



ANU ANALYTICS FOR THE AUSTRALIAN GRAINS INDUSTRY

2025 Highlights

**5th May 2025
Patrick Starts**



**3rd June 2025
Fonti Starts**



Post-Doctorate Fellows

Adam Nie

BDSI
Fonti Kar
Patrick Li
Yidi Dang
et al.

**1st July 2025
Yidi Starts**



ANU AAGI TRAINING

9-14th July 2025

- Introduction to selective breeding,
- the analysis of a single field trial,
- the analysis of a multi-environmental field trial,
- workflow and tools for reporting, and
- linear mixed models.



ANU BIOMETRICS SEMINAR

Kickstarted on 1st August 2025

**5 seminars
in total**



Organised by Patrick

1. Novel methods for analysing single cell gene expression data by Yidi Deng
2. How will future climate change affect wheat yield and nutritional quality? By Zixiong Zhuang
3. Design and Spatial Analysis of On-Farm Strip Trials: From Principles to Simulation Evaluations by Zhanglong Cao
4. A predictive model for genotype x environment x management practice (GxExM) interactions incorporating environmental covariates by Michael Mumford
5. Predicting changes in agricultural yields under climate change using meta-analytic mixed effects models by Christine Li



**ANU Glasshouse Tour
by Zixiong
15th August 2025**

Emi presents at:

- **Forum “Math for Industry” in Korea**
(19th August 2025)
- **Lab of Biometry and Bioinformatics at University of Tokyo**
(25th August 2025)
- **Mini-Symposium at University of Kyushu**
(2nd September 2025)
- **EUCARPIA Biometrics in Plant Breeding**
(17th September 2025)
- **AAGI Symposium**
(28th October 2025)
- **AAGI Workshop**
(30th October 2025)



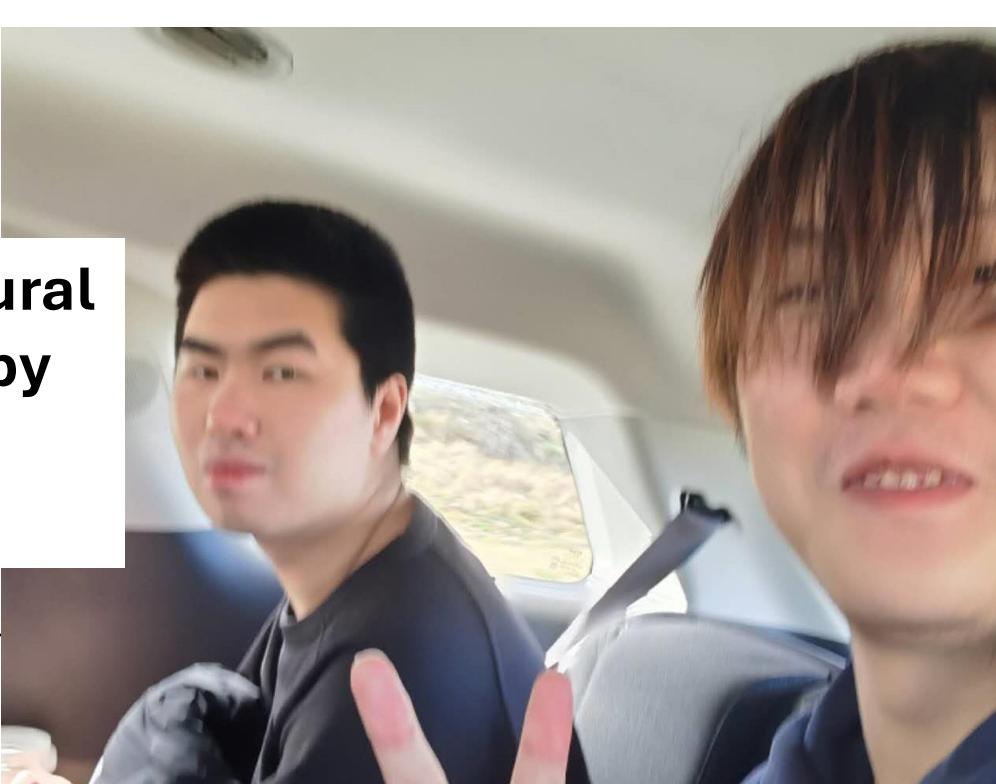
AAGI Symposium (29th October 2025)

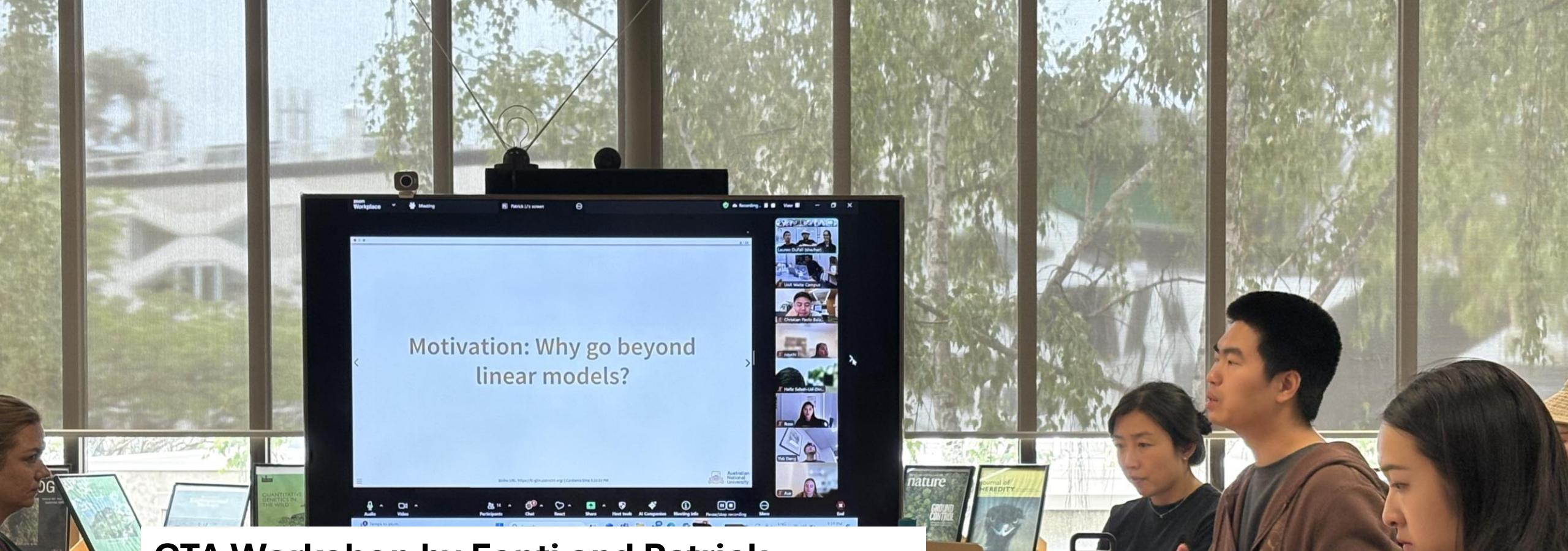
Emi presenting work based on
"Examining the Interface Design
of Tidyverse" published in ANZJS





CSIRO Boorowa Agricultural Research Station Visit by Patrick and Yidi (9th September 2025)





**GTA Workshop by Fonti and Patrick
(21st Sep 2025)**

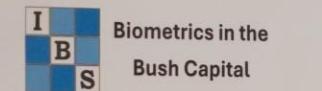
- Initial Data Analysis
- Hypothesis Testing and Chi-Square Test
- Generalised Linear Model

Computer Vision Workshop by Patrick (23rd November 2025)



Tutorial Room 4

WEI:biometric
(username)



Biometrics in the
Bush Capital

Deep Learning and
Computer Vision in R: A
Practical Introduction

by Patrick Weihao Li



RGB
↓
RGB

Yidi Deng

Biometrics in the Bush Capital

24-28th November 2025

LOC including Emi, Yidi, Patrick, Fonti & Alan

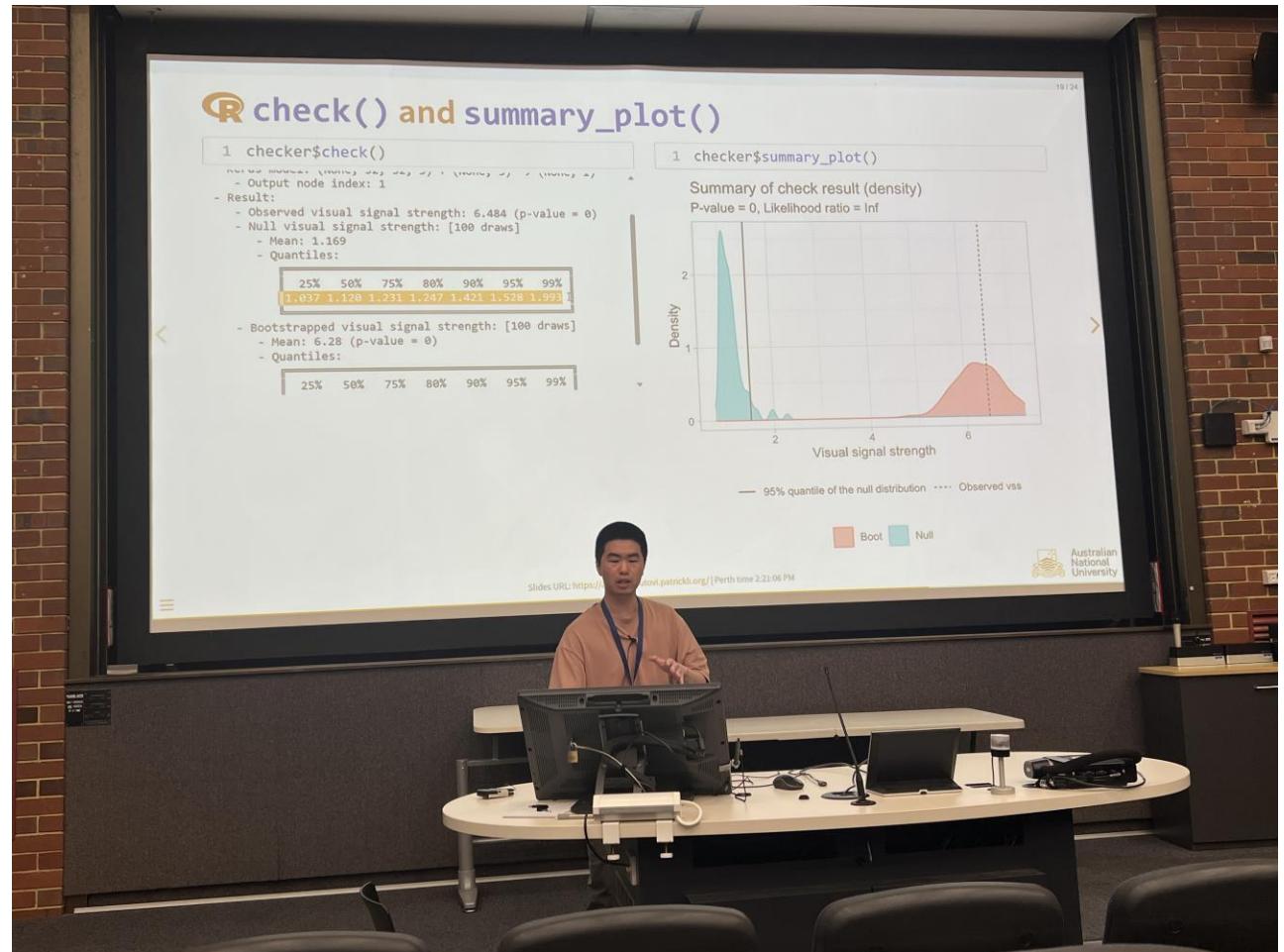
**Program Chair)
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Talks by Yidi, Patrick and Fonti



Patrick's invited talk at the Australian Statistics Conference





**Congratulations to our students
Maggie and Jenny for their prize and
honourable mention at BIBC2025
(28th November 2025)**



In the horizon:

- **AAGI-AU-RD-BFA: Exploring a flexible Bayesian framework for ASReml-compatible inference and prediction** (Emi, Francis)
 - **AAGI-AU-RD-PBS: Sowing seeds for continuous development of a software suite and community of practice in crop analytics** (Fonti, Emi, Yidi, Patrick)
 - **Integrating expression Quantitative Trait Loci (eQTL) mapping and network analysis to provide a colocation track for post-Genome Wide Association Studies (GWAS) SNP-to-Gene assignment** (Yidi, Emi)
 - **CSP2307-006RTX: Effective Control of Blackleg of Canola: Contract 4 Phenotyping** (Patrick, Emi, Yidi, Alan)
 - **DPI2504-006RTX: Development of genetic selection tools for improved canola acid soils tolerance-Phase 2** (Fonti, Emi, Yidi)
 - **AAGI-AU-RD-PB2: Incorporating GxE interaction models into plant breeding simulation pipelines to improve genetic gain** (Emi, Yidi)
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