YICHI ZHANG

+1(734)355-2810 ⋄ yichiz@umich.edu
3339 North Quad, 510 State St., Ann Arbor, MI 48109, U.S.A.

EDUCATION

University of Michigan, Ann Arbor (Umich) Sep 2019 - Present
Ph.D. in School of Information
Advisor: Prof. Grant Schoenebeck

Shanghai Jiao Tong University (SJTU) Aug 2015 - Jun 2019
B.S. in Electronic Science and Engineering
Advisor: Prof. Xinbing Wang and Prof. Luoyi Fu

University of California, Los Angeles (UCLA) Jul 2018 - Sep 2018
CSST (summer research program), Department of Computer Science
Advisor: Prof. Mario Gerla

EMPLOYMENT EXPERIENCES

Research Assistant, **University of Michigan** Sep 2019 - Present
Algorithm Engineer Intern, **YITUTech** Feb 2019 - May 2019

RESEARCH PROJECTS

Information Elicitation From Rowdy Crowds WWW 21
With *Grant Schoenebeck and Fang-Yi Yu*

We consider the adversarial attack on crowdscouring systems.

- Propose a framework for designing information elicitation mechanisms which can handle a fraction of adversarial agents who can collude and mess up the system.
- Based on the framework, use robust learning algorithms as the black box to design three mechanisms under two commonly used settings.
- Prove the truthfulness of the proposed mechanisms using probability theory and information theory as tools.

Quality on a Budget: Peer Prediction Mechanisms with Continuous Effort To be submitted
With *Grant Schoenebeck*

We consider how to pay the crowdsoucing workers with endogenous effort using the peer prediction mechanisms.

- Propose a theoretical framework to analyze continuous effort in the peer prediction setting.
- Review and reproduce the state of art peer prediction mechanisms with theoretical guarantees.
- Study a threshold payment mechanism that perform well in incentivizing high effort with a limited budget.
- Prove the performance with both theoretical analysis and an agent-based model with synthetic data and real-data-estimated model.

A System-Level Analysis of Conference Peer Review using Agent-Based Modeling To be submitted
With *David Kempe, Grant Schoenebeck and Fang-Yi Yu*

We build a theoretical framework and use the agent-based model to study the review process of a conference its influences on three parties who share diverse interests: the reviewers, the conference committee and the authors.

- Build a theoretical model that captures the strategic aspects of the authors who aim to game the conference' review process.

- With the agent-based model approach, identify the trade-off between the review resources and the utility of the conference.
- Study how systems parameters and review policies have on the trade-off.

COURSES (TAKEN)

Computer Science: machine learning, reinforcement learning, approximation algorithm, randomized algorithm.
Economics: advanced game theory (mechanism design), electronic commerce, digital public goods.

TEACHING

I'm a GSI of the following courses:

- SIADS 642: Deep Learning with Prof. Paramveer Dhillon. Fall 2021
- SIADS 652: Network Analysis with Prof. Daniel Romero. Fall 2021

AWARDS

- The Web Conference Student Scholarship. 2021
- EIC Education Scholarship (top 5%). 2018
- Samsung Scholarship (top 3%). 2017
- Meritorious Winner in Mathematical Contest in Modeling. 2017