

SCIENTIA PhD SCHOLARSHIPS (\$40,000 p.a. tax-free over 4 years)

CLIMATE CHANGE RESEARCH CENTRE

UNIVERSITY OF NEW SOUTH WALES, SYDNEY, AUSTRALIA

Topic area: The physics of drought extremes in the 21st Century

Expressions of interest are sought from outstanding graduates with a strong academic record including Honors Class I or equivalent for up to two 4-year PhD scholarships that include a living allowance of \$40,000 per annum (tax-free) and \$10,000 per annum in additional project support costs (e.g. relocation, travel, etc).

Graduates with a strong background in physics, mathematics, oceanography, atmospheric science, engineering or similar quantitative sciences are particularly encouraged to apply. Graduates with additional past experience working as a research scientist or assistant are also strongly encouraged to apply. Expressions of interest require (1) full copies of academic transcripts (2) a CV and (3) the names of up to three qualified referees.

The PhD students will be based at the UNSW Climate Change Research Centre. For further details on the CCRC, including faculty, research staff, students, research foci, and publications, see <http://www.ccrc.unsw.edu.au>

Up to two PhD scholarships will be offered; the first will focus on the ocean-atmosphere dynamics regulating drought using models and observations. This will focus on the large-scale drivers of drought including the role of the oceans via the El Niño and Indian Ocean variability, and the role of variations in the Southern Annular Mode. For this project, knowledge of ocean-atmosphere dynamics and GFD would be an advantage. The second PhD will focus on the role of land-atmosphere interactions. Here, the specific role of the land in intensifying drought will be examined including the importance of turbulent energy and/or vegetation feedbacks, and the role of regional-scale heating in re-organizing the atmosphere towards persistent patterns of blocking. Both PhD scholarships seek graduates with strong quantitative and numerical skills.

Both students will also gain direct support through the ARC Centre of Excellence for Climate System Science (ARCCSS). This will include access to technical and computational support, formal engagement through the Centre's Graduate Program (including targeted training, mentorship, Winter Schools and so on) and allocation of supercomputing resources for simulations via the National Computational Infrastructure facilities.

Apart from experts based at the UNSW Climate Change Research Centre, students will also be able to engage with international experts and have opportunities to spend time in Europe or the US working with colleagues.

Expression of Interest including academic transcript, CV and the names of up to three referees should be emailed to M.England@unsw.edu.au by November 11, 2016.