

Graduate Program Opportunities and Perspectives

Melissa Hart

Perspectives- ARCCSS strategic plan

Transform graduate education in climate science at the national scale

1. Develop a national graduate program led by a Graduate Director
2. PhD students engaged in co-supervision and collaborative research projects across institutions
3. Conduct annual winter schools, workshops and training courses to educate, train and build relationships
4. Grow the PhD cohort via scholarships and support

Perspectives- PhD students

- 70 enrolled (61 in 2014)
- 13 submissions (9 in 2014)
- 39% international
- 47% women
- Destinations post-graduation have included: Columbia, Princeton, Oxford, NASA, BoM, Leibniz Institute of Marine Sciences Kiel, ARCCSS

Perspectives- MSc and Hons students

- 5 MSc students (4 in 2014)
 - 2 submissions (1 in 2014)
 - 1 has moved on to PhD
- 22 Hons students (12 in 2014)
 - 16 submissions (7 in 2014)
 - 4 have moved on to PhD

Perspectives- Undergrad summer scholarships

- 21 undergraduate students
 - + 20 arriving this summer, including 1 supported by the Department of Environment
- 6 have moved on to Hons/MSc/PhD
- 6 week research projects.
- Embedded in node universities, CSIRO, BoM.
- Supervised mostly by early career researchers.



Opportunities- ECR committee

- Development of Early Career Researcher (ECR) committee
 - 1 student + 1 postdoc from each node
 - Objective: to give ECRs a voice in the Centre beyond their individual nodes and research programs



Submission to

The Senate Inquiry into Australia's Innovation System

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The Australian Research Council Centre of Excellence for Climate System Science (ARCCSS) is an international research consortium of five Australian universities and a suite of outstanding national and international Partner Organizations. The Centre's vision is to revolutionize understanding of the Australian climate system by transforming the scale and quality of climate system science in Australian Universities, linked with national and international partners. Our programs combine innovative research with high performance computing, "big data", innovative computational methods and demands on our researchers to bridge a range of the physical and biological sciences. The Centre has a graduate program that reaches beyond a single university and develops the technical and intellectual capacity of Australian climate science graduates. Our graduate students and early career researchers (ECR) are represented by an ECR committee within the Centre that consists of representatives from each partner university. This submission was written by members of our ECR committee. We focus on two main challenges that dissuade ECRs from beginning or continuing a research career. This undermines the national Innovation System, represents lost national capacity, wasted investment and provides easy opportunities for our international competitors.

Opportunities- ECR committee

- **Monash**
 - Student- [Sugata Narsey](#)
 - ECR- [Laura O'Brien](#)
- **Melbourne**
 - Student- [Andrea Dittus](#)
 - ECR- [Claire Vincent](#)
- **UTAS**
 - Student- [Viviane Vasconcellos de Menezes](#)
 - ECR- [Max Nikurashin](#)
- **ANU**
 - Student- [Kate Snow](#)
 - ECR- [Sophie Lewis](#)
- **UNSW**
 - Student- [Yue Li](#)
 - ECR- [Ruth Lorenz](#)

Opportunities- Grad program – next 3 years

- Individualised training needs assessment
 - Packaging of all components of the graduate program.
 - A personalised skills/knowledge assessment and development plan.
 - Revisited and revised throughout candidature.

Opportunities- Grad program – next 3 years

- ARCCSS induction (half)day for new students.
- Science
 - Expand the virtual seminar series.
 - Build on virtual lecture library.
 - Paper reading groups.
- Technical Training (in collaboration with CMS team)
 - Virtual intro lectures for models used in the Centre.
 - Ongoing training as needed: Python, Fortran...

Grad program – in a re-funded centre

- Formalising the graduate program
- Personalised program: built around core components of the graduate program + individualised training needs assessment.
- Possibly Grad cert/dip
- Possibly Australian Higher Education Graduation Statement (AHEGS)
- Complicating factor: some universities bringing in compulsory coursework for PhD students (e.g. UTAS- grad cert in research, The Monash PhD)

Thank you

- Please feel free to contact me at ANYTIME.

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