The Vacation Scholarship Program 2022/2023

The University of Melbourne
School of Mathematics and Statistics

Information Session 2 August 2022

Presented by: Dr Thomas Quella and Dr Wei Huang

With contributions from

- Jiani Xie (student experience)
- Xinyi Yang (student experience)
- Dr Peter McNamara (supervisor perspective)
- A/Prof Agus Salim (supervisor perspective)

Coordination

Dr Wei Huang
Dr Thomas Quella — Academic matters

Roy Ridgway — Practical matters

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Note: The email address above can be clicked, just as many other things in this presentation.

The many shades of W...

- What? (is it about?)
- When? (does it take place?)
- Who? (is it aimed at?)
- Why? (should one get involved?)
- Which? (students and projects get selected?)

What is it about?

It's a summer research program for undergraduate students in a degree related to Mathematics and Statistics who are enrolled at a University in Australia or New Zealand

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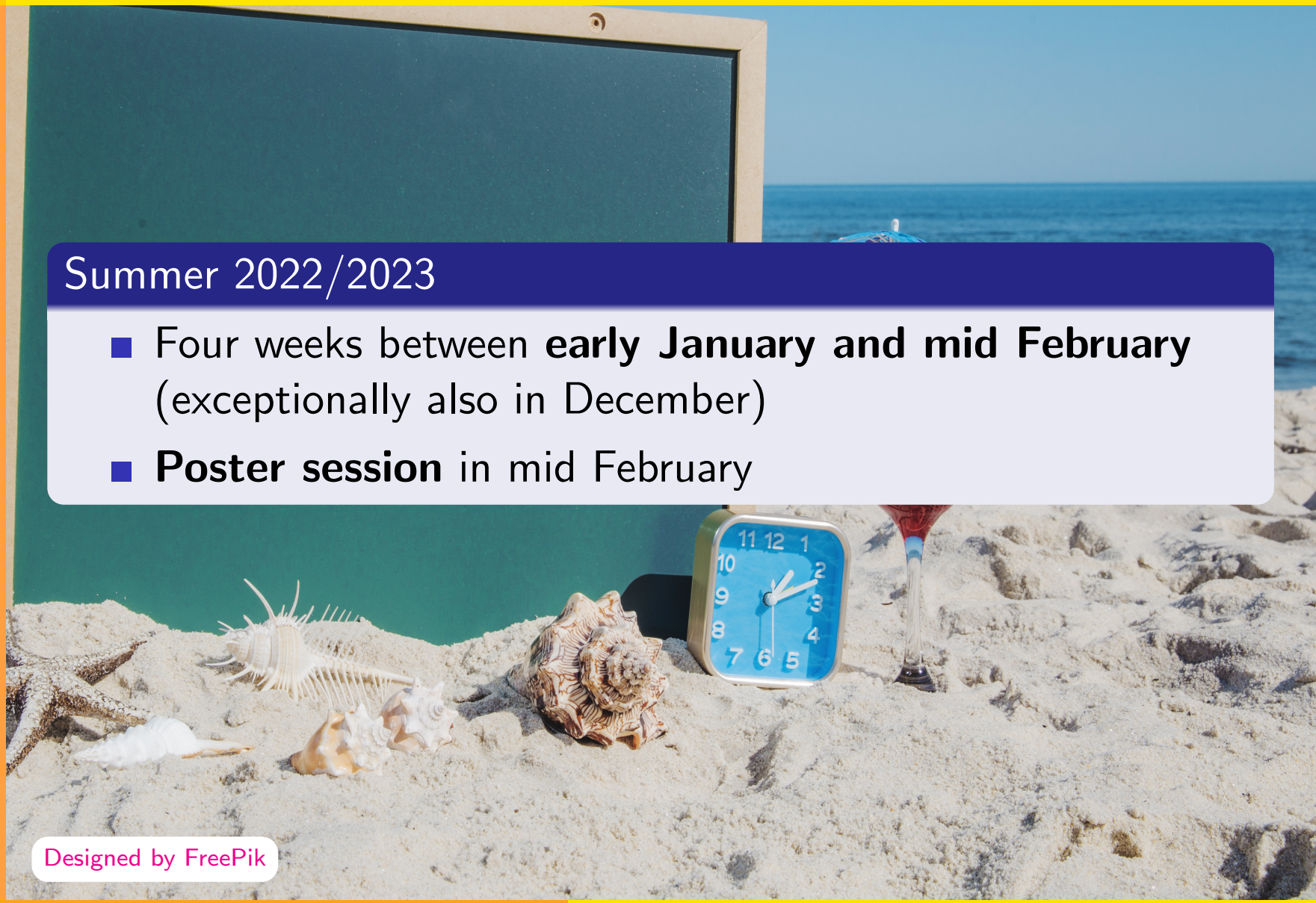
When does it take place?



Summer 2022/2023

- Four weeks between **early January and mid February** (exceptionally also in December)
- **Poster session** in mid February

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Who is it aimed at?

Students

- Undergraduates interested in research
- Already trained in basic mathematics and/or statistics
  $\Rightarrow$ Must be an advanced 2nd year or a 3rd year student

Supervisors

- Supervisor list
- Feel free to also contact other academics to discuss their availability ($\rightarrow$ List of all academics)

Why should one get involved?

Students

- Experiencing active research under supervision
- Developing new perspectives on maths and stats
- Experiencing the school in a different way
- Networking and making friends with like-minded students
- Getting paid for having fun with mathematics
- Warming up for the masters

Supervisors

- Implementing a small research idea
- Finding good students for the graduate programs
- Interacting with bright young minds

Which students (and projects) get selected?

Schematics of the selection procedure

- Students decide which projects they find attractive
  $\rightarrow$ nominate up to three supervisors and research areas
- Students need to seek "supervisor approval"
- The main criterion for selection will be the **total WAM***
- Highly ranked students are more likely to have their project/supervisor preferences realised

*Some scholarships may be distributed by different criteria (to be determined), e.g. to increase the participation of disadvantaged and currently underrepresented groups.

The nitty gritty details

Eligibility criteria

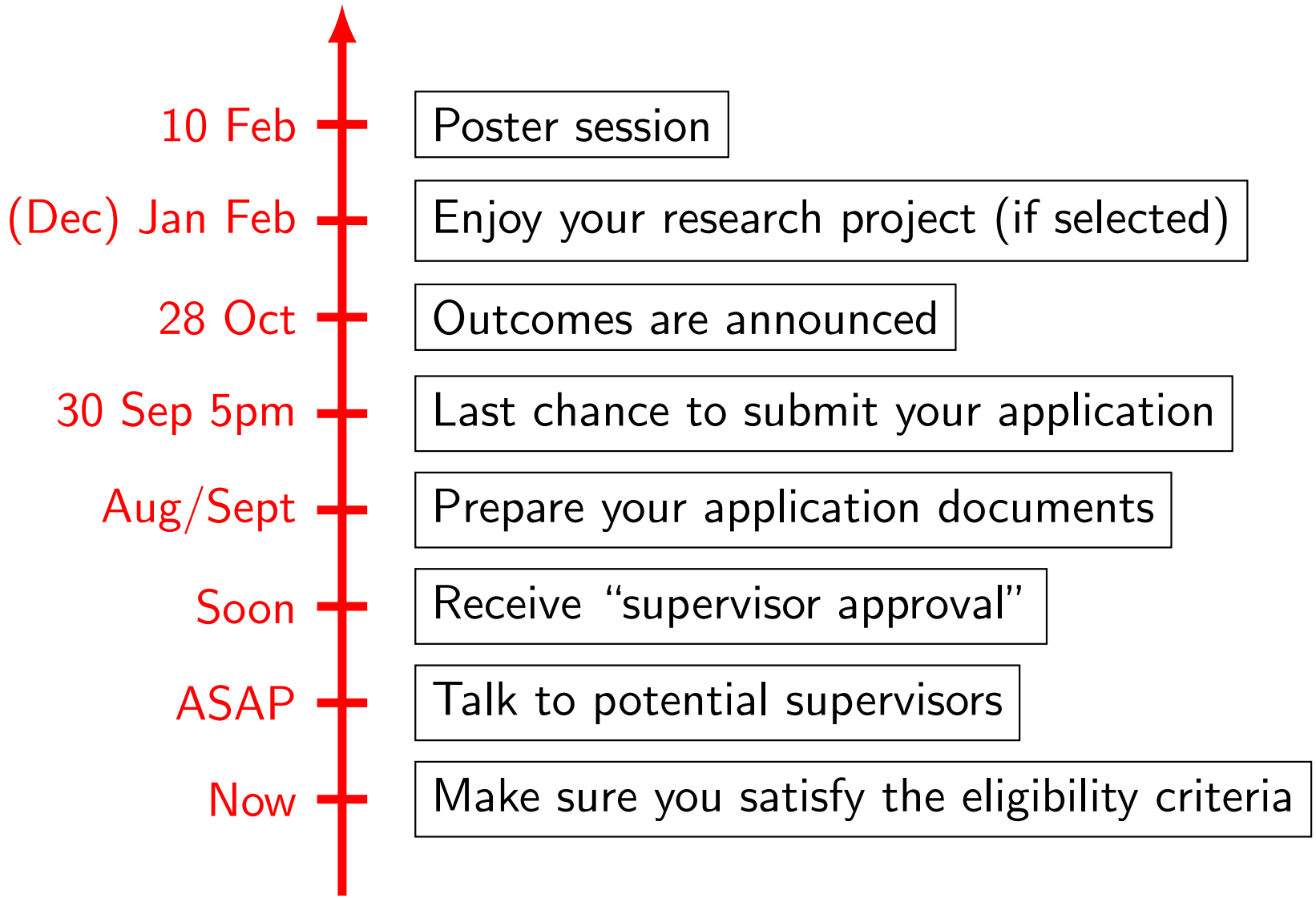
Eligibility

- Be an undergraduate student at an AU/NZ university
- At UoM: Usually BSc, D-MATHSC or start of GDA-SCI
- Completed ≥ 1 level 2 or 3 genuine M&S subjects
- Completed or be enrolled in ≥ 3 such subjects
- Have not participated before (AMSI would be okay)
- Received "approval" from at least one supervisor

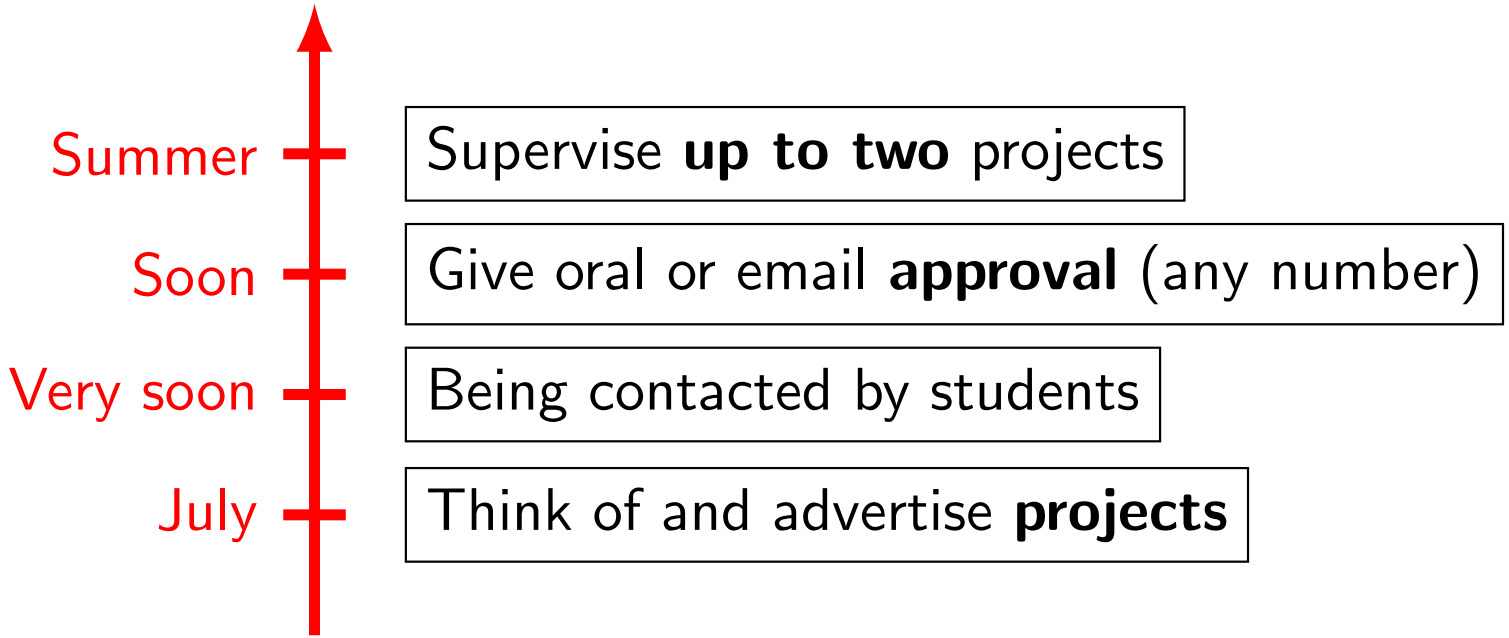
Remarks:

- MAST10009 Accelerated Mathematics 2 counts as level 2
- MAST20029 Eng. Maths is **not** a genuine M&S subject
- See the web page for the full list of eligible subjects

Timeline for students



Timeline for supervisors



Approval criteria are up to individual supervisors, e.g.

- Match of student to project (subject choices, WAM, ...)
- Availability in summer
- Future academic (or non-academic) plans
- Fit of personalities

Finding a supervisor and a project

Finding a supervisor and a project is a very individual matter that depends very much on personal interests etc.

Useful resources

- Supervisor list
- List of current projects (by research area)
- Poster gallery of previous projects
- List of research groups
- List of all academics

It is strongly recommended that you talk to more than one academic and nominate several supervisor preferences in your application.

Wooing a supervisor

Wooing a supervisor

- What **not** to do?
- Things that might work...

Any suggestions?

Wooing a supervisor

Wooing a supervisor

- What **not** to do?
- Things that might work...

Things to avoid (by no means exhaustive):

- Starting with "Dear Sir/Madam" or "Dear Prof." etc.
- A generic email that could be sent to anyone
- Arrogance

Keep in mind that supervisors might receive many requests.

Wooing a supervisor

Wooing a supervisor

- What **not** to do?
- Things that might work...

Things that might work:

- Personalise/adapt your email to the supervisor and her/his projects or research interests
- Be considerate: We are all busy and receive loads of emails
- Briefly explain your background and motivation
- Kindly ask for a brief personal (Zoom) meeting
- Potentially attach a statement of results

Talking to a potential supervisor

What you could discuss in a personal (Zoom) meeting

- Your academic interests, motivation and background
- Your preferences (abstract/hands-on, theory/computer)
- What projects there are on offer and what they entail
- Whether projects can be adapted to your interests
- What knowledge you are expected to have
- How supervision will work in practice
- Availability during certain periods
- Possibility of remote participation

Follow-up: You are not expected to decide right away but once you made up your mind it would be kind to let the supervisor(s) know whether you intend to nominate them.

How to apply

The application form is available on the web page
https://ms.unimelb.edu.au/engage/vacation-scholarships

Documents to be provided for upload

- Supervisor approval (pdf printout of email)
- Current academic transcript or statement of results
- Curriculum Vitae ($\approx$ 2 pages)†
- Brief statement of motivation*

† Please do not include sensitive information such as mobile phone numbers, private email addresses or your residential address.

* The statement of motivation is not part of any formal assessment but might become relevant if you nominate supervisors you did not contact beforehand.

What other research opportunities are there?

AMSI Vacation Research Scholarship

Students who already participated in the School's Vacation Scholarship program are strongly encouraged to consider an application for an AMSI Vacation Research Scholarship.

Science Research Project in the Bachelor of Science

Students with an excellent academic record can potentially take the module "Science Research Project" (SCIE30001) as part of their degree.

Note: The rules for the Science Research Project have changed recently, see the detailed information on MS Prime.

It is **not permitted** to recycle a Vacation Scholarship Project as a Science Research Project.

Guest presentations

Finally we will hear about examples of previous and currently offered projects as well as personal experiences and recommendations...

Student presentations

- Jiani Xie
- Xinyi Yang

Presentations by academics

- Dr Peter McNamara (Algebra)
- A/Prof Agus Salim (Biostatistics)

Any questions?