YUJI SAIKAI

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Professional Appointments

- Tutor (2020 – present)
  School of Mathematics and Statistics, the University of Melbourne, Australia

Education

- Ph.D., 2020
  Agricultural & Applied Economics with minor in Computer Science
  University of Wisconsin–Madison, USA
- Complex Systems Summer School, 2017
  Santa Fe Institute, USA
- Bachelor of Economics (Honours), 2014
  The Australian National University, Australia
- Bachelor of AgriCommerce, 2013
  Massey University, New Zealand

Research Fields

- Data-driven optimization | Bayesian optimization | Reinforcement learning
- Agent-based modeling
- Agricultural systems | Precision agriculture

Teaching Experience

- Instructor in *Systems Modelling and Simulation* (MAST90045) | Semester 1, 2021
- Guest lecturer on *Deep learning* in AAE722 *Machine learning in applied economic analysis* | Instructor: Sheldon Du | Summer 2019
- Teaching assistant in AAE706 *Applied risk analysis* | Instructor: Jean-Paul Chavas | Spring 2019

References

Paul Mitchell (Economics)
University of Wisconsin–Madison
(608) 320-1162, pdmitchell@wisc.edu

Vivak Patel (Statistics)
University of Wisconsin–Madison
(608) 262-2539, vivak.patel@wisc.edu

Jun Zhu (Statistics)
University of Wisconsin–Madison
(608) 262-3720, jzhu@stat.wisc.edu

Shawn Conley (Agronomy)
University of Wisconsin–Madison
(608) 262-7975, spconley@wisc.edu

Presentations

- Annual Conference of the Australasian Agricultural and Resource Economics Society (AARES), 2020
- Data Science Research Bazaar, 2020
- American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America (ASA-CSSA-SSSA) International Annual Meeting, 2019
- North Central Extension & Research Activity (NCERA) 180 Precision Agriculture Technologies for Food, Fiber, and Energy Production, 2019
- Agricultural & Applied Economics Association (AAEA) Annual Meeting, 2017-19

Research Papers

An agent-based model of insect resistance management and mitigation for Bt maize: A social science perspective

- with Terrance Hurley and Paul Mitchell
- published at ***Pest Management Science***
- Python code: https://github.com/ysaikai/BTABM

Machine learning for optimizing complex site-specific management

- with Vivak Patel and Paul Mitchell
- published at ***Computers and Electronics in Agriculture***
- Python code: https://github.com/ysaikai/BOPA

Adaptive experimental design using Bayesian optimization to improve the cost efficiency of field trials

- with Vivak Patel, Shawn Conley, and Paul Mitchell

- https://github.com/ysaikai/AEDBO

A bandit algorithm for efficient on-farm research

- with Paul Mitchell
- https://github.com/ysaikai/MABPS

An agent-based model for promoting modest technologies

- https://github.com/ysaikai/TechAdoption