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

🐙 github.com/emitanaka

🐦 @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)

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

  Statististical 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.

> *Hosted by Univeristy of Tokyo.*

🛎 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