

UCLA Department of Statistics, Statistical Consulting Center

January 2000 to July 2001

Supported a class-action lawsuit filed against the County of Los Angeles for overdetections in county jails, resulting in a \$27-million settlement.

Quantum Consulting Inc, Berkeley, California

December 1992 to January 1997, and September 1998 to August 1999

Performed a variety of statistical, market research, and energy use analyses for electric and gas utilities. Responsibilities included report writing, sample design, regression analysis, and survey instrument design. Using SAS, merged several sources of data—including billing information, customer telephone surveys, appliance dealer questionnaires, facility inspections, and end-use electric meter data—into validated analysis data sets. Evaluations reports with significant contributions included:

“Evaluation of the Commercial/Industrial Chiller Retrofit Program”. Prepared for Florida Power & Light. 21 Oct 1996.

“Evaluation of the Commercial/Industrial High Efficiency Split/Packaged DX Air-Conditioning System (CHEDS) Program”. Prepared for Florida Power & Light. 21 Nov 1996.

Caulfield, Tim, Stephen Erickson, et al. *Consumer Power Company's Reduce the USe Program Nonresidential Evaluation Report* (1994).

IBAH, Emeryville, California

January 1997 to August 1998

Created statistical reports, data summaries, and data listings for clinical trials of new drugs and surgical devices. Served as sole programmer/ analyst for several projects, including a pharmacokinetic analysis of an intravenous solution and a pooled analysis of data from seven different studies of a surgical device.

Coopers & Lybrand, San Francisco, California

June 1991 to November 1992

As member of the actuarial division, produced estimates of future insurance liabilities using a variety of forecasting techniques.

Computing

Unix, Linux, Macintosh, Windows, R, S-Plus, XLISP-STAT, SAS, Stata, C++, L^AT_EX.

References

David B. Allison
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Chiara Sabatti
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