



Random selection at the SSA

Jessica Kasza, Monash University

SSA fast facts

WHAT?

- Australia's national society for statisticians in academia, industry and government

WHO?

- Around **1000 statisticians** from around Australia (and the globe!)
 - About 300 student statisticians

SINCE WHEN?

- Founded in 1962

OVERALL OBJECTIVE OF THE SSA?

- Further the study, application and good practice of statistical theory and methods in all branches of learning and enterprise

www.statsoc.org.au

PhD Top-Up Scholarships

- Awarded annually since 2021
 - 4 x \$2500 scholarships for PhD or Masters students in statistics
- Application form (<2 pages):
 - Confirmation of eligibility
 - Degree details
 - Summary of PhD/Masters Project
 - Career to date & career plans
- Selection process:
 - Suitability of application assessed by 2-3 senior statisticians
 - 4 winners randomly selected out of all suitable applications; at least 2 non-male

Diamond Jubilee Fellowships, 2022

- 4 x \$5000 Fellowships to help further careers of early/mid-career statisticians
- Application form (<3 pages):
 - Confirmation of eligibility
 - Activities the fellowship will support
 - Track record in relation to planned activities
 - Proposed budget
- Selection process:
 - Review by 2-3 senior statisticians
 - Applications grouped into quartiles by each reviewer
 - Top 50% of applications decided upon by discussion

Random selection process

- Panel meeting via zoom; all applications discussed
 - Consensus on “Eligible”/“Competitive” applications reached
- R code for random selection written ahead of time
 - Panel members (not the person running the code) each asked to pick a number (any number!)
 - These added or multiplied to give the random seed
- Random selection:
 - In the case of PhD scholarships, random draws until at least two selected winners are non-male
 - Only the final selection displayed

Why random selection?

- If we could, we'd give out more scholarships & fellowships.
- Which applications are the “best”?
 - It can be difficult to differentiate between applications, particularly when considering short track records.
- Risk of unconscious bias and other biases influencing decisions.
- There is already randomness in the system!
 - Were you to rank the same set of applications multiple times, what proportion of the time would you come up with exactly the same rank ordering?

Advantages & disadvantages

Advantages:

- Reduce the impact of biases when assessing applications
 - Increased transparency in the process?
- Reduce the length of applications
 - Only ask for what we really need
- Reduce the effort required to select winners
 - Don't need to agonise over the rank order of applications

Disadvantages:

- If outcomes are random, will applicants submit lower-quality applications?
- Decrease the prestige associated with winning?