Jared D. Huling

University of Minnesota
Division of Biostatistics

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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

Academic Experience

2020 - Present	Assistant Professor, Division of Biostatistics, School of Public Health, University of Minnesota
2017 - 2020	Assistant Professor, Department of Statistics, The Ohio State University
2017 - 2020	Affiliated Faculty, Translational Data Analytics Institute, The Ohio State University
2017 - 2020	Affiliated Biostatistics Faculty, Interdisciplinary Ph.D. Program in Biostatistics, The Ohio State University

Research Interests

Subgroup identification and precision medicine
Risk prediction
Causal inference
Statistical learning

Publications

1. **Jared D. Huling**, Maureen A. Smith, and Guanhua Chen. A two-part framework for estimating individualized treatment rules from semi-continuous outcomes. To appear in the *Journal of the American Statistical Association*, 2020+. URL `https://doi.org/10.1080/01621459.2020.1801449`

2. **Jared D. Huling** and Menggang Yu. Subgroup identification using the `personalized` package. To appear in the *Journal of Statistical Software*, 2020+. URL `https://arxiv.org/abs/1809.07905`

3. Ingrid K Richards Adams, Wilson Figueroa, Irene Hatsu, James B Odei, Mercedes Sotos-Prieto, Suzanne Leson, **Jared D Huling**, and Joshua J Joseph. An examination of demographic and psychosocial factors, barriers to healthy eating, and diet quality among african american adults. *Nutrients*, 11(3):519, 2019

4. **Jared D. Huling**, Menggang Yu, and A. James O'Malley. Instrumental variable based estimation under the semiparametric accelerated failure time model. *Biometrics*, 75(2):516–527, 2019

5. **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*, 2020+. URL `https://arxiv.org/abs/1801.09661`

6. **Jared D. Huling**, Menggang Yu, and Maureen Smith. Fused comparative intervention scoring for heterogeneity of longitudinal intervention effects. *The Annals of Applied Statistics*, 13(2):824–847, 06 2019. doi: 10.1214/18-AOAS1216. URL `https://doi.org/10.1214/18-AOAS1216`

7. **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

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

9. 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

Preprints

1. **Jared D. Huling** and Simon Mak. Energy balancing of covariate distributions. Submitted, 2020+. URL `https://arxiv.org/abs/2004.13962`

2. Xiaowu Dai and **Jared D. Huling**. Selection and estimation optimality in high dimensions with the TWIN penalty. 2020+. URL `https://arxiv.org/abs/1806.01936`

Grants

Current

1. NICHD R03 1R03HD101083-01 08/01/2020 - 07/31/2021

   Pilot Study to Develop a Functional Status Score for Children with Acute Neurologic Illnesses and Injuries

   Total cost: $168,095

   Role: PI (Multi-PI with Jennifer Lundine)

Completed Support

2. PCORI ME-1409-21219

   Matching Complex Patients to Treatments: Innovative Statistical Scoring Methods for Treatment Selection

   Total cost: $1,459,660

   Role: Research Assistant (09/01/15-08/31/17), Subcontract PI (09/01/17-10/31/18)

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

Presentations

Invited Talks

Sep 2020 *Energy Balancing of Covariate Distributions for Estimation of Causal Effects*, Seminar, Department of Statistical Science, Duke University

Jan 2020 *Energy Balancing of Covariate Distributions for Estimation of Causal Effects*, Seminar, Division of Biostatistics, University of Minnesota

Jan 2020 *Semiparametric Sufficient Dimension Reduction for Heterogeneous Populations with Application to Health System Risk Modeling*, Seminar, Department of Statistics and Actuarial Science, University of Waterloo

Dec 2019 *Energy Balancing of Covariate Distributions*, Seminar, Department of Statistics, University of Illinois at Urbana-Champaign

Dec 2019 *Comparative intervention scoring for assessing heterogeneity of long-term health system intervention effects*, CMStatistics, London, 2019

Aug 2019 *Comparative Intervention Scoring for Assessing Heterogeneity of Long-Term Health System Intervention Effects* and *Diagnosis-Group-Specific Translational Care Program Recommendation for Thirty-Day Rehospitalization Reduction*, ISBS Kyoto, 2019

Jun 2019 *Semiparametric Sufficient Dimension Reduction for Heterogeneous Populations with Application to Health System Risk Modeling*, Seminar, Division of Biostatistics, University of Toronto

Jun 2019	*Comparative Intervention Scoring for Assessing Heterogeneity of Long-Term Health System Intervention Effects*, ICSA Applied Statistics Symposium, 2019
Jun 2018	*Risk Prediction for Heterogeneous Populations with Application to Hospital Admission Prediction*, ICSA Applied Statistics Symposium, 2018
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, The Ohio State University
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 Talks

Jul 2019	*Semiparametric Sufficient Dimension Reduction for Populations with Structured Heterogeneity*, Joint Statistical Meetings, Denver 2019
Jul 2019	*Comparative intervention scoring for assessing heterogeneity of long-term health system intervention effects*, ISCB, Leuven 2019
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
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.

Contributed Posters

Jul 2019	*Semiparametric Sufficient Dimension Reduction for Populations with Structured Heterogeneity*, New Researchers Conference, Colorado State University 2019
Oct 2015	*Mortality Comparison of Endovascular versus Open Repair for Abdominal Aortic Aneurysm using Instrumental Variables*, Poster, International Conference on Health Policy Statistics

Teaching

The Ohio State University

Spring 2020	Instructor for Statistics 3302 - Statistical Modeling for Discovery II
Autumn 2019	Instructor for Statistics 6730 - Introduction to Computational Statistics
Spring 2019	Instructor for Statistics 7605 - Advanced Regression Modeling of Time-to-Event Data
Autumn 2018	Instructor for Statistics 6450 - Applied Regression Analysis
Autumn 2017	Instructor for Statistics 6450 - Applied Regression Analysis

Short Courses and Other

Apr 2017	(With Menggang Yu) taught short course *Subgroup Analysis and Treatment Scoring with Application in Precision Medicine*, New England Statistics Symposium 2017
Jul-Aug 2013, 2014, 2015	Teaching Assistant for the Summer Institute in Biostatistics program

Service

Associate Editor	*Biometrical Journal*	2020-present

Reviewer	*Biometrics*, *Biometrika*, *Brazilian Journal of Probability and Statistics*, *Computational Statistics and Data Analysis*, *Journal of Computational and Graphical Statistics*, *Journal of Statistical Software*	
Member	American Statistical Association	2015-present
	International Biometric Society (East North American Region)	2017-present
Departmental	OSU Biostatistics Program Graduate Studies Committee	2018-2019
	OSU Biostatistics Ph.D. Program Admissions Committee	2018-2019
	OSU Masters of Applied Statistics Qualifying Exam Committee	Winter 2018, 2019, Spring 2019

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.
- `personalized2part` – An `R` package for subgroup identification/precision medicine for semi-continuous outcomes with high-dimensional data. Available at github.com/jaredhuling/personalized2part. and cran.r-project.org/package=personalized2part.
- `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: September 10, 2020