Xuanye Wang

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Employment

Assistant Professor, IAER at the Dongbei University of Finance and Economics, 2020-

Education

Ph.D. Economics, University of Texas at Austin, 2020

Ph.D. Mathematics, Louisiana State University, 2013

B.S. Mathematics, Sun Yat-sen University, 2009

Teaching and Research Fields

Fields: Game Theory; Experimental Economics; Mathematical Economics

Awards, Scholarships and Fellowships

Pasquale Porcelli Graduate Student Academic Excellence Award, Louisiana State University, 2010

Outstanding Student Scholarship, Sun Yat-sen University, 2006-2008

Kaisi Freshman Fellowship, Sun Yat-sen University,2005

Research

Working Papers

"Fragility of Confounded Learning",

> *We consider an observational learning model with exogenous public payoff shock. We show that confounded learning doesn't arise for almost all private signals and almost all shocks, even if players have sufficiently divergent preferences.*

"The Set of Confounded Learning Beliefs is (Almost) Homeomorphic to Standard Cantor Set in Observational Learning",

> *We provide a comprehensive characterization of the set of confounded learning beliefs in a classic observational learning model. We surprisingly find that this set could be (almost) homeomorphic to standard cantor set. This peculiar phenomenon is robust in the sense that it holds for an open set of private signals-except for a set of first category; and in the sense that it survives even if we assume all private signals have C^∞ density functions. This peculiar phenomenon is gone if we assume all private signals have real-analytic density functions. Then the set of confounded learning beliefs must be discrete. We also prove that the set of real-analytic private signals is dense in the set of all private signals.*

"Confounded Observational Learning with Common Values",

We analyze observational learning when a fraction of players are uninformed and act based exclusively on their private information. Informed players are uncertain about the true proportion of uninformed players. They simultaneously learn about this proportion and about the payoff-relevant state. Confounded learning emerges as a robust phenomenon in this environment, and could be globally stable- there're environments where public beliefs eventually settle down to confounded learning with positive probability, starting from almost all current beliefs. We also show that correct learning is always globally stable. In contrast, correct learning may not be globally stable when it arises due to heterogeneous preferences.

"On Convergence of Public Beliefs in Observational Learning"

In an observational learning environment, the public belief λ_t forms a martingale and converges almost surely to a limit belief λ_∞. If $\{\lambda_t\}_{t\in\mathbb{N}}$ is not uniformly bounded, we show that it doesn't converge to λ_∞ in L^1 or in mean.

Work in Progress

"Belief-based Rule Learning in Repeated Normal Form Games: Theory and Evidence",

We propose a belief-based rule learning theory in repeated normal form games. Each player uses a rule out of a rule set to play a game repeatedly. A sophisticated belief-based rule learner uses a counting method to form a belief over the rule-usage of the opponent from history, and then best respond. We confront the theory with data in Stahl(2000)('Rule Learning in Symmetric Normal-Form Games: Theory and Evidence'). The empirical result suggests the existence of this sophisticated learning behavior.

Publication in Mathematics

"Extra Structures and the Universal Construction for the Witten-Reshetikhin-Turaev TQFT", with Patrick M. Gilmer, *Proc. Amer. Math. Soc. 142 (2014), 2915-2920*

Conference Presentations

International Conference on Game Theory in Honor of Pradeep Dubey and Yair Tauman, The State University of New York at Stony Brook, July 17 - 21, 2017

Confounded Observational Learning with Common Values

Texas Economic Theory Camp, Southern Methodist University, October 20-21, 2018

Confounded Observational Learning with Common Values

Teaching Experience

The University of Texas at Austin, Department of Economics

Teaching Assistant, Introductory Game Theory, Prof. V. Bhaskar, Fall 2018, Spring 16, Spring 15

Teaching Assistant, Game Theory (Master Level), Prof. Dale O. Stahl, Spring 2017, Fall 2016

Teaching Assistant, Math for Economists (Ph.D. Level), Prof. Mark Feldman, Fall 2015, Fall 2014

Instructor, Math Camp for Incoming PhD, Summer 2015, Summer 2014

Teaching Assistant, Introduction to Microeconomics, Prof. Thomas E. Wiseman, Fall 2013

Louisiana State University, Department of Mathematics

    Instructor, Preliminary Exam Preparation Course (Analysis), Summer 2013,2012

    Grader, Differential Geometry (Ph.D. Level), Prof. Richard Litherland, Spring 2013

    Grader, Topology II (Ph.D. Level), Prof. Daniel Cohen, Spring 2013

Miscellaneous

    Languages: Mandarin(Native), English(Fluent)

    Computer Skills: Matlab

Last updated: June 9, 2021