PhD Scholarship at UNSW on future drought analysis

**Project Summary:** Droughts have an enormous impact economically, socially and environmentally in Australia and around the world, with one estimate of the 2002-2003 costs of the Millennium drought being 1.6 percent of Gross Domestic Product. A wide range of industries and sectors are affected by changes in water availability. Understanding the vulnerability of these systems to climate variability has traditionally been achieved by assuming that past hydrological extremes will occur in the future, an assumption that is no longer tenable due to anthropogenic climate change. Our team at UNSW Australia (the University of New South Wales) has recently been awarded a grant by the Australian Research Council with project partner DPI Water to develop a framework for future drought downscaling. The aim of the project is to use information from global climate models to assess changes in drought frequency and their impact on water availability in catchments in NSW.

As part of the project, we are seeking a PhD candidate to investigate the best ways to identify the causes of droughts within climate model simulations. The outcomes from the PhD will be used by other members of the project team in providing input to new statistical downscaling methods. The PhD candidate will gain experience in climate impact assessment and hydrologic modelling and will develop valuable industry relationships through this Linkage Project.

The successful applicant will be expected to apply for an APA or an EIPRS scholarship, with a $5000 top-up scholarship available. We are seeking potential candidates with a background in hydrology, civil/environmental engineering, atmospheric science or mathematics. The successful applicant need not be an Australian citizen; however, preference will be given to local applicants with the right background.

If interested, please send a CV and your educational transcripts to Dr Fiona Johnson (f.johnson@unsw.edu.au) with a subject line marked “Future Drought Downscaling PhD” by 15th August 2016.