

# KEVIN HASEGAWA ENG

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- CONTACT INFORMATION Department of Statistics  
University of Wisconsin-Madison  
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Madison, WI 53707 Web: www.stat.wisc.edu/~eng/
- EDUCATION **University of Wisconsin - Madison**, Madison, WI. USA.  
Ph.D. Statistics. (In progress: Fall 2006-present).  
M.S. Statistics. 2009.  
• Certificate of emphasis in Biostatistics  
**Brown University**, Providence, RI. USA.  
Sc.B. Statistics, Honors. 2005.  
• Thesis: Efficient designs for randomized trials comparing two diagnostic tests  
Adviser: Prof. Bo Lu
- WORK EXPERIENCE **University of Wisconsin - Madison**  
**Department of Statistics**, Madison, WI. USA.  
*NHLBI Predoctoral Trainee* **April 2009 - Present**  
• Department of Biostatistics and Medical Informatics.  
• Rotation with Prof. Sijan Wang. Regularized single-index Cox regression for high-dimensional survival data.  
*Research Assistant* **January 2007 - April 2009**  
• Applications: Statistical genomics, comparative data.  
• Methods: Smoothing splines, linear mixed effects models, finite mixture models.  
• Supervisors: Prof. Grace Wahba, Prof. Sündüz Keleş.  
*Teaching Assistant* **September 2006 - January 2007**  
• Stat 371 Introduction to Statistics for Life Sciences.  
**Memorial Sloan Kettering Cancer Center**  
**Department of Epidemiology and Biostatistics**, New York, NY. USA.  
*Data Analyst* **June 2005 - August 2006**  
• SAS data analysis for Genes Environment Melanoma (GEM) study.  
• Supervisor: Dr. Colin Begg.
- AWARDS ENAR Student Travel Award 2008.  
Graduate Student Mentor Award 2008, UW Graduate School.
- PUBLICATIONS **Eng KH**, Corrada Bravo H, Keleş S. (2009) A Phylogenetic Mixture Model for the Evolution of Gene Expression Families. *Molecular Biology and Evolution*. (To Appear)

Ratkovic MT, **Eng KH**. (2009) Finding Jumps in Otherwise Smooth Curves: Identifying Critical Events in Political Processes. Political Analysis. (To Appear)

Corrada Bravo H, Wright S, **Eng KH**, Keleş S, Wahba G. Estimating Tree Structured Covariance Matrices via Mixed-Integer Programming. In Proceedings of the Twelfth International Conference on Artificial Intelligence, Volume 5: AISTATS 2009, 41-48.

Begg CB, **Eng KH**, Hummer AJ. (2007) Statistical tests for clonality. Biometrics. 63(2): 522-530.

**Eng KH**, Kosorok MR. (2005) Sample size formula for the supremum log rank statistic. Biometrics. 61(1):86-91.

IN PREPARATION **Eng KH**, Keleş S. Neutral Expectation Tests of Evolutionary Hypotheses.

**Eng KH**, Keleş S. Covariance Model Selection in Model Based Clustering.

**Eng KH**, Ratkovic MT. Likelihood Based criterion for model selection in mixed-effects models.

**Eng KH\***, Kvitek D\*, Keleş S, Gasch A. Transient Genotype-by-Environment interactions in the dynamic response of yeast to heat shock. \*Joint first authors

#### TECHNICAL

REPORTS, INVITED PAPERS **Eng KH**, Corrada Bravo H, Keleş S. (2008) A Phylogenetic Mixture Model for the Evolution of Gene Expression Families. University of Wisconsin-Madison, Dept. of Statistics Technical Report No. 1144.

**Eng KH**, Keleş S, Wahba G. (2008) A Linear Mixed Effects Clustering Model for Multi-species Time Course Gene Expression data. University of Wisconsin-Madison, Dept. of Statistics Technical Report No. 1143.

**Eng KH**, Kvitek D, Wahba G, Gasch A, Keleş S. Exploratory statistical analysis of multi-species time course gene expression data. Proceedings of the 56th International Statistical Institute. July 2007.

#### CONFERENCE

POSTERS, PRESENTATIONS ENAR Spring Meeting. March 2008.  
Student Paper Talk: A Linear Mixed Effects Clustering Model for Multi-species Time Course Gene Expression data.

Midwestern Symposium on Computational Biology and Bioinformatics. October 2007.  
Poster: Mixed effects clustering model for multi-species time course gene expression data.

#### RESEARCH EXPERIENCE

Thursday Working Group. Statistical genomics, machine learning. Supervised by Prof. Grace Wahba, Prof. Sündüz Keleş, UW-Madison. Spring 2007- Present.

Smoothing splines for political data. Joint with Marc Ratkovic, UW-Madison. Fall 2008 - present.

Statistical methods for clonality. Dr. Colin Begg, Memorial Sloan Kettering Cancer Center. Fall 2005 - Spring 2006.

Efficient designs for randomized trials comparing two diagnostic tests. Prof. Bo Lu, Brown University. Honors thesis work. Spring 2005.

Hierarchical empirical bayes methods for matched microarray experiments. Prof. Christina Kendzioriski, UW-Madison. NSF-REU Program, Summer 2004.

Sample size formula for the supremum log rank statistic. Prof. Michael Kosorok, UW-Madison. NSF-REU Program, Summer 2003.

PROFESSIONAL MEMBERSHIPS American Statistical Association  
International Biometric Society (ENAR)

SERVICE EXPERIENCE University of Wisconsin-Madison, Department of Statistics.

*Graduate Student Leader* Fall 2008, Spring 2009.

- Organized professional development workshops targeted for statistics graduate students through career services
- Organized first annual student-faculty ping pong tournament.
- Student representative in Biostatistics department chair search.

*Student Seminar, Co-organizer*

- Seminar Series: Student Research. Fall 2006, Spring 2007.
- Reading Group: Methods for Array-based data. Summer 2008.

University of Wisconsin-Madison, Department of Biostatistics and Medical Informatics.

*Graduate Mentor* Summer 2009.

- Mentor for undergraduate research program (6 students)

PERSONAL Black Belt, Taekwondo.  
Unranked, Iaido.