

YUJI SAIKAI

<https://yujsaikai.com> | ysaikai@unimelb.edu.au | +81.50.7119.1632, +254.703.279.157

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>