

Jean Morrison

Postdoctoral Scholar
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Department of Human Genetics

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<https://jean997.github.io>

Education

- 2016 PHD BIostatISTICS, University of Washington
Advisor: Noah Simon, Department of Biostatistics
- 2009 BA MATHEMATICS, University of Chicago

Work Experience

DEPARTMENT OF HUMAN GENETICS, UNIVERSITY OF CHICAGO

- 10.2016–
Present *Postdoctoral Scholar*
Supervisor: Xin He and Mathew Stephens

DEPARTMENT OF BIostatISTICS, UNIVERSITY OF WASHINGTON

- 12.2013–
8.2016 *Research Assistant*
Supervisor: Noah Simon
Statistical methods for spatially structured genomic data and high dimensional studies.

- 6.2014–9.2015 *Research Assistant*, Genetic Analysis Center
Supervisor: Cathy Laurie
Genome wide association analysis of blood cell and dental traits for the Hispanic Community Health Study/ Study of Latinos, a large multi-ethnic study of Latino populations.

- 6.2011–6.2014 *Research Assistant*
Supervisor: Bruce Weir and Tim Thornton
Investigations of population structure and its effects in genetic association studies.

DEPARTMENT OF MEDICINE, SECTION OF GENETICS, UNIVERSITY OF CHICAGO

- 7.2009–6.2011 *Research Assistant*

Supervisor: Nancy Cox

Genome wide association analysis, quality control and imputation for the Hyperglycemia and Adverse Pregnancy Outcomes (HAPO) study. QC and programming support for other genetic analysis projects.

Honors, Awards

- 2016 ASA Section on Genetics and Genomics Student Paper Award
University of Washington School of Public Health Gilbert S. Omenn Award for Academic Excellence
- 2016 Ruth L. Kirschstein Predoctoral Individual National Research Service Award, National Institutes of Health
- 2016 Biostatistics Statistical Genetics Training Grant, National Institutes of Health
- 2011–2014

Publications

- Morrison, Jean, Daniela Witten, and Noah Simon (2016). "Simultaneous detection and estimation of trait associations with genomic phenotypes". *Biostatistics* In press.
- Schick, Ursula M., Deepti Jain, Chani J. Hodonsky, Jean V. Morrison, James P. Davis, Lisa Brown, et al. (2016). "Genome-wide Association Study of Platelet Count Identifies Ancestry-Specific Loci in Hispanic/Latino Americans". English. *The American Journal of Human Genetics* 98, pp. 229–242.
- Morrison, Jean, Cathy C Laurie, Mary L Marazita, Anne E Sanders, Steven Offenbacher, Christian R Salazar, et al. (2015). "Genome-wide association study of dental caries in the Hispanic Communities Health Study/Study of Latinos (HCHS/SOL)." *Human Molecular Genetics* 25.4, pp. 807–816.
- Hayes, M. Geoffrey, Margrit Urbanek, Marie France Hivert, Loren L. Armstrong, Jean Morrison, Cong Guo, et al. (2013). "Identification of HKDC1 and BACE2 as genes influencing glycemic traits during pregnancy through genome-wide association studies". *Diabetes* 62.9, pp. 3282–3291.
- Morrison, Jean (2013). "Characterization and correction of error in genome-wide ibd estimation for samples with population structure". *Genetic Epidemiology* 37.6, pp. 635–641.
- Urbanek, Margrit, M. Geoffrey Hayes, Loren L. Armstrong, Jean Morrison, Lynn P. Lowe, Sylvia E. Badon, et al. (2013). "The chromosome 3q25 genomic region is associated with measures of adiposity in newborns in a multi-ethnic genome-wide association study". *Human Molecular Genetics* 22.17, pp. 3583–3596.

Below, J. E., E. R. Gamazon, J. V. Morrison, A. Konkashbaev, A. Pluzhnikov, P. M. McKeigue, et al. (2011). "Genome-wide association and meta-analysis in populations from Starr County, Texas, and Mexico City identify type 2 diabetes susceptibility loci and enrichment for expression quantitative trait loci in top signals". *Diabetologia* 54.8, pp. 2047–2055.

Presentations

Morrison, Jean and Noah Simon (2017). "Adaptive discovery of signal regions in spatially structured genomic data with false discovery rate control". In: *The Western North American Region of the International Biometric Society*. Santa Fe, NM.

Morrison, Jean, Noah Simon, and Daniela Witten (2016). "Simultaneous Detection and Estimation of Trait Associations with Genomic Phenotypes". In: *Joint Statistical Meetings*. Chicago, IL.

Morrison, Jean, Richard Sandstrom, and Noah Simon (2015). "Locally adaptive comparison of DNase I profiles to detect fine scale differences in regulatory activity." In: *American Society for Human Genetics Meetings*. Baltimore, MD.

Morrison, Jean, Daniela Witten, and Noah Simon (2014). "JADE: A tool for comparative analysis of spatially smooth genomic data." In: *American Society for Human Genetics Meetings*. San Deigo, CA.

Morrison, Jean (2012). "Overestimation of relatedness in admixed and ancestrally heterogeneous populations using method of moments estimation." In: *American Society for Human Genetics Meetings*. San Francisco, CA.

Morrison, Jean, DA Scheftner, A Pluzhnikov, LP Lowe, C Ackerman, L Armstrong, et al. (2011). "SNPs near CCNL1 associated with infant adiposity in multi-ethnic mega-analysis with strongest effect observed in European ancestry newborns". In: *International Congress on Human Genetics meeting*. Montreal, Quebec.

Morrison, Jean, Anna Pluzhnikov, MG Hayes, H Lee, David Levine, Caitlin McHugh, et al. (2010). "G6PC2 associated with fasting glucose levels in pregnant women of European ancestry." In: *American Society for Human Genetics Meetings*. Washington, DC.

Software

FRET: Association testing with one dimensional spatially correlated data such as DNase-seq and other genomic phenotypes <https://github.com/jean997/fret>

jadeTF: Differential visualizations and function fitting for one dimensional spatially correlated data <https://github.com/jean997/jadeTF>

RCC: Confidence intervals controlling the rank conditional coverage for high dimensional

parameter estimates <https://cran.r-project.org/web/packages/rcc/index.html>

Teaching Experience

- Fall 2014 *Teaching Assisitant*, BIOST 536: Categorical Data Analysis in Epidemiology
Supervisor: Scott Emerson
- Spring 2014 *Teaching Assisitant*, BIOST 540: Correlated Data Analysis
Supervisor: Ken Rice
- 9.2008–5.2009 *Teaching Assistant for SESAME Algebra*, University of Chicago
Algebra for middle grade teachers.
- 9.2006–9.2007 *Young Scholars Program Counselor/Teaching Assistant*, University of Chicago
Math enrichment program for middle schoolers.

Professional Service

- 9.2015–8.2016 *Member*, Biostatistics Department Curriculum Committee
- 9.2014–5.2015 *Member*, Biostatistics Department Student, Faculty Relations Committee