YUJI SAIKAI

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Professional Appointments

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

Education

- PhD, 2020
  Agricultural & Applied Economics with minor in Computer Science
  The 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

References

Howard Bondell (Statistics)
University of Melbourne
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John Banks (Teaching in maths & stats)
University of Melbourne
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Paul Mitchell (Economics)
University of Wisconsin–Madison
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Vivak Patel (Statistics)
University of Wisconsin–Madison
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Jun Zhu (Statistics)
University of Wisconsin–Madison
jzhu@stat.wisc.edu

Shawn Conley (Agronomy)
University of Wisconsin–Madison
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Teaching Experience

- Instructor in *Systems Modelling and Simulation* (MAST90045) | Semester 1, 2021
- Tutor in:
    - *Vector Calculus* (MAST20009) | Semester 2, 2021
    - *Engineering Mathematics* (MAST20029) | Semester 2, 2021
    - *Linear Statistical Models* (MAST30025) | Semester 1, 2021
    - *Applied Risk Analysis* (AAE706) | Spring, 2019
- Guest lecturer on *Deep learning* in *Machine learning in applied economic analysis* (AAE722) | Summer, 2019

Research Fields

- Data-driven optimisation
- Reinforcement learning
- Precision agriculture

Research Papers

Deep reinforcement learning for precision irrigation using high-dimensional sensor feedback (in progress)

APSIM meets TensorFlow: Optimising sequential management decisions via deep reinforcement learning (in progress)

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

Machine learning for optimizing complex site-specific management

- with Vivak Patel and Paul Mitchell
- published at Computers and Electronics in Agriculture

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