

PhD Position UNSW Australia - Flood Forecasting

The WRC, or Water Research Centre, is a multi-disciplinary research centre located at UNSW Australia and has a 62-year history of leading Australian water research within a holistic international perspective of water from catchment to ocean and beyond. Information about the Water Research Centre at UNSW is available at water.unsw.edu.au

Our hydrology group has been awarded a large grant by the Australian Research Council to develop a framework for flood forecasting in data sparse areas. The aim of the project is to use remote sensing information on soil moisture and open water locations in real-time to improve the information in hydrologic and hydraulic models. As part of the project, we are seeking a PhD candidate to investigate the best ways to undertake hydraulic modelling in data sparse regions. This may include data assimilation to incorporate information from remote sensing of flood inundation and/or soil moisture. Potential research questions include optimum spatial resolution of input data and forecasts, the impact of the choice of hydraulic model on the forecasts and the levels of accuracy that can be achieved. The outcomes from the PhD will be used by other members of the project team in developing the overall system for flood forecasting. It is hoped that this project will make valuable contributions to efforts to provide real-time flood forecasting systems in data sparse regions.

The successful applicant will be expected to apply for an APA or an EIPRS scholarship, which will be topped up by project funds depending on performance. We are seeking potential candidates with a background in hydrologic and hydraulic modelling, civil engineering or mathematics. Applicants able to commence study in Semester 2 2015 are preferred.

If interested, please send a CV and your academic transcripts to Dr Fiona Johnson (f.johnson@unsw.edu.au) with a subject line marked "Flood Forecasting PhD".