



**UNSW**  
CANBERRA

## **Scientia PhD Scholarship Opportunity at UNSW, Canberra, for 2017/18**

**What is Scientia PhD?:** The Scientia Scholarship Scheme, established as a cornerstone of the UNSW 2025 Strategy, is a distinctive scheme aimed towards PhD scholars of exceptional quality. Scientia scholars will have a strong commitment to making a difference in the world with demonstrated potential for contributing to the UNSW 2025 Strategy.

**Award Details:** These prestigious scholarships include a stipend of \$40,000 per annum for 4 years and a support package of up to \$10,000 per annum awarded to provide support for development activities, international collaboration and other related expenses.

Detailed guidelines for the Scholarship can be found at <https://research.unsw.edu.au/unsw-scientia-phd-scholarship-scheme>. This scholarship opportunity is for candidature at UNSW Canberra.

### **Project Details:**

***Evolutionary Computation for Environmental Modeling and Optimization:*** Identification of cost-effective and environment-friendly solutions for design and operation stages is a major global concern. The modelling and optimization involved in such design problems encapsulate several challenges, including large number of design objectives, variables and constraints, uncertainty in modelling and decision making in presence of multiple conflicting criteria. This project aims to develop efficient algorithms to deal with these challenges. The proposed research brings together the aspects of sustainability, risk management, multi-objective optimization and decision making. The target applications will be in environmental engineering, in particular land/water resource management and design and operation of renewable energy systems.

**About the Research Group:** The research will be undertaken within the Multidisciplinary Design Optimization (MDO) lab, which is located in the School of Engineering and Information Technology, UNSW Canberra. The group has a strong international standing in development of cutting-edge, practical and efficient algorithms and frameworks to support multidisciplinary optimization, especially for computationally expensive problems. Further details on the research activities of the group can be found at <http://www.mdolab.net>.

**Supervisors:** Dr. Hemant Singh, Prof. Tapabrata Ray and Prof. Ruhul Sarker

### **Expected qualifications:**

- First Class Honors or equivalent in computer science, engineering or related disciplines
- Interest in the development of optimization algorithms with a flair for innovation
- Strong mathematical and programming skills
- Good communication skills
- Ability to work independently and in a group and strive for research excellence.

**Timeline:** Please contact [Dr. Hemant Singh \(h.singh@adfa.edu.au\)](mailto:h.singh@adfa.edu.au) expressing your interest (EOI) for this scholarship by the (inextensible) **deadline of 30 June 2017**. Please include a detailed CV, copy of academic transcripts and copies of all publications. Up to two EOIs will be selected and forwarded to UNSW committee for further ranking and final selection shortly after.