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References

Prof. Jack Porter (chair) Department of Economics +1 (608) 263-3870 jrporter@ssc.wisc.edu

Prof. Bruce Hansen Department of Economics +1 (608) 263-3880 bruce.hansen@ssc.wisc.edu

Prof. Mikkel Sølvsten Department of Economics University of Wisconsin-Madison University of Wisconsin-Madison University of Wisconsin-Madison +1 (608) 262-1789 soelvsten@wisc.edu

Prof. Harold Chiang Department of Economics University of Wisconsin-Madison +1 (608) 263-4202 hdchiang@wisc.edu

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 the test and classical efficiency comparisons based on localasymptotics indicate all consistent variance estimators lead to equivalent tests. This paper develops an asymptotic framework in which the efficiency consequences of variance estimation can be quantified and compared across different variance estimators. The main insight is that under fixed alternatives. The general asymptotic theory is developed and several environments are considered, including generalized methods of moments (GMM), quantile regression, heavy-tailed data, and cluster-robust inference. In the case of cluster-robust inference, it is shown that there is an asymptotic penalty paid for adopting a conservative approach to inference. An application demonstrates how researchers can use these new findings to conduct power analysis and incorporate these costs into their own approach to empirical work.

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++