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), Honours 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)

This resume was made with the R package
pagedown.
Last updated on 2021-03-27.

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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 2021-03-27.

</> SOFTWARE

® edibble

An R-package that implements the grammar of experimental design.
Creator and maintainer. GitHub stars: 122
🔗 Source: https://github.com/emitanaka/edibble
🔗 Documentation: https://edibble.emitanaka.org

® anicon

An R-package to insert animated icons for R markdown and Shiny apps.
Creator. GitHub stars: 109
🔗 Source: https://github.com/emitanaka/anicon

® nestr

An R-package to build hierarchical or nested sturctures.
Creator and maintainer. GitHub stars: 10
🔗 Source: https://github.com/emitanaka/nestr
🔗 Documentation: https://nestr.emitanaka.org

® monash

A utility R-package with consolidated tools and templates for staffs at Monash University.
Creator and maintainer. GitHub stars: 3
🔗 Source: https://github.com/numbats/monash

® xaringan

An R package for creating slideshows with remark.js through R Markdown.

Contributor. My contribution is the adaptation of the ninja-theme shown in the Documentation. GitHub stars: 1137
🔗 Source: https://github.com/yihui/xaringan
🔗 Documentation: https://github.com/emitanaka/ninja-theme

® gghdr

Plots of highest density regions (HDR) for ggplot2.
Listed as author but my contribution is small. GitHub stars: 34
🔗 Source: https://github.com/ropenscilabs/gghdr
🔗 Documentation: https://ropenscilabs.github.io/gghdr

® shinycustomloader

Add a custom loader for R shiny.
Creator. GitHub stars: 98
🔗 Source: https://github.com/emitanaka/shinycustomloader

® datalegreyar

Datalegreya, the typeface that melts text and data visualisation, for R markdown.
Creator. GitHub stars: 38
🔗 Source: https://github.com/emitanaka/datalegreyar

</> Tomtom

A motif comparison tool part of the MEME Suite.
The -incomplete-scores is an implementation as a result of Tanaka et al. (2011).
🔗 Documentation: https://meme-suite.org/meme/doc/tomtom.html

💬 TALKS

List of talks (and links to the slides if available) are at **https://emitanaka.org/talks.html**.
Below show the last 10 talks.

● Visual Inference
FukuokaR
2021-03-27

● 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

🧰 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 Centre of Excellence

Associate Investigator
ARC Centre of Excellence for Mathematical and Statistical
Frontiers (ACEMS)

2020

● ARC Industrial Transformation Training Centre

Chief Investigator
Data Analytics for Resources and Environments (DARE)

2019

$3,973,202

● R Consortium Grant

Lead Investigator
Symbolic Formulae for Linear Mixed Models

2019

$6,000

● Sydney Institute of Agriculture Research Project
Grant

Chief Investigator
Land surface models of carbon and water do not work in
agricultural landscapes where it actually matters they work

2018

$90,000