SHUOWEN CHEN

270 Bay State Road, Room B03B
Boston University, Department of Economics
Boston MA 02215 USA
Cell: (585) 319-6057
Email: swchen@bu.edu
Website: https://shuowencs.github.io

EDUCATION

Ph.D., Economics, Boston University, Boston MA, May 2022 (expected)
   Dissertation Title: *Essays in Econometrics: Bias Correction and Robust Inference*
   Dissertation Committee: Iván Fernández-Val, Hiroaki Kaido and Jean-Jacques Forneron

M.A., Economics, The University of Texas at Austin, Austin, TX, 2016

B.A., Economics with Honors and Highest Distinction, Mathematics with High Distinction
(Magna Cum Laude), University of Rochester, Rochester, NY, 2015

FIELDS OF INTEREST

Econometrics, Empirical Industrial Organization, Economics of Innovation

PUBLICATIONS

"SortedEffects: Sorted Causal Effects in R" (with Victor Chernozhukov, Iván Fernández-Val
   and Ye Luo), *The R Journal*, (2020) 12(1): 131-146, paper, package.
"Mastering Panel Metrics: Causal Impact of Democracy on Growth" (with Victor
   Chernozhukov and Iván Fernández-Val), *American Economic Association Papers and
   Proceedings*, (2019) 109: 77-82, paper.

WORKING PAPERS

"Indirect Inference for Nonlinear Panel Models with Fixed Effects," October 2021 (Job
   Market paper)
"Robust Tests of Model Incomplete in the Presence of Nuisance Parameters" (with Hiroaki
   Kaido), 2021.
"R&D Heterogeneity and Countercyclical Productivity Dispersion" (with Yang Ming),
   2021, paper.

WORK IN PROGRESS

"Crossover Jackknife Bias Correction for Nonstationary Nonlinear Panel" (with Victor
   Chernozhukov, Iván Fernández-Val, Hiroyuki Kasahara and Paul Schrimpf)
"Dynamic Discrete Choice Models with Fixed Effects"
"Sensitivity Analysis of Estimation with Discretization"

PRESENTATIONS

BU-BC Green Line Econometrics Meeting, 2021 (expected)
Boston University, Econometrics Seminar, 2018, 2020, 2021

FELLOWSHIPS AND AWARDS

Best Second Year Paper Award, Boston University, 2019
Dean's Fellowship and Assistantship, Boston University, 2016 - 2021

Merit-Based Scholarship, The University of Texas at Austin, 2015
William Morse Hastings Essay Prize, University of Rochester, 2015
Citation of Special Achievement in Economics, University of Rochester, 2015
Dean's Scholarship, University of Rochester, 2011 - 2015

WORK EXPERIENCE

Research Assistant to Hiroaki Kaido, Boston University, Summer 2019,
   Fall 2021 to Spring 2022
Research Assistant to Iván Fernández-Val, Boston University, Fall 2018 to Spring 2019,
   Fall 2020 to Spring 2021
Research Assistant to Pierre Perron, Boston University, Summer 2018

TEACHING EXPERIENCE

Graduate Teaching Fellow, Department of Economics, Boston University
   EC708, PhD Econometrics I, Spring 2020
   EC102, Principles of Macroeconomics, Fall 2017 to Spring 2018

Undergraduate Teaching Assistant, University of Rochester
   ECO217, Contract Theory, Department of Economics, Fall 2015
   ECO211, Money, Credits and Banking, Department of Economics, Spring 2015
   MTH161, Calculus I, Department of Mathematics, Fall 2014

DEPARTMENTAL SERVICE

Organizer, BU Econometrics Reading Group, Spring 2020 to Spring 2021

LANGUAGES: English, Chinese

COMPUTER SKILLS: Julia, Mathematica, MATLAB, Python, R, STATA/Mata

CITIZENSHIP/VISA STATUS: China/F1

REFERENCES

Professor Iván Fernández-Val	**Professor Hiroaki Kaido**	**Professor Jean-Jacques Forneron**
Department of Economics	Department of Economics	Department of Economics
Boston University	Boston University	Boston University
Phone: (617) 353-9670	Phone: (617) 358-5924	Phone: (617) 353-4824
Email: ivanf@bu.edu	Email: hkaido@bu.edu	Email: jjmf@bu.edu

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Indirect Inference for Nonlinear Panel Models with Fixed Effects (Job Market Paper)

Fixed effects estimation for nonlinear panel data models suffers from incidental parameter problem. This leads to two undesirable consequences in applied research: point estimates are subject to large bias, and confidence intervals have incorrect coverage. This paper proposes a simulation--based method for bias reduction. The method simulates data using estimated individual effects, and finds values of parameters by equating the fixed effects estimators obtained from observed and simulated data. The asymptotic framework provides consistency, bias correction and asymptotic normality results. An application to labor force participation illustrates the finite--sample performance of the method.

Robust Tests of Model Incompleteness in the Presence of Nuisance Parameters *(with Hiroaki Kaido)*

In a number of discrete choice models, whether the model makes a unique prediction or not is tied to important features of the underlying model such as the interdependence of agents' preferences in models of social interaction or the endogeneity of treatment assignments. We provide a novel test of model incompleteness using a score-based statistic. Our test statistic remains computationally tractable even with a moderate number of nuisance parameters because they have to be estimated only in the restricted complete model. A Monte Carlo experiment shows the score test outperforms existing tests in terms of local power. An empirical application to a model of entry in the airline industry illustrates the computational feasibility of the method.

Crossover Jackknife Bias Correction for Nonstationary Nonlinear Panel *(with Victor Chernozhukov, Iván Fernández-Val, Hiroyuki Kasahara and Paul Schrimpf)*

Fixed effects estimators suffer from the incidental parameter problem in dynamic or nonlinear panel models with unobserved effects. Hahn and Newey (2004) and Dhaene and Jochmans (2015) proposed convenient jackknife bias corrections, which require that all the variables in the panel be stationary over time. Many covariates of interest in panel and difference-in-differences applications such as policy indicators, age or cohort are not stationary over time. We propose a jackknife bias correction for fixed effects estimators that does not rely on stationarity. We name the new correction as crossover jackknife as it is based on partitioning the panel in two halves, each including half of the time series observations for each cross sectional unit. Numerical examples show that crossover jackknife improves over the existing jackknife corrections, which are not even applicable under some common forms of non-stationarity such as a policy intervention that starts in the middle of the time dimension for some of the cross sectional units.

October 2021