Jared D. Huling

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Department of Statistics

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Experience

2017 - Present	Assistant Professor, Department of Statistics, The Ohio State University

Education

2012 - 2017	**Ph.D.**, Statistics, University of Wisconsin-Madison, Under the supervision of Menggang Yu and Peter Chien
2008 - 2012	**B.S.** Actuarial Science, The Ohio State University *Summa cum Laude* with Honors

Publications

1. **Jared D. Huling** and Menggang Yu. Subgroup identification using the `personalized` package. To appear in the *Journal of Statistical Software*, 2019+. URL `https://arxiv.org/abs/1809.07905`

2. **Jared D. Huling**, Menggang Yu, and A. James O'Malley. Instrumental variable based estimation under the semiparametric accelerated failure time model. To appear in *Biometrics*, 2019+

3. **Jared D. Huling**, Menggang Yu, and Maureen Smith. Fused comparative intervention scoring for heterogeneity of longitudinal intervention effects. To appear in the *Annals of Applied Statistics*, 2019+

4. **Jared D. Huling** and Peter Z. G. Qian. Fast penalized regression and cross validation for tall data with the `oem` package. To appear in the *Journal of Statistical Software*, 2019+. URL `https://arxiv.org/abs/1801.09661`

5. **Jared D. Huling**, Menggang Yu, Muxuan Liang, and Maureen Smith. Risk prediction for heterogeneous populations with application to hospital admission prediction. *Biometrics*, 74(2):557–565, 2018

6. Xiao Nie, **Jared Huling**, and Peter Z. G. Qian. Accelerating large-scale statistical computation with the GOEM algorithm. *Technometrics*, 59(4):416–425, 2017

7. Shifeng Xiong, Bin Dai, **Jared Huling**, and Peter Z. G. Qian. Orthogonalizing EM: A design-based least squares algorithm. *Technometrics*, 58(3):285–293, 2016

Manuscripts Under Review and In Preparation

1. **Jared D. Huling** and Menggang Yu. Semiparametric sufficient dimension reduction for populations with structured heterogeneity. In preparation, 2019+

2. Xiaowu Dai and **Jared D. Huling**. Selection and estimation optimality in high dimensions with the TWIN penalty. 2019+. URL `https://arxiv.org/abs/1806.01936`

3. **Jared D. Huling** and Peter Chien. Neural networks for flexible emulation of large and complex computer experiments. Submitted, 2019+

Selected Awards and Honors

2017	**Travel Award** BiostatMCW - Biostatistics in the Modern Computing Era
2016	**Student Travel Award** Spring Research Conference on Statistics in Industry and Technology
2015	**Student Travel Award** International Conference on Health Policy Statistics

Research & Professional Experience

Reviewer	*Biometrics*, *Journal of Computational and Graphical Statistics*, *Brazilian Journal of Probability and Statistics*, *Journal of Statistical Software*, *Computational Statistics and Data Analysis*
Committees	OSU Biostatistics Program Graduate Studies Committee, OSU Biostatistics PhD Program Admissions Committee, OSU Masters of Applied Statistics Qualifying Exam Committee
August 2012 - July 2015	**N.I.H. Predoctoral Fellow Trainee in Biostatistics**
Spring 2014	Collaborated with Prof. Sijian Wang in the development of outcome weighted learning techniques for multiple treatments for subgroup identification.
Fall 2013	Collaborated with Prof. Menggang Yu in the development and implementation of instrumental variable estimation techniques in survival analysis for the comparison of surgical repair procedures for abdominal aortic aneurysm.
Spring 2013	Collaborated with Prof. Mark Craven on utilizing hidden Markov models for the identification and characterization of surgical skill using video data.
Fall 2012	Collaborated with Prof. Michael Newton in developing a testing procedure to determine if a surrogate cell selection technique was able to preferentially select expanded clone T-cells.

Invited Presentations

Jun 2018	*Risk Prediction for Heterogeneous Populations with Application to Hospital Admission Prediction*, 2018 ICSA Applied Statistics Symposium
Jun 2018	*Neural Networks for Flexible and Fast Emulation of Computer Experiments*, Joint Research Conference 2018
Apr 2018	*Comparative Intervention Scoring for Assessing Heterogeneity of Long-Term Health System Intervention Effects*, Joint Biostatistics Symposium, Ohio State University, 2018
Apr 2017	*Heterogeneity of Intervention Effects and Subgroup Identification Based on Longitudinal Outcomes*, New England Statistics Symposium 2017
Feb 2017	*Addressing Population Heterogeneity in Hospital System Modeling*, Emory University, Biostatistics Seminar
Feb 2017	*Addressing Population Heterogeneity in Hospital System Modeling*, The Ohio State University, Statistics Seminar
Aug 2016	*Deep Learning for Emulation in Uncertainty Quantification*, Joint Statistical Meetings 2016
Apr 2016	*Endovascular vs. Open Surgery: Analysis of Survival Outcomes Using Instrumental Variables*, Dartmouth, Department of Biomedical Data Science - Biostatistics Seminar

Contributed Presentations

Jul 2018	*Semiparametric Sufficient Dimension Reduction for Heterogeneous Populations with Application to Health System Risk Modeling*, IBC Barcelona 2018
Jan 2018	*Risk Prediction for Heterogeneous Populations with Application to Hospital Admission Prediction*, ICHPS 2018
Sep 2017	*Risk Prediction for Heterogeneous Populations with Application to Hospital Admission Prediction*, BiostatMCW 2017
Mar 2017	*Statistical Modeling for Heterogeneous Populations with Application to Hospital Admission Prediction*, ENAR 2017
May 2016	*Stabilizing Gradient Enhanced Kriging with Sparsity Constraints*, Spring Research Conference on Statistics in Industry and Technology
Oct 2015	*Mortality Comparison of Endovascular versus Open Repair for Abdominal Aortic Aneurysm using Instrumental Variables*, Poster, International Conference on Health Policy Statistics
Sep 2015	*Instrumental Variable Estimation in Censored Regression*, UW-Madison Department of Statistics Student Seminar.

May 2014	*Individualized Treatment Rules with Multinomial Outcome Weighted Learning*, Biostatistics and Medical Informatics Trainee Seminar.
Dec 2013	*Endovascular vs. Open Surgery: Analysis of Survival Outcomes Using Instrumental Variables*, Biostatistics and Medical Informatics Trainee Seminar.
May 2013	*Hidden Markov Models and Fisher Scores for Surgical Skill Modeling*, Biostatistics and Medical Informatics Trainee Seminar.
Dec 2012	*Does Surrogate Selection of T-cells Preferentially Sample Expanded Clones?*, Biostatistics and Medical Informatics Trainee Seminar.

Teaching and Mentoring Experience

Spring 2019	Statistics 7605 - Advanced Regression Modeling of Time-to-Event Data
Fall 2018	Statistics 6450 - Applied Regression Analysis
Fall 2017	Statistics 6450 - Applied Regression Analysis
Apr 2017	(With Menggang Yu) taught short course *Subgroup Analysis and Treatment Scoring with Application in Precision Medicine*, New England Statistics Symposium 2017
Dissertation Committees	Chenggong Han (Biostatistics, PhD)
Jun-Aug 2015	Mentored a student in the Computational Biology and Biostatistics Summer Research Program
Jul-Aug 2013, 2014, 2015	Teaching Assistant for the Summer Institute in Biostatistics program

Computing

Software Most of my open-source software is available for download at my GitHub site: github.com/jaredhuling

- `personalized` – An `R` package with estimation and evaluation methods for subgroup identification / personalized medicine for observational studies and randomized controlled trials. Available at cran.r-project.org/package=personalized. Documentation available at jaredhuling.org/personalized/.
- `oem` – An `R` package for the efficient computation of a wide variety of penalized linear regression models for tall data. Available at cran.r-project.org/package=oem. Documentation available at jaredhuling.org/oem/.

- `vennLasso` – An `R` package for variable selection for heterogeneous populations. Available at cran.r-project.org/package=vennLasso. Documentation available at jaredhuling.org/vennLasso/.
- `personalizedLong` – An `R` package with estimation and evaluation methods for subgroup identification / personalized medicine for longitudinal studies. Available at github.com/jaredhuling/personalizedLong.
- `aftiv` – An `R` package for instrumental variable estimation for time-to-event outcomes under the semiparametric accelerated failure time model. Available at github.com/jaredhuling/aftiv.
- `ordinis` – A flexible, easily modifiable `R` package for convex and nonconvex penalized regression computation via coordinate descent. The `ordinis` package can accommodate any GLM specified by the `family` class of objects. Available at github.com/jaredhuling/ordinis.
- `OrthogEM.jl` – A `Julia` package for penalized regression using the OEM algorithm. Available at github.com/jaredhuling/OrthogEM.jl.

Languages: `R`, `C++`, `Python`, `Javascript`, LaTeX

Last updated: January 25, 2019