Jessica Minnier

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Education

Harvard University, Boston, MA

Ph.D., Biostatistics, May 2012
Committee: Drs. Tianxi Cai (advisor), Victor DeGruttola, Xihong Lin
Thesis Title: Inference and Prediction for High Dimensional Data via Penalized Regression and Kernel Machine Methods

A.M., Biostatistics, June 2009

Lewis & Clark College, Portland, OR

B.A., Mathematics with Computer Science minor, May 2007
magna cum laude

Experience

Division of Biostatistics
Department of Public Health & Preventive Medicine
School of Medicine at Oregon Health & Science University
Portland, Oregon
Assistant Professor 2013 - present

Program in Biostatistics and Biomathematics
Division of Public Health Sciences
Fred Hutchinson Cancer Research Center
Seattle, Washington
Post-doctoral Research Fellow 2012 - 2013

Department of Biostatistics, Harvard University
Boston, Massachusetts
Post-doctoral Research Assistant 2012
Graduate Research Assistant 2009 - 2012
Advisor: Dr. Tianxi Cai

Honors and Awards

APHA Statistics Section Student Research Competition Finalist 2012
Distinction in Teaching in Biostatistics, Harvard School of Public Health 2011
ASA Biometrics Section David P. Byar Travel Award for JSM 2011

International Biometric Society ENAR Distinguished Student Paper Award	2011
Phi Beta Kappa	2007
Barry M. Goldwater Excellence in Education Scholar	2006

Fellowships and Scholarships

Rose Traveling Fellowship in Chronic Disease Epidemiology and Biostatistics *Harvard School of Public Health*	2011
NIH Pre-doctoral Biostatistics Training Grant in AIDS	2007 – 2012
Lewis & Clark College Trustee Merit Scholarship	2003 – 2007
John S. Rogers Science Research Foundation Internship	2005, 2007

Publications

Published or In Press

1. Nelson J, Sklenar J, Barnes AP, **Minnier J** (2016). The START App: A Web-Based RNAseq Analysis and Visualization Resource. *Bioinformatics*, btw624.
2. Tavori H, Christian D, **Minnier J**, Plubell D, Shaprio MD, Yeang C, Guinzioni I, Croyal M, Duell BP, Lambert G, Tsimikas S, Fazio S (2016). PCSK9 association with lipoprotein (a). *Circulation Research*, 119:29-35.
3. **Minnier J**, Yuan M, Liu JS, Cai T. (2015). Risk Classification with an Adaptive Naive Bayes Kernel Machine Model. *Journal of the American Statistical Association,* 110(509); 393-404. [An earlier version won an ENAR Distinguished Student Paper Award and a David P. Byar Young Investigator Travel Award for JSM.]
4. Castro VM, **Minnier J**, Murphy SN, Kohane IS, Churchill SE, Gainer V, Cai T, Hoffnagle AG, Dai Y, Block S, Weill SR, Nadal-Vicens M, Pollastri AR, Rosenquist JN, Goryachev S, Ongur D, Sklar P, Perlis RH, Smoller JW. (2015) Validation of Electronic Health Record Phenotyping of Bipolar Disorder and Controls. *The American Journal of Psychiatry*, 172(4); 363-372.
5. Kantor ED, Hutter CM, **Minnier J**, Berndt SI, Brenner H, Caan BJ, Campbell TP, Carlson CS, Casey G, Chan AT, Chang-Claude J, Chanock SJ, Cotterchio M, Du M, Duggan D, Fuchs CS, Giovannuci EL, Gong J, Harrison TA, Hayes RB, Henderson BE, Hoffmeister M, Hopper JL, Jenkins MA, Jiao S, Kolonel LN, LeMarchand L, Lemire M, Ma J, Newcomb PA, Ochs-Balcom HM, Pflugeisen BM, Potter JD, Rudolph A, Schoen RE, Seminara D, Slattery ML, Stelling DL, Thomas F, Thornquist M, Ulrich CM, Warnick GS, Zanke BW, Hsu L, Peters U, White E. (2014). Gene-environment interaction involving recently identified colorectal cancer susceptibility loci. *Cancer Epidemiology, Biomarkers & Prevention*, 23(9); 1824?33.
6. Perlis RH, Iosifescu DV, Castro VM, Murphy SN, Gainer VS, **Minnier J**, Cai T, Goryachev S, Zeng Q, Gallagher PJ, Fava M, Weilburg JB, Churchill SE, Kohane IS, Smoller JW. (2012). Using Electronic Medical Records to Enable

Large-Scale Studies in Psychiatry: Treatment Resistant Depression as a Model. *Psychological Medicine*, 42(1), 41-50.

7. Chen YP, Dittmore A, Goda Y, Laughton A, **Minnier, J**. (2012). Locating CpG Islands with Kullback-Leibler Divergence. *Journal of Biometrics & Biostatistics*, 3(5), 148-156.
8. **Minnier J**, Tian L, Cai T. (2011). A Perturbation Method for Inference on Regularized Regression Estimates. *Journal of the American Statistical Association*, 106(496), 1371-1382.
9. McDaniel S, **Minnier J**, Betensky RA, Mohapatra G, Shen Y, Gusella J, Louis D, Cai T. (2010). Assessing Population Level Genetic Instability via Moving Average. *Statistics in Biosciences*, 2(2), 120-136.

In Preparation

1. Vasilevsky NA, **Minnier J**, Haendel MA, Champieux R. Reproducible and reusable research: Are journal data sharing policies meeting the mark? (*PeerJ* preprint: https://peerj.com/preprints/2588v1/)
2. **Minnier J**, Tian L, Cai T. Inference about Prediction Accuracy in High Dimensions via Multi-layer Cross-validation and Resampling. (submitted)
3. **Minnier J***, Gronsbell J* (equal first authors), Shen Y, Liao K, Cai T. Automated Feature Selection for Prediction with Electronic Medical Records Data.
4. Guo Q, **Minnier J**, Burchard J, Chiotti K, Spellman P, Schedin P. Physiologically activated mammary fibroblasts promote mammary cancer progression post-weaning. (submitted)
5. Burchill LJ, Gao L *(Biostat Lab student)*, Kovacs AH, Opotowsky AR, Maxwell BG, **Minnier J**, Khan A, Opotowsky S, Broberg CS. Adult Congenital Heart Failure Admissions in the United States: Trends, Resource Use and Mortality. (submitted)
6. Plubell DL, Wilmarth PA, Zhao Y, Fenton AM, **Minnier J**, Reddy AP, Klimek J, Yang X, David L, Pamir N. Extended multiplexing of TMT labeling reveals age and high fat diet specific proteome changes in mouse epididymal adipose tissue. (submitted)
7. Mott B, Le E, Dykan IY, Ammi, AY, Zhao Y, **Minnier J**, Kaul S. Myocardial Effects of Therapeutic Ultrasound in a Canine Model of Acute Myocardial Infarction. (submitted)
8. Oehler AC, **Minnier J**, Lindner JR. Increased Coronary Tortuosity is Associated with Longitudinal Myocardial Shortening But Not Left Ventricular Mass. (submitted)
9. Yadava M, Nugent M, Krebsbach A, **Minnier J**, Henrikson CA. Magnetic Resonance Imaging in Patients with Cardiac Implantable Electronic Devices: A Single-Center Prospective Study. (submitted to Circulation: Arrhythmia and Electrophysiology)

10. Grandy DK, Kimbel AD, Liu X, Grandy MS, Anoshchenko O, **Minnier J**, Placzek A, Grandy WC, Littrell OM, Cass WA, Gerhardt GA, Mark GP. The Trace Amine-Associated Receptor 1-Selective Antagonist EPPTB Reveals Two Molecular Modes of Action Underlie Methamphetamine's Stimulant Effect in Mice. (submitted)
11. Barton MD *(MD/MPH thesis committee student)*, Cary M, Kinzie D, Lambert W, **Minnier J**, Riley C. Psychiatric and Somatic Symptoms of Tortured Refugees and Asylees Residing in Portland, Oregon.

Invited Talks and Presentations

1. R and Machine Learning – Automated Feature Selection of Predictors in Electronic Medical Records.
   Portland Women Who Code Group. January 10, 2017.
2. Colorectal Cancer Risk Classification with Genetic and Environmental Data via Kernel Machine Methods.
   The 10th International Chinese Statistical Association Internation Conference. Shanghai, China. December 21, 2016.
3. The START App – Shiny Transcriptome Analysis Resource Tool.
   Portland R User Group. December 7, 2016.
4. Reproducible Research in Statistics.
   Cancer Research & Biostatistics and OHSU Knight Cancer Biostatistics Shared Resource Summer Retreat, Cancer Research & Biostatistics, Seattle, WA. June 16, 2016.
5. The START App – Shiny Transcriptome Analysis Resource Tool.
   OHSU Data Jamboree. May 20, 2016.
6. Risk classification with an adaptive naive bayes kernel machine model.
   ASA Oregon Chapter Meeting. Portland, OR. June 30, 2015.
7. Risk classification with a blockwise kernel machine model.
   Canadian Human and Statistical Genetics Meeting. Vancouver, BC. April 19, 2015
8. Kernel methods for prediction with genomic data.
   Research in Progress Seminar, Oregon Health & Science University. Portland, OR. December 11, 2014.
9. Risk classification with an adaptive naive bayes kernel machine model.
   Emerging Statistical Challenges and Methods for Analysis of Massive Genomic Data in Complex Human Disease Studies. Banff International Research Station. June 25, 2014.
10. Risk classification with a blockwise kernel machine model in the presence of gene-environment interactions.
    Big Data Seminar, Harvard School of Public Health. Boston, MA. May 20, 2014.

11. Math, Stats and CS in Public Health and Medical Research.
Mathematical Sciences Colloquium, Lewis & Clark College. Portland, OR. March 19, 2014.
12. Genome-wide risk modeling with machine learning methods.
GECCO Investigator Meetings, Fred Hutchinson Cancer Research Center. Seattle, WA. Feburary 8, 2014.
13. Regularized regression and perturbation methods for high dimensional data.
Public Health & Preventive Medicine Department Grand Rounds, Oregon Health & Science University. Portland, OR. January 16, 2014
14. Risk classification with a blockwise kernel machine model in the presence of gene-environment interactions.
Biostatistics seminar, Fred Hutchinson Cancer Research Center. Seattle, WA. March 13, 2013
15. Risk classification with an adaptive naive bayes kernel machine model.
Biostatistics seminar, Fred Hutchinson Cancer Research Center. Seattle, WA. December 5, 2012

Invited Panels

1. Women in STEM Career Panel
Lewis & Clark College. Portland. April 9, 2015.
2. Post PhD: What to Expect in Your First Year?
Women in Statistics Conference. Research Triangle. May 16, 2014
3. Post PhD: What to Expect in Your First Year?
Joint Statistical Meetings. Montreal. August 5, 2013

Submitted Talks and Presentations

1. Joint Statistical Meetings. Chicago, IL. Aug 2016
2. Am. Public Health Assoc. Annual Meeting, San Francisco, CA Oct 2012
3. Joint Statistical Meetings, San Diego, CA July 2012
4. Joint Statistical Meetings, David P. Byar Award Section, Miami, FL Aug 2011
5. New England Statistics Symposium, Storrs, CT Apr 2011
6. ENAR, Miami, FL Mar 2011
7. Joint Statistical Meetings, Vancouver, BC Aug 2010
8. ENAR, New Orleans, LA Mar 2010
9. John S. Rogers Research Program Presentations, Portland, OR Jul 2007
10. John S. Rogers Research Program Presentations, Portland, OR Jul 2005

Poster Presentations

1. Prentice Symposium, Fred Hutchinson Cancer Research Center, Seattle, WA Oct 2011

Journal Referee

Annals of Applied Statistics
Bioinformatics
Biometrics
Biostatistics
Communications in Statistics
Journal of the American Statistical Association, Theory & Methods
Journal of the American Medical Association
Statistical Applications in Genetics and Molecular Biology
Statistics in Biosciences
Statistics and its Inference
Statistics in Medicine

Professional Memberships

Chapter Representative, Oregon Chapter of American Statistical Association (2016 – present)
American Statistical Association (2008 – present)
Western North American Region of the International Biometric Society (2014 – present)
Institute of Mathematical Statistics (2008 – 2015)
Eastern North American Region, International Biometric Society (2009 – 2013)
Program in Quantitative Genomics at Harvard School of Public Health (2010 – 2012)

Technical Skills

Code: R (including Shiny), Markdown, SAS, STATA, LaTeX, Python, knowledge of C and Perl

Teaching Experience

Professor, Oregon Health & Science University, Biostatistics Program

Course for masters in Biostatistics
BSTA 552 Mathematics/Statistics II — Spring 2016, 2017

Guest Lecturer, Oregon Health & Science University, School of Medicine

Course for medical students
Scholarly Projects — Fall 2015

Lecturer, Harvard University, Department of Biostatistics

Course for doctoral students in Biostatistics

Problem Solving in Advanced Statistics — Spring 2012

Teaching Assistant, Harvard University, Department of Biostatistics

Course for doctoral students in Biostatistics and Epidemiology

Epidemiology 511: Advanced Population and Medical Genetics — Spring 2011, 2012

Courses for biomedical and social science MPH students and Masters students in Biostatistics

Biostat 214: Principles of Clinical Trials	Spring 2011
Biostat 209: Statistics for Medical Research, Translational	Summer 2010
Biostat 206: Intro. Statistics for Medical Research	Summer 2009, 2010
Biostat 226: Applied Longitudinal Data Analysis	Spring 2010
Biostat 207/208: Intro. Statistics for Medical Research II	Summer 2009
Biostat 222: Basics of Statistical Inference	Fall 2008

Teaching Assistant, Lewis & Clark College, Department of Mathematics

Course for undergraduates needing preparation for quantitative requirements

Math 055: Review of Algebra — Fall 2004 – Spring 2007

Service & Academic Activities

Member of Committee, Clinical Research Review Committee, Knight Cancer Institute, OHSU, Jan 2014 – present

Special Awards Judge, Intel Northwest Science Expo for High School Students, April 2016.

Session Chair, ICSA Applied Statistics Symposium, *Multivariate Survival Analysis – Data with Dependent Censoring and Dependent Truncation*, June 2012

Session Chair, Joint Statistical Meetings, *High-Dimensional Graphical and Correlated Modeling*, August 2011

Co-founder and Participant, Journal Club: Seminal Contributions to the Field of Biostatistics by Harvard Faculty, November 2009 – May 2012

Department Representative, Student Academic Advisory Board, Lewis & Clark College, January 2005 – January 2007