



School of Mathematics and Statistics

# Becoming a PhD student

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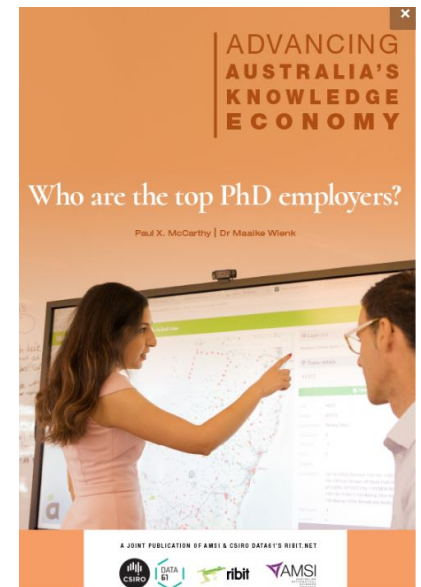
Director of Postgraduate Studies

## Questions:

1. Do I want to do a PhD? (Why?)
2. Can I do a PhD? Should I?
3. Is mathematics the most suitable discipline?

## Check out:

<https://amsi.org.au/publications/advancing-australias-knowledge-economy/>



# What does the degree involve?

The handbook says:

The degree of Doctor of Philosophy (PhD) may be awarded to a candidate who completes a piece of research that demonstrates a significant and original contribution to knowledge in their field of study

The PhD program involves a minimum of three years full-time study. Students undertake supervised research leading to the production of the thesis.

The length of a doctoral thesis normally should not exceed 100,000 words of text and should be submitted for examination within 4 years of full-time study.

...but what do you actually do for 3(+) years?

# What it really involves!

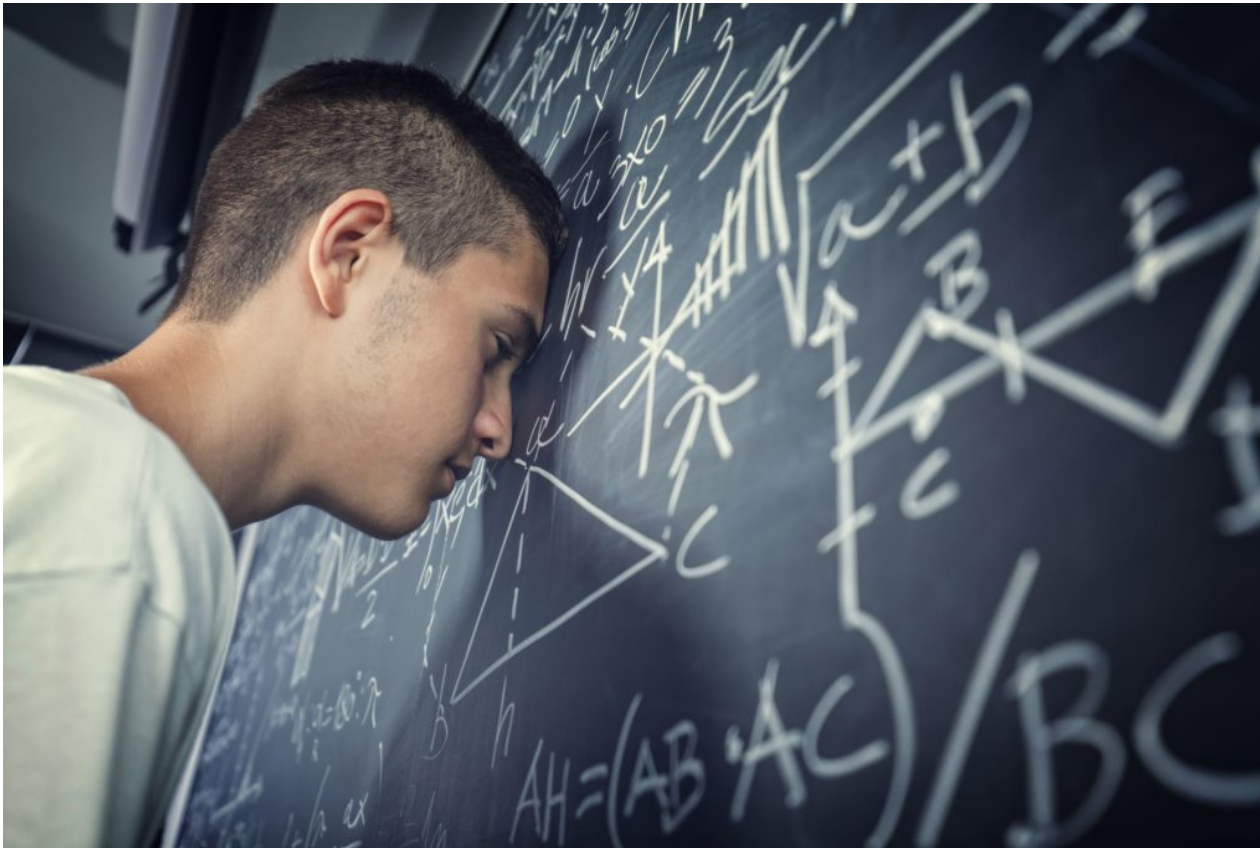
To learn how to be an independent mathematical researcher.

To do this you will need to

- Learn some more maths
- Learn how to find (and solve) problems
- Learn how to write mathematics for publication
- Learn how to present mathematics at seminars and conferences
- Learn how to collaborate with other researchers

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# Entry requirements

- Almost all universities have the same entry requirements: **at least a II-1 Honours degree.**

In reality, you should probably have a 1<sup>st</sup> class Honours degree (ie 85+ at UNSW)

.... with exceptions

+ Money!

+ Passion for problem solving!

# First steps

**You need to decide where you want to study!**

## **Important points to consider:**

- **Constraints/desires of location?**
- **What area of maths are you interested in?**
- **Where are the main people/unis in that area?**
- **What sort of postgrad environment does the university provide? What reputation does the university have? Number of PhD students?**
- **Are there special requirements? Courses? Languages? Opportunities to teach?**
- **What sort of funding is available? (Scholarships and research support)**

# The Master's Apprentice (or Mistress's)



You'll need to find your Yoda!



## Do some research

First: ask your Honours supervisor for advice!

Check the research web pages of different maths departments.

Look people up on MathSciNet? (Are they publishing?  
Do they have good collaborators?)

## What are the application deadlines?

eg UNSW for 2020: (2021 not yet announced!)

Applications closed 18 September

Offers: from 26 Nov. (Before end of T3!)

Highly variable and not always obvious!

(deadlines mainly for scholarship purposes)

# Making an application

Line up some referees. Prepare a CV.

Email some possible supervisors

- Most places require you to have done this before applying!
- Write them a **personal** email, not a generic one!
- Send them a transcript and a description of your Honours project.
- If they respond positively, you may need to prepare some sort of research proposal with them.
- Visit if you can – some places require an interview.

Make the formal application to the university.

Wait for the offers to roll in .....

# Funding in Australia

Full Fees are expensive!

Almost all domestic research students have their tuition fees waived via the government's Research Training Program (RTP)

**Living allowance scholarships:** Most local PhD students receive an RTP scholarship worth roughly **\$28k pa**. You need a 'good' H1 degree to get one.

Uni's often offer additional scholarships to try to fund all local H1 applicant, and/or offer 'top-ups' to some students.

Often some money from teaching/marking.

# Funding

Some supervisors have funding specifically for their project.

Or Industry funding.

There are some 'high prestige' higher value scholarships, (eg  
UNSW Scientia Scholarships  
\$41k pa + ....)

# The program at UNSW

We currently have around 50 PhD students in the School, with topics ranging from abstract analysis to sports statistics.

UNSW is highly ranked!

About 30 domestic, 20 international students.

Local students with a RTP/UNSW scholarship also get an extra \$7500 pa School scholarship, as well as opportunities to earn additional income through tutoring etc.

Well-developed progress review system. Excellent completion rate (about 15 completions in last 12 month period).

Annual postgraduate conference to celebrate postgrad research.

Contact Alina Ostafe for more details on the admission process.

**Any Questions?**