

Dear all

One item this week:

- A PhD opportunity at The University of Melbourne as part of the Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA).

If you would like something included in this digest please email it to office@mssanz.org.au

kind regards, Karen

PhD project description

The planning and management of environmental (or water) systems is often complex, often involving many (and sometimes conflicting) objectives and subject to uncertainty in both the short term and the distance future. The focus of this PhD project is to develop theories and methods in robust multiobjective optimisation for managing environmental systems. The Coorong system in South Australia will be used as the case study. The Coorong is one of Australia's most environmentally significant areas under the Ramsar Convention (effective since 1975). Under the Murray-Darling Basin Plan, environmental water is delivered to improve the bird habitat of the Coorong. The system needs to be actively managed to improve water quality in the Coorong while maintaining sufficient tidal connectivity considering uncertain conditions, e.g. inflows, evaporation and tidal conditions.

This PhD project is part of the Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA). The standard University of Melbourne PhD research scholarship applies. The successful PhD candidate will be supervised by Dr Wenyan Wu from the University of Melbourne, Prof Holger Maier from the University of Adelaide and Dr Matt Gibbs from the Department for Environment and Water (DEW) in South Australia.

Selection criteria (Max 200 words each)

1. An Honours or Masters degree (or equivalent) in environmental engineering, civil engineering or relevant fields.
2. A study/research background in water resources management, environmental modelling and/or optimisation.
3. Competence in at least one computer programming language, such as C/C++, R or Python.
4. Excellent written and verbal communication skills in English, demonstrated by report writing, class/seminar/conference presentations or other forms of presentations.
5. Excellent interpersonal skills, including the ability to interact with internal and external stakeholders (academic, administrative and support staff) in a courteous and effective manner.
6. Demonstrated perseverance when faced with difficult situations.
7. Relevant industry experience is desired.

Application instruction

Please address the selection criteria above. Please send your responses to each of the selection criteria, together with your CV (including the names and contact information of two referees), academic transcripts (for Master's and/or Bachelor's degree) and a brief research proposal of no more than 3 pages (including references) to Dr Wenyan Wu at wenyan.wu@unimelb.edu.au. The

application deadline is 5pm Friday 15th Jan. 2021 (AEST). Please include "Application to DECRA PhD 2021" in your email subject.

Please note that applications will be prioritised from those who are not affected by travel restrictions. Please see the latest updates to Australia's immigration and border arrangements during the COVID-19 (Coronavirus) outbreak: <https://covid19.homeaffairs.gov.au/>. Due to the large number of applications, applicants not selected for interview will not be notified.