

VOLUME 2025 - ISSUE 2

RESEARCH REVIEW



TOP
PUBLICATIONS

WELCOME TO THE
FAMILY

SENSORY PLANT

Journal of the American Statistical
Association, Biometrika,
Management Science, & Insurance:
Mathematics and Economics

Meet Fonti, Patrick & Yidi

Buddleia a.k.a Butterfly Bush

Welcome to the Issue 2 of Research Review for 2025!

We've had a busy and (despite the ANU's best efforts) successful quarter on the research front with multiple top publications across all three disciplines!

We also welcome three new post-doctorate researchers to the RSFAS family: Fonti Kar, Patrick Li, and Yidi Deng

But before we get to business, read about this quarter's sensory plant: Buddleia (also spelt Buddleja).

Buddleias are one of my all time favourite plants. Visually stunning with an enchanting perfume, these plants are commonly known as a "butterfly bush" and rightly so – a single plant can attract over 100 butterflies in a single day (and other insects and birds!).

Buddleias are an easy and fast-growing deciduous shrub. There are many varieties, some large and some smaller "dwarf" varieties that are good for borders and pots, but the standard is probably 2-3 metres in height and 1 metre wide. They have gorgeous flowers: long fluffy cones of tiny blossoms. These blossoms come a variety of colours (purple, blue, pink and white and even yellow) and appear continuously for around six weeks in mid/late-summer; and they have a rich sweet honey-like fragrance.

These plants are super hardy and can put up with a range of climates. Buddleias can ride out frost and snow, and are fine in full sun or part shade. They're even tolerant of salt spray, making them suitable for just about any garden.

Best of all, Buddleias are super low maintenance.

Aside from the occasional boost with a seaweed solution, you should snip off the old dead flowers (deadheading) and chances are the stems will produce a second and even third wave of buds. Deadheading is also a good idea as Buddleias can actually be a garden escapee and become an environmental weed in some climate friendly areas, so by deadheading, you're preventing that from happening. But, if "forget" to clip them, they respond very well to hard pruning. You can cut an old plant down to a very low trunk, almost to the ground (I just cut ours in half each winter with a hedge trimmer!), and it will regenerate and sprout out new flowering shoots.

So with spring around the corner, now is the time visit a nursery to pick up one or three these plants (I noticed last year even Bunnings stocks some smaller varieties). Happy reading!



BUDDLEIA

WELCOME TO THE FAMILY

MEET FONTI KAR

Fonti is a postdoctoral research fellow working on the Analytics for Australian Grains Industry project. Fonti has a background in evolutionary biology, quantitative biology and open-source tool building. She is interested in the sources of biological variability in plant and animal breeding where she leverages mixed modelling techniques to solve agricultural problems. Fonti is an advocate for openness, in science and in code and has developed software to support ecological research. She is passionate about data science education and empowering others with collaborative coding and package building skills. Learn more about Fonti's work at her [website](#)



MEET PATRICK LI

Dr Patrick (Weihao) Li is a Postdoctoral Research Fellow at the Biological Data Science Institute, Australian National University. He holds a Bachelor of Commerce (majoring in Business Analytics), an Honours degree in Econometrics, and a PhD in Statistics from the Department of Econometrics and Business Statistics at Monash University. His research focuses on machine learning, data visualization, visual inference, and computer vision, with a particular interest in automating the evaluation of diagnostic graphics and understanding how people interpret them. Patrick has developed and published multiple R packages on CRAN and GitHub, contributing to the open-source ecosystem for data analysis and visualization. He is a strong advocate for open and reproducible science, and regularly integrates tools such as Git, Quarto, and Jupyter into his workflows. He is proficient in R and Python, with growing experience in C and systems-level programming. He is also a member of the Statistical Society of Australia.



MEET YIDI DENG

Yidi is a statistical bioinformatician and new post-doctoral fellow, working with Dr Emi Tanaka to uncover genomic insights that support Australia's grain-industry research. Yidi completed a PhD in applied statistics at the University of Melbourne, where he developed novel methods for multi-omics data integration and variable selection, aimed at deciphering gene-regulatory mechanisms in the context of developmental biology and immunology. Yidi's overall research interests is to translate advanced statistical approaches into intuitive, practical software that biologists can easily adopt without specialized statistical or computational expertise.





EXTERNAL ENGAGEMENT

presentations, media mentions and more

Geoff Warren has been very busy... I'm not sure how he does all this in a quarter! Below is impressive list of industry and media engagement

Appointments:

- ASIC Public and Private Markets Advisory Group – appointed as member

Submissions:

- Treasury: Advice through superannuation consultation
- Treasury: Design options for the annual superannuation performance test
- ASIC: Australia's evolving capital markets discussion paper

Engagement:

- KPMG Super Insights 2025, Contributed article “Three lenses on the impacts of ‘big super’ plus involvement in launch webinar
- APRA: Feedback provided on review of retirement income strategies
- APRA: Discussion of retirement licensing regime concept

Media:

- ABC Radio Drive – interview on superannuation guarantee as it moves to 12%
- Investment Magazine, “What it would really take for a super industry liquidity crisis”
- Professional Planner, “How advisers can provide clients with quality private market exposure
- Professional Planner, Retirement Magazine, “Retirement advice through super will be far better than no advice”
- Firstlinks, “Does dividend investing make sense?”
- Professional Planner, “When investing for income make sense”
- Retirement Magazine and Professional Planner, “DBFO Tranche 2 fills gap in super fund retirement guidance and advice”
- Conference presentations:
- IBR iPARM Australia – presented on CPI-plus investment objectives and panel member on performance measurement
- All Actuaries Summit – presented on “Systemic impacts of ‘big super’”
- Conexus Fiduciary Investors Symposium, Blue Mountains, ran super fund liquidity workshop



EXTERNAL ENGAGEMENT

presentations, media mentions and more

Le Zhang did a short interview with the ABC radio, for the proposed merger of Mandalay Resources (a Canadian mining firm) and Alkane Resources (an Australian mining firm). The segment is available [here](#).

Takeshi Yamada was voted in as a board member of the Asian Finance Association.

Luca Maestrini gave an invited talk at the conference Bayes Comp 2025, which was held at the National University of Singapore from 16 to 20 June 2025.

Emi Tanaka was recently interviewed by the Australian Research Data Commons as one of the leaders in research software development. Read more [here](#).

Kevin Lu presented “Pricing Energy Spread Options with Variance Gamma-Driven Ornstein-Uhlenbeck Dynamics” at the 2025 SIAM Financial Mathematics and Engineering conference.

Francis Hui was appointed an Associated Editor for the journal Biometrics



Well done Le, Takeshi, Luca, Emi, Kevin Francis and Geoff!



EVENTS

save the date...

We will host the ANU-FIRN Banking & Financial Stability Meeting on 30 September.

The 1-day event will feature 6 papers and a keynote address from Sascha Steffen, who is the DWS Senior Chair in Finance and a Professor of Finance at the Frankfurt School of Finance & Management, and the director of the Centre for European Transformation. For more information, please visit the conference [website](#).

The conference chairs are Antje Berndt and Phong Ngo

The Statistical Society of Australia ACT branch is running an in-person workshop on An Introduction to Distributional Regression by Prof Gillian Heller.

For more details and to sign up please go [here](#).



HDR NEWS

Careful. We don't want to learn from this - Bill Watterson, "Calvin and Hobbes"

Congratulations to the following (former) students who have completed their PhDs

- a. Qingyue (Marco) Li – Actuarial. Thesis: Essays on Private Health Insurance in Australia: Household Decisions, Participation Projections, and Policy Explorations
- b. Dehua Tao – Statistics. Thesis: Recent Developments in Applying Quantile Regression for Missing Data in Longitudinal Studies
- c. Hedda Cui – Finance. Thesis: Three essays in Corporate Finance
- d. Tiancheng (Leo) Huang – Actuarial. Thesis: Three Essays in Life Cycle Modelling
- e. Yue Wang – Finance. Thesis: Debt Issuance and Asset Revaluation: Firm Heterogeneity, Monetary Easing, and Implications on Investment
- f. Ellen Saber – Statistics. Thesis: Resemblance Between Microbiomes: How Distance Measures Shape Variation in the Gill Microbiome of Atlantic Salmon

Well done to Wei Li – Statistics who has recently submitted and is now awaiting examiners reports!

We welcome new students: Wentao (Johnny) Gao (Actuarial), Mingke (Maddy) Wang (Actuarial), Bridget Browne (Actuarial), Xixuan (Claire) Wang (Finance), & Qifeng (Alex) Zou (Finance)

Finally, former PhD (Actuarial) student Tiancheng (Leo) Huang has landed at MLC Life Insurance as an Actuarial Analyst



PUBLICATIONS

“I used to save all my rejection slips because I told myself, one day I’m going to autograph these and auction them. And then I lost the box.”

—James Lee Burke

Congratulations to Raymond Liu, Adam Butt, Chao Gao, Andy Wood, Jacie Liu, Emi Tanaka, Xuan Liang, Tao Zou, Luca Maestrini, Ning Wang, Jiazhen Xu, Janice Scealy, Alan Welsh, Francis Hui on their recent publication success, full details on the next page.

A special mention to Chao Gao for his [Management Science](#); Jiazhen Xu, Andy Wood and Tao Zou for their [Biometrika](#); Ning Wang for his [Insurance: Mathematics and Economics](#); and Francis Hui for his [Journal of the American Statistical Association](#).

These are all the premiere journals in their respective fields!





Accepted



Rejected

PUBLICATIONS

Barre, S., Alinani, A., Luo, J.C., Liu, W.-M., Fink, B., Herbaugh H., Shah V., & Adhikary, S. (2025) Pain Trajectory After Total Knee Arthroplasty (TKA) with Prolonged Use of Outpatient Adductor Canal Catheters. Forthcoming in the Journal of Anesthesia and Translational Medicine.

Frees, E. W., Butt, A., & Shi, P. (2025) Algorithmic Insurable Risk Portfolios. North American Actuarial Journal, 1-17.

Gao, C., Hu, G. X., & Zhang, X. (2025). Uncertainty Risk Resolution Before Earnings Announcements. Forthcoming in Management Science

Gao, C. & Johnston, M. (2025). Managerial Ownership in a Private Firm Framework. Forthcoming in the Review of Corporate Finance Studies

Gastaren, C.V., Pereira, M., & Liu, W.-M., Thiruvengkatarajan, V., & Sundararajan, K. (2025) Determinants of distress and anxiety in relatives of patients in a quaternary intensive care unit: Pilot study to evaluate targeted social work and counselling intervention. Forthcoming in the Journal of Acute Care.

Kume, A., Sei, T. & Wood, A.T.A. (2025). On the representation and computational aspects of a linear combination of independent noncentral chi-squared random variables. Statistics and Probability Letters, 218, 110291.

Li, J., Cheng, F., Liu, J., & Tanaka, E. (2025). Analysis of international life expectancies with manifold learning and neural networks. Genus. 81, 8

Liang, X. & Zou, T. (2025) Quasi-Score Matching Estimation for Spatial Autoregressive Model with Random Weights Matrix and Regressors. Forthcoming in the Journal of Business & Economic Statistics

Liu, D., Wang, N., Xu, L. & Wang, H. (2025). Life-cycle planning model with inflation and time-varying consumption constraints. Forthcoming in Quantitative Finance.

Xu, J., Wood, A. T. A., & Zou, T. (2025) Robust functional principal component analysis for non-Euclidean random objects. Biometrika, 2025, asaf040

Xu, J., Scealy, J. L., Wood, A. T. A., & Zou, T. (2025) Generalized score matching, Journal of Multivariate Analysis, Volume 210, 105473

Maestrini, L., Hui, F. K. C. & Welsh, A. H. (2025). Restricted maximum likelihood estimation in generalized linear mixed models. Forthcoming in Statistical Science.

Ning, N., Hui, F.K.C., & Welsh, A.H. (2025). Inferential procedures for random effects in generalized linear mixed models. PLoS ONE, 20, e0320797



PUBLICATIONS

Nghiem, L.H. & Hui, F.K.C. (2025). Random effects model-based sufficient dimension reduction for independent clustered data. Forthcoming in the Journal of the American Statistical Association.

Russell, A., Rainsford, S., Glasgow, N. & Liu, W.-M. (2025) Utilisation of Palliative Care Electronic Resources in Australian Rural General Practice: a cross-sectional study. Forthcoming in Progress in Palliative Care.

Wang, H., Liu, D., Xu, L. and Wang, N. (2025). Life-cycle planning model with stochastic volatility and recursive preferences. Forthcoming in International Review of Finance.

Wang, N. and Zhang, Y. (2025). Robust asset-liability management games in a stochastic market with stochastic cash flows under HARA utility. Forthcoming in Insurance: Mathematics and Economics.

Zhang, J., Wei, J. and Wang, N. (2025). Optimal decision-making for consumption, investment, housing, and life insurance purchase in a couple with dependent mortality. Forthcoming in Annals of Actuarial Science.

