

# EMI TANAKA

## WORK EXPERIENCE

- **Lecturer**  
Monash University,  
Department of Econometrics and Business Statistics  
2020/01 - current
- **Lecturer**  
The University of Sydney,  
School of Mathematics and Statistics  
2017/01 - 2019/12
- **Research fellow**  
University of Wollongong,  
School of Mathematics and Applied Statistics  
2014/01 - 2017/01

## EDUCATION

### **PhD, Statistics**

Statistical Methods for Improving Motif Evaluation

Supervisor: Dr. Uri Keich

School of Mathematics and Statistics

The University of Sydney, Sydney, Australia, 2015

### **Bachelor of Science (Advanced Mathematics), Honour I**

Major in Mathematics and Statistics

The University of Sydney, Sydney, Australia, 2010

## PUBLICATIONS

1. Morota, G, Cheng, H, Cook, D, & Tanaka, E (2021) ASAS-NANP SYMPOSIUM: Prospects for interactive and dynamic graphics in the era of data-rich animal science. *Journal of animal science*, 99(2). *Citations: 1.*
2. Tanaka, E (2020) Simple outlier detection for a multi-environmental field trial. *Biometrics*, 76(4), 1374-1382. *Citations: 4.*
3. Tanaka, E & Hui, F (2019) Symbolic formulae for linear mixed models. *Statistics and data science*, 3-21
4. Hui, F, Tanaka, E, & Warton, D (2018) Order selection and sparsity in latent variable models via the ordered factor LASSO. *Biometrics*, 74(4), 1311-1319. *Citations: 6.*
5. Norman, A, Taylor, J, Tanaka, E, Telfer, P, Edwards, J, Martinant, J, & Kuchel, H (2017) Increased genomic prediction accuracy in

## Contact

✉ [emi.tanaka@monash.edu](mailto:emi.tanaka@monash.edu)

🔗 [github.com/emitanaka](https://github.com/emitanaka)

🐦 [@statsgen](https://twitter.com/statsgen)

For more information, please  
contact me via email.

## Skills

**Expert:** R, HTML/CSS, LaTeX

**Intermediate:** Git/GitHub, Python,  
Bash, JS

**Languages:** English (fluent) and  
Japanese (conversational)

## Interests

**Research:** experimental design,  
mixed models, data visualisation,  
bioinformatics, statistical genetics,  
selective breeding

**Non-Research:** drawing (but not  
good at it), reading (manga,  
manhwa and non-fiction books)

*This resume was made with the R package  
**pagedown**.  
Last updated on 2021-03-14.*

wheat breeding using a large australian panel. *Theoretical and applied genetics*, 130(12), 2543-2555. *Citations: 16.*

6. Tanaka, E, Ral, J, Li, S, Gaire, R, Cavanagh, C, Cullis, B, & Whan, A (2017) Increased accuracy of starch granule type quantification using mixture distributions. *Plant methods*, 13, 107. *Citations: 5.*
7. Tanaka, E (2014) Statistical methods for improving motif evaluation. *PhD Thesis*
8. Tanaka, E, Bailey, T, & Keich, U (2014) Improving MEME via a two-tiered significance analysis. *Bioinformatics*, 30(14), 1965-1973. *Citations: 17.*
9. Liachko, I, Tanaka, E, Cox, K, Chung, S, Yang, L, Seher, A, Hallas, L, Cha, E, Kang, G, Pace, H, Barrow, J, Inada, M, Tye, B, & Keich, U (2011) Novel features of ARS selection in budding yeast *lachancea kluyveri*. *BMC genomics*, 12, 633. *Citations: 22.*
10. Tanaka, E, Bailey, T, Grant, C, Noble, W, & Keich, U (2011) Improved similarity scores for comparing motifs. *Bioinformatics*, 27(12), 1603-1609. *Citations: 49.*

Citation counts are sourced from Google Scholar at 2021-03-14.

## TALKS

List of talks (and links to the slides if available) are at <https://emitanaka.org/talks.html>.

Below show the last 10 talks.

- The Grammar of Experimental Design  
TokyoR  
2021-01-23
- Advent of “Grammar”: Bridging Statistics and Data Science for the Design of Experiments  
Statistical Society of Australia  
2020-11-27
- Rethinking the framework to specify the design of experiments  
Department of Agriculture and Fisheries, Queensland  
2020-11-11
- What every young statistician should know: Developing your identity, networking and marketing  
Statistical Society of Australia Western Australian Branch  
2020-09-30
- Advent of “Grammar”: Bridging Statistics and Data Science for the Design of Experiments  
Monash Bioinformatics Seminar  
2020-07-15

- **Beyond Beamer: Modern and Dynamic Presentations with R Markdown**

Statistical Society of Australia Canberra & NSW Branch

2020-06-23

- **Software design, selection and estimation for latent variable models**

WOMBAT

2019-11-28

- **Symbolic model formulae for linear mixed models illustrated with the analysis of agricultural data**

Department of Mathematics and Statistics, Macquarie University

2019-10-15

- **Symbolic model formulae for linear mixed models illustrated with the analysis of agricultural data**

Research School of Finance, Actuarial Studies and Statistics,  
Australian National University

2019-09-16

- **Statistical modelling for plant breeding trials for accurate genotype-by-environment effect predictions**

Sydney Institute of Agriculture

2019-09-06

## WORKSHOPS

- **Data Wrangling with R**

2020/12

*Hosted by Statistical Society of Australia NSW Branch.*

- **Data Visualisation with R**

2020/11

*Co-presented with Di Cook.*

*Hosted by Statistical Society of Australia VIC Branch.*

- **Tidyverse and R Markdown Workshop**

2019/12

*Hosted by International Biometrics Society Australasia Region.*

- **R Package & R Markdown Workshop**

2019/11

*Co-presented with Damjan Vukcevic.*

*Hosted by Statistical Society of Australia VIC Branch.*

- **Statistical Methods for Omics Assisted Breeding**

2018/11

*Co-presented with Gota Morota, Diego Jarquin, Malachy Campbell,  
Jessica Tressou, Hiroyoshi Iwata.*

## SERVICE

- Vice President  
Statistical Society of Australia, Victoria Branch  
2020/03-2021/03
- President  
Statistical Society of Australia, Victoria Branch  
2021/03-2023/03
- Vice President  
Statistical Society of Australia, Victoria Branch  
2023/03-2024/03
- Assistant Secretary  
Statistical Society of Australia, NSW Branch  
2017/03-2018/03
- Secretary  
Statistical Society of Australia, NSW Branch  
2018/03-2020/03
- Social Media Coordinator  
International Biometrics Society, Australaisan Region  
2018/01-ongoing
- Member  
useR! 2021, Program Committee  
2021/03-2021/03

## PROFESSIONAL MEMBERSHIPS

- Statistical Society of Australia
- International Biometrics Society

## AWARDS & DISTINCTIONS

- ARC Industrial Transformation Training Centre  
2019  
Lead: Sally Cripps  
\$3,973,202
- R Consortium Grant

2019

Lead: Emi Tanaka  
\$6,000

- **Sydney Institute of Agriculture Research Project Grant**

2018

Lead: Thomas Bishop  
Competitive grant with 36% success rate.  
\$90,000

- **SSA NSW Branch J. B. Douglas Award Prize**

2011

Each school/department in NSW nominates one near-final or recently-completed postgraduate student then the nominated student is required to make a 15-20 minute presentation to the audience and judging panel, followed by 5 minutes of questions. I was nominated in the second year of my Ph.D. candidature (almost all nominated students are 3rd or 4th year Ph.D. students) and I won second prize.  
\$500

- **Winter School Student Travel Bursaries**

2010

Selected by Selection Committee of Winter School in Mathematical & Computational Biology to attend Winter School in Mathematical & Computational Biology 2011, University of Queensland, Queensland.  
\$250

- **Statistical Society of Australia Inc. Student Travel Grant**

2010

Selected by Statistical Society of Australia NSW Branch Council to attend the Australian Statistical Conference 2010, Fremantle, Australia.  
\$300

- **Australian Postgraduate Award**

2010

Funded by the Australian Federal Government and awarded to students of exceptional research potential.  
\$78,750

- **Dean's List for Academic Excellence**

2008

Awarded for academic excellence.

- **Tim Brown Prize II**

2008

The Tim Brown Prize II is awarded for proficiency in Senior Statistics at the School of Mathematics and Statistics, The University of Sydney.  
\$275

- **Barker Scholarship IV**

2008

Awarded for proficiency in Senior units of study in the School of  
Mathematics and Statistics at the School of Mathematics and Statistics,  
The University of Sydney.  
\$750