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PLACEMENT DIRECTORS

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EDUCATION

Ph.D.	Economics, University of Maryland at College Park, expected May 2022
M.A.	Economics, University of Maryland at College Park, 2017
B.A.	Economics, University of Virginia, 2014

FIELDS OF SPECIALIZATION

Primary: Applied Econometrics
Secondary: Industrial Organization

DISSERTATION

Essays on Spatial Econometrics
Committee: Prof. Ingmar Prucha (Co-Chair), Prof. Andrew Sweeting (Co-Chair), Prof. John Chao

JOB MARKET PAPER

"LIVE and FIVE Estimation of Simultaneous Equations Models with Higher-Order Spatial and Social Interactions"

This paper introduces a new class of limited and full information GMM estimators for simultaneous equation systems with network interdependencies that are modeled by Cliff-Ord type spatial lags. I allow for higher order spatial lags in the dependent variables, the exogenous variables and the disturbances. The network is defined in terms of a measure of proximity and thus can accommodate a wide class of dependence structures. One contribution of the paper is showing that the scores of the log-likelihood function can be viewed as a weighted sum of linear and quadratic moments. Moreover, the linear components can be written to permit an IV interpretation, extending on the insights of Hausman (1975) and Hendry (1976) in the context of classical SEMs. The GMM estimators in this paper employ approximations of both the linear and quadratic moment conditions implied by the score. In particular, the instruments exploit the nonlinear structure of parameters in the reduced form, while those utilized by existing 2SLS and 3SLS type estimators do not. From this perspective, my estimation methodology incorporates the ideas underlying the LIVE and FIVE estimators for classical SEMs considered in Brundy and Jorgenson (1971), as well as the IV estimator using optimal instruments for spatial autoregressive models considered in Lee (2003). The new LIVE and FIVE type estimators for network SEMs in this paper remain computationally feasible even in large samples and robust against heteroskedasticity of certain forms. Monte Carlo simulations show that the estimators considered in this paper exhibit improved finite sample performance over existing 2SLS and 3SLS type estimators, especially when instruments are weak.

OTHER RESEARCH PAPERS

"Spatial Price Competition between Branded Chains in Vancouver's Retail Gasoline Market", working paper

"GARCH Model with Spatially Structured Conditional Volatility", work in progress

"Cross-border Spillover Effects of U.S. Quantitative Easing Programs in the Early Stage of the Great Recession", work in progress

TEACHING EXPERIENCE

Instructor, International Economics (undergraduate), University of Maryland, Winter 2019, Summer 2018

Instructor, Applied Economic Statistics (undergraduate), University of Maryland, Summer 2017, Summer 2016

Teaching Assistant, Intermediate Macroeconomics (undergraduate), University of Maryland, Spring 2018, Fall 2017, Spring 2017

Teaching Assistant, Introductory Macroeconomics (undergraduate), University of Maryland, Fall 2016, Spring 2015, Fall 2015, Fall 2014

RESEARCH AND RELEVANT WORK EXPERIENCE

Research Assistant, Prof. Ingmar Prucha, University of Maryland, Spring 2019 – Spring 2020

GRANTS AND AWARDS

Dean's Research Initiative Award, University of Maryland, 2019
Graduate Assistantship, University of Maryland, 2014-2019
Marshall Jevons Research Fund, University of Virginia, 2014

LANGUAGES

Mandarin Chinese (native), English (fluent)

COMPUTATIONAL SKILLS

Matlab, Python, R, Stata, SQL

REFERENCES

Prof. Ingmar Prucha	University of Maryland	prucha@umd.edu	(301) 405-3499
Prof. Andrew Sweeting	University of Maryland	atsweet@umd.edu	(301) 405-8325
Prof. John Chao	University of Maryland	jcchao@umd.edu	(301) 405-1579