PHD SCHOLARSHIP AT UNSW ON DECADAL HYDROLOGIC PREDICTION

Have you wondered how one could predict water availability 10+ years into the future? This is a question that has been put up for investigation as part of the forthcoming IPCC 5th assessment report (AR5). In connection with this initiative, the Australian Research Council (ARC), with support from the Australian Bureau of Meteorology and the State Water Corporation of NSW, has recently awarded us a Linkage project, with the aim of formulating the best viable strategies for decadal hydrologic prediction for use in a range of water management initiatives.

A part of this study focusses on finding the best solution for a known problem with GCM decadal predictions – the issue of model “drift” (search “climate drift” on the web). Applications are sought for a PhD focusing on assessment and correction of climate drift in decadal climate simulations from a hydrological viewpoint. The outcomes from this PhD will be used by other members of the project team in formulating downscaling alternatives for selected regions, and ultimately, for formulating decadal hydrologic predictions across the country and will make valuable contributions to the international effort to provide reliable decadal predictions of climate.

The PhD will be directly supervised by Ashish Sharma from Civil and Environmental Engineering, and Alex Sen-Gupta from the Climate Change research Centre at UNSW, with inputs from many other project investigators and personnel. The applicant for this PhD should have a background in hydrology, with an interest in computer programming, statistics and climate science, and a passion for research into climate change and its implications for water. The successful applicant will be expected to apply for an APA or an EiPRS scholarship first, which will be topped up by project funds on a performance basis to lead to a stipend of up to $40,000 pa. The successful applicant need not be an Australian citizen, however, preference will be given to local applicants with the right background. Also, while a Masters qualification is not a requirement, preference will be given to applicants having a postgraduate qualification unless they have suitable industry exposure and skills.

If interested, please send a CV and your educational transcripts to Ashish Sharma (a.sharma@unsw.edu.au) with a subject line marked “decadal prediction scholarship” by 16/08/2013.

ADDITIONAL INFORMATION

Ashish Sharma’s web pages:
Web: www.civeng.unsw.edu.au/staff/ashish_sharma
Web (group): www.hydrology.unsw.edu.au
Web (centre): www.water.unsw.edu.au
Linkedin profile: http://au.linkedin.com/pub/ashish-sharma/55/11b/577

Alex Sen-Gupta’s web page: http://web.maths.unsw.edu.au/~alexg/
Web (centre): http://www.ccrc.unsw.edu.au; http://www.climatescience.org.au

ARC Linkage project title and summary:
A decadal to inter-decadal streamflow prediction system
This project will develop the first ever decadal streamflow prediction system for Australia, leading to predictions of streamflow for the next 10 years and beyond that take into account both natural climatic variability (driven by factors such as the El Nino Southern Oscillation) and changing greenhouse gas concentrations due to a warming planet.