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References

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Education

Ph.D. in Economics, University of Wisconsin-Madison, 2022 (expected)

M.S. in Economics, University of Wisconsin-Madison, 2019

M.S. in Statistics, Oregon State University, 2016

B.A. Economics & B.S. Mathematics, Seattle University, 2014

Job Market Paper

“Comparing variance estimators: a test-based relative-efficiency approach”

When constructing Wald tests, consistency is the key property required for the variance estimator. This property ensures asymptotic validity of Wald tests and confidence intervals. Classical efficiency comparisons indicate all consistent variance estimators lead to equivalent tests. This paper derives asymptotic normality of the Wald test statistic under fixed alternatives. These asymptotic distributions generally differ when different variance estimators are used. A simple relative efficiency measure leads to several new conclusions: when analyzing heavy-tailed data there are tradeoffs between point estimation and variance estimation, smooth kernels should be used when estimating the asymptotic variance in quantile regression, and conservative cluster-robust inference leads to efficiency loss. Simulation evidence indicates these results provide good finite-sample approximations. An application demonstrates how researchers considering different cluster levels can evaluate the costs associated with conservative clustering.

Publications

Staying at Home: Mobility Effects of COVID-19, with John Stromme and Anson Zhou, *Covid Economics: Vetted and Real-Time Papers*, Issue 4, 86-102, April 2020

Offline training for improving online performance of a genetic algorithm based optimization model for hourly multi-reservoir operation, with Duan Chen, Arturo S. Leon, Claudio Fuentes, and Qiuwen Chen, *Environmental modelling & software*, Volume 96, 46-57, October 2017

Working Papers

“Comparing variance estimators: a test-based relative-efficiency approach” (Job market paper) ([link](#))

Work in Progress

“Heteroskedastic-robust variance estimators for heavy-tailed data”

“Robust Wald tests via sample splitting”

“Improved testing in partially linear models with many regressors”

Teaching Experience

University of Wisconsin-Madison:

Spring 2021: MS Econometrics II (ECON 705), TA

Fall 2020: PhD Math Camp/Math for Economists (ECON 703), TA

Fall 2019: PhD Econometrics I (ECON 709), TA

Fall 2017: Economic Approach to Current Issues (ECON 100), TA

Fall 2016, Spring 2017: Principles of Macroeconomics (ECON 102), TA

Oregon State University:

Fall 2015: Introduction to Statistical Methods (ST 351), TA

Fall 2014, Winter 2015, Spring 2015: Principles of Statistics (ST 201), TA

Other Experience

2017- Statistical Consulting Group, College of Agricultural and Life Sciences, University of Wisconsin-Madison

Presentations

2021 UW Madison Job Market Mini-conference
2020 UW Madison Econometrics Student Workshop
2019 UW Madison Econometrics Student Workshop

Fellowships and Awards

2021 Alice S. Gengler Dissertation Fellowship, University of Wisconsin-Madison
2018 Summer Research Fellowship, University of Wisconsin-Madison
2017 Juli Plant Grainger Outstanding TA Award, University of Wisconsin-Madison

Research Experience

2018-19, Research assistant to Prof. Mikkel Sølvsten, University of Wisconsin-Madison
2020
2018 Research assistant to Prof. Bill Sandholm, University of Wisconsin-Madison

Refereeing Activity

American Economic Review: Insights, Journal of Population Research, World Medical & Health Policy

Additional Information

Programming: R, Stata, C++