Jon Arni Steingrimsson

jonsteingrimsson.github.io

CONTACT INFORMATION

121 South Main Street office 720
Providence, RI, 02903

Email: jon_steingrimsson@brown.edu

ACADEMIC APPOINTMENTS

2017 - present. Assistant Professor, Department of Biostatistics, Brown University

EDUCATION

2015 - 2017. Postdoctoral Fellow, Department of Biostatistics, Johns Hopkins University
Advised By: Michael Rosenblum

2015. Ph.D. Statistics, Cornell University
Advised By: Rob Strawderman

2010. MS. Statistics, University of Copenhagen

2008. B.S. Mathematics, University of Iceland

PUBLICATIONS

Steingrimsson, J., and Yang, J. *Subgroup Identification using Covariate Adjusted Interaction Trees.* Statistics in Medicine. (In Press)

Steingrimsson, J., Diao, L., and Strawderman, R. (2019), *Censoring Unbiased Regression Trees and Ensembles.* Journal of the American Statistical Association. Volume 525. 370-383.

Hu, C., and **Steingrimsson, J**. (2018) *Personalized Risk Prediction in Clinical Oncology Research: Applications and Practical Issues Using Survival Trees and Random Forests.* Journal of Biopharmaceutical Statistics. Volume 28. 333-349.

Steingrimsson, J., and Strawderman, R. (2017) *Estimation in the Semiparametric Accelerated Failure Time Model with Missing Covariates: Improving Efficiency through Augmentation.* Journal of the American Statistical Association. Volume 519. 1221-1235.

Steingrimsson, J., Hanley, D., and Rosenblum, M. (2017), *Improving Precision by Adjusting for Prognostic Baseline Variables in Randomized Trials with Binary Outcomes, without Regression Model Assumptions.* Contemporary Clinical Trials. Volume 54. 18-24.

Steingrimsson, J., Diao, L., Molinaro, A., and Strawderman, R. (2016), *Doubly Robust Survival Trees.* Statistics in Medicine. Volume 35. Issue 20. 3595 - 3612.

Vangay, P., **Steingrimsson, J.**, Wiedmann, M., and Stasiewicz, MJ. (2014), *Classification of Listeria Monocytogenes Persistence in Retail Delicatessen Environments Using Expert Elicitation and Machine Learning.* Risk Analysis. Volume 34. Issue 10. 1830 - 1845.

PREPRINTS

Dahabreh, I., Hernan, M,, Robertson, S., Buchanan, S., and **Jon A. Steingrimsson** *Generalizing trial findings using nested trial designs with sub-sampling of non-randomized individuals.* https://arxiv.org/abs/1902.06080

Dahabreh, I, Petito, L., Robertson, S., Hernan, M., and **Steingrimsson, J.** *Towards causally interpretable meta-analysis: transporting inferences from multiple studies to a target population.* https://arxiv.org/abs/1903.11455

Steingrimsson, J. *Deep Learning for Survival Outcomes* https://arxiv.org/abs/1904.10345.

Steingrimsson, J., Betz, J., Qian, T., and Rosenblum, M. *Optimized Adaptive Enrichment Designs for Multi-ArmTrials: Learning which Subpopulations Benefit from Different Treatments.*

Betz, J., **Steingrimsson, J.**, Qian, T., and Rosenblum, M. *Comparison of Adaptive Randomized Trial Designs for Time-to-Event Outcomes that Expand Versus Restrict Enrollment Criteria, to Test Non-Inferiority.* Johns Hopkins University, Dept. of Biostatistics Working Papers. Working Paper 289.

Rosenblum, M., and **Steingrimsson, J**. *Matching the Efficiency Gains of the Logistic Regression Estimator while Avoiding its Interpretability Problems, in Randomized Trials.* Johns Hopkins University, Dept. of Biostatistics Working Papers. Working Paper 281.

Invited Talks

"Using Deep Learning to Build Risk Prediction Models for Time-to-event Outcomes". *Joint Statistical Meetings.* Denver CO, 2019.

"Subgroup Identification using Covariate Adjusted Interaction Trees". *ICSA Applied Statistics Symposium.* Raleigh, NC, 2019.

"Deep Learning with Time-to-event Outcomes". *New England Statistical Symposium.* Hartford CT, 2019.

"Deep Learning with Time-to-event Outcomes". *Lifetime Data Science Conference.* Pittsburgh PA, 2019.

"Subgroup Identification using Covariate Adjusted Interaction Trees" *Models and Machine Learning for Causal Inference and Decision Making in Health Research.* Providence, 2019.

"Optimizing Adaptive Clinical Trial Designs". *Brown Data Science Initiative.* 2018.

"Improving Efficiency Through Augmentation in the Semiparametric Accelerated Failure Time Model With Missing Covariates". *International Indian Statistical Association.* Gainesville FL, 2018.

"Group Sequential Design Comparing Multiple Treatments to a Common Control". *International Chinese Statistical Association Conference.* Chicago IL, 2017.

"Censoring Unbiased Survival Forests". *Lifetime Data Science Conference.* Storrs CT, 2017.

"Analysis of Longitudinal Adherence Measures from HIV Pre-Exposure Prophylaxis Studies". *International Chinese Statistical Association Conference.* Shanghai China, 2016.

"Estimation in the Semiparametric Accelerated Failure Time Model with Missing Covariates: Improving Efficiency through Augmentation". *Survival, Longitudinal, and Multivariate Data Seminar Johns Hopkins University.* 2016.

"Censoring Unbiased Survival Ensembles". *Causal Inference Seminar Johns Hopkins University.* Baltimore MD, 2016.

"Censoring Unbiased Survival Trees and Forests". *Survival, Longitudinal, and Multivariate Data Seminar Johns Hopkins University.* Baltimore MD, 2016.

"Information Recovery for the Semiparametric Accelerated Failure Time Model for Case-Cohort Studies". *Causal Inference Seminar Johns Hopkins University.* Baltimore MD, 2015.

Contributed

"Improving Precision by Adjusting for Prognostic Baseline Variables in Randomized Trials with Binary Outcomes, without Regression Model Assumptions". *World Intracranial Hemorrhage Conference.* Baltimore MD, 2017.

"Improving Precision by Adjusting for Prognostic Baseline Variables in Randomized Trials with Binary Outcomes, without Regression Model Assumptions". *Annual Meeting of the Society for Clinical Trials.* Liverpool England, 2017. (Poster Presentation)

"Augmented Estimators for Censored Linear Regression for Case-Cohort Studies". *Joint Statistical Meeting.* Boston MA, 2014.

"Information Bounds for Censored Linear Regression with Covariates Missing by Design". *Student Seminar, Cornell University.* Ithaca NY, 2012.

Honors and Awards

Brown University Richard B. Salomon Faculty Research Awards (2018)

Best paper award at LIDA 2017 conference for "Censoring Unbiased Regression Trees and Ensembles".

Outstanding Graduate Teaching Assistant in the Department of Biological Statistics and Computational Biology at Cornell University (2015).

A.P. Moller Fonden: Student grant at University of Copenhagen (2009).

Instructor

Spring 2019. Probability, Statistics, and Machine Learning: Advanced Methods. DATA 2020.

Fall 2018: Analysis of Lifetime Data. PHP 2602.

Fall 2017: Linear Models PHP 2601.

Guest Lecturer

A guest lecture in Clinical Trials Methodology at Brown University. Topic: Survival Analysis.

Short course in Survival, Longitudinal, and Multivariate Data Group Johns Hopkins University. Topic: Survival Trees and Forests.

Guest lecturer in Advanced Inference Class Johns Hopkins University Department of Biostatistics. Topic: Introduction to Empirical Processes for Biostatisticians.

Teaching Assistant

Cornell University, Statistical Methods II (3 Semesters, Ph.D. Level).

Cornell University, Statistical Methods I (4 Semesters, Ph.D. Level).

Cornell University, Probability Models and Inference (2 Semesters, Masters Level).

Cornell University, Introductory Statistics I (1 Semester, Undergraduate Level).

University of Copenhagen, Probability Theory II. (1 Semester, Undergraduate Level).

University of Iceland, Calculus II (2 Semesters, Undergraduate Level).

University of Iceland, Calculus I (2 Semesters, Undergraduate Level).

Research Grants

PCORI: New Design and Analysis Tools for Randomized Trials, With Clinical Applications in Stroke, Cardiac Resynchronization Therapy, Alzheimer's Disease, and HIV Prevention
PI: Michael Rosenblum (JHU)
Role: Sub-Award

R01: Missing Data Matters: Substance Use Disorder Clinical Trials:
PI: Daniel Scharfstein (JHU)
Role: Sub-award

R01 Defining Phenotype of Complicated Delirium.
PI: Richard Jones (Brown University)
Role: Co-Investigator

R01: Real Time Phylogeny and Contact Tracing to Disrupt HIV Transmission
PI: Rami Kantor (Brown University)
Role: Co-Investigator

Advising

Jiabei Yang: PhD Student Brown University (Co-advised with Dr. Schmid)

Samantha Morrison: PhD Student Brown University (Co-advised with Dr. Gatsonis)

Yimo Zhang Masters: Student Brown University, Graduated 2019, PhD Student Department of Biostatistics at Brown University

Carol Shum: Masters Student Brown University, Graduated 2019, First Job: PhD Student Department of Epidemiology at UC Davis

Academic Advisor: Kexin Qu PhD Student (2017-2019), Ruotao Zhang PhD Student (2018-2019), Blake Hansen Masters Student (2018-2019), Kira Raskina Masters Student (2018-2019), Camilla Calmasini Masters Student (2018-2019).

Departmental Service

Chair of Diversity and inclusion committee. Department of Biostatistics Brown University 2018-2019.

Masters Thesis Award Committee 2019

Seminar Co-Organizer. Department of Biostatistics Brown University 2018-2019 and 2019-2020.

PhD admission committee. Department of Biostatistics Brown University 2017-2018 and 2018-2019.

Member Diversity and inclusion committee. Department of Biostatistics Brown University 2017-2018.

University Service

Faculty Search Committee for Data Science Initiative. 2019.

Member of Diversity and Inclusion Committee. School of Public Health Brown University 2018-2019

Mentor at Brown University Health Hackathon 2017.

Statistical consulting at Cornell University (3 Semesters).

Statistical consulting at University of Iceland (1 Semester).

Professional Service

Judge for 2019 Student Paper Competition for ASA Stat Computing/Graphics Sections.

Panelist for *Statistics and Data Science Careers* at Cornell University. May 2017.

Organizer and chair of invited session: *Analysis of Complex Sampling Designs with Censored Data* at Lifetime Data Science Conference. University of Connecticut. May 2017.

Organizer and chair of invited session: *New Methods and Software for Adaptive Designs* at the Joint Statistical Meeting. August 2017.

Reviewer: Journal of the Royal Statistical Society B, Journal of the American Statistical Association, Statistics in Medicine, Biostatistics, Biometrics, Computational Statistics & Data Analysis, Journal of the Korean Statistical Society, International Journal of Biostatistics, Scandinavian Journal of Statistics, Biometrika, BMJ Open, Biometrical Journal, The Canadian Journal of Statistics.

Professional Society Memberships American Statistical Association 2013-Present
Lifetime Data Analysis Interest Group