The Vacation Scholarship Program 2020/2021

The University of Melbourne
School of Mathematics and Statistics

Information Session 13 August 2020
Presented by: Dr. Thomas Quella

With contributions from
• Harshit Sharma (student experience)
• Yuan (Rebecca) Yin (student experience)
• Dr. Binzhou Xia (supervisor perspective)
• Dr. Joyce Zhang (supervisor perspective)
Coordination

Dr. Wei Huang  Academic matters
Dr. Thomas Quella
Roy Ridgway  Practical matters

Contact: ms-vacation-scholarships@unimelb.edu.au

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.
When does it take place?

- **Summer 2020/2021**
  - Four weeks between *early January* and *mid February*
  - **Poster session** in mid February
Who is it aimed at?

**Students**
- Undergraduates interested in research
- Already trained in basic mathematics and/or statistics
  ⇒ 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 (→ 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 → nominate up to three supervisors and research areas
- Students need to seek “supervisor approval”
- Applications are ranked by total WAM
- Highly ranked students are more likely to have their project/supervisor preferences realised

Note: In contrast to previous years the basic selection is based on student merit and not on individual supervisors’ preferences
The nitty gritty details
Eligibility criteria

Eligibility

- Be an undergraduate student at an AU/NZ university
- Completed $\geq 1$ level 2 or 3 genuine M&S subjects
- Completed or be enrolled in $\geq 3$ such subjects
- Have not participated before (AMSI would be okay)
- Received “approval” from at least one supervisor
- Have an Australian bank account

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

11 Sep 5pm
- Last chance to submit your application

Aug/Sept
- Prepare your application documents
- Receive “supervisor approval”

Soon
- Talk to potential supervisors

ASAP
- Make sure you satisfy the eligibility criteria

Now
- Enjoy your research project (if selected)

Make sure you satisfy the eligibility criteria
Talk to potential supervisors
Prepare your application documents
Last chance to submit your application
Outcomes are announced
Enjoy your research project (if selected)
Timeline for supervisors

- **Summer**
  - Supervise **up to two** projects
- **Soon**
  - Give oral or email **approval** (any number)
- **Very soon**
  - Being contacted by students
- **July**
  - Think of and advertise **projects**

**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
The program in the “New Normal”

In view of the uncertain outlook regarding the Covid-19 situation in Australia (and New Zealand) the program might be subject to currently unknown government and university restrictions. For this reason, it will be possible (and might become necessary) to participate remotely.

The application form will ask whether you intend
- to participate on campus (if allowed and safe to do so)
- to participate remotely
- not to participate (if this could only be done remotely)

Please also discuss this aspect when contacting potential supervisors.
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)
- List of previous projects (UoM-internal link)
- List of research groups
- List of all academics

It is recommended that you talk to more than one supervisor
Wooing a supervisor

What **not** to do?

Things that might work...

Any suggestions?
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 everyone
- Arrogance
Wooing a supervisor

What not to do?

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 personal (Zoom) meeting
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
- Curriculum Vitae (≈ 2 pages)
- Brief statement of motivation*

* The statement of motivation is not part of any formal assessment but might be 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.
Guest presentations

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

Student presentations
- Yuan (Rebecca) Yin
- Harshit Sharma

Presentations by academics
- Dr. Binzhou Xia (Discrete Mathematics)
- Dr. Joyce Zhang (Operations Research)
Any questions?