



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

# PhD Scholarship in Public Health or Social Sciences

## **Exploring the relationship between housing design and quality of life for people with dementia and their carers**

The Sustainable Buildings Research Centre at the University of Wollongong is seeking an outstanding graduate in the disciplines of Social Sciences or Public Health. This is an exciting opportunity to undertake research in relation to health and building design and also be part of Team UOW Australia which is taking part in the Solar Decathlon Middle East 2018 competition.

### **The PhD Project**

The impact of the design of residential aged care environments on the quality of life of people with dementia has been well documented. However, the impact that 'good environmental design' has on quality of life and the ability to remain living in one's own home is less well understood. Whilst much is known about individual features of good design, there is a critical need for the development of a tool that can assist with the auditing of home environments in the community. There is also a need for research which assesses the relationship between the presence of design features and quality of life for people with dementia and their carers.

As part of the Solar Decathlon project, this PhD student will work with designers, engineers, psychologists and public health academics to develop and validate a tool to assess the quality of home care environments.

This project aims to produce a validated tool to assist in the translation of evidence based knowledge about the aspects of the built environment that are helpful to people with dementia into the practices of those involved in refurbishing or building homes in the community for people with dementia. The tools will also be used to assess Desert Rose's suitability for supporting aging well with dementia.

## Supervisors



Dr Lyn Phillipson  
NHMRC-ARC Dementia Fellow  
Faculty of Social Sciences



Prof Richard Fleming  
Director Dementia Training and  
Study Centres  
Faculty of Science, Medicine  
and Health



Prof Tim McCarthy, Faculty of  
Engineering and Sustainable  
Buildings Research Centre

## Be Part of the Solar Decathlon Team

You will join a multidisciplinary team of students and researchers in Engineering, Computer Science, Business, Arts and Health. We are designing and building a net-zero energy, dementia-friendly eco-home for the SDME2018 contest which will be held in Dubai in late 2018. You will develop your interdisciplinary research skills, developing knowledge through the design process, whilst tackling important topic such as passive residential design in hot climate and dementia-friendly residential architecture.

Applicants should send a letter of application including CV, copy of degrees and transcripts (including IELTS if applicable) and a short 3-4 page research proposal, on a topic of their choice aligned with the Desert Rose House Vision, as part of their application. Suitable research topics include, but are not limited to residential design for people with dementia and its impact on quality of life.

The ideal candidate will hold a high quality degree in social sciences, psychology or public health and be proficient in the use of Nvivo and/or SPSS data analysis

software. Ideally they will also have an interest or experience in age-friendly or dementia-friendly experience in sustainable residential construction.

## Scholarship Details

The current value of Higher Degree Scholarships is \$26,288 non-taxable per year living allowance. Tuition fees will also be covered by this scholarship for international students. Domestic students' fees are paid by the Australian Government. Students will be liable for a small Student Amenities Fee and international students will also be liable for their own health insurance.

## Applications

Applications should include a cover letter, CV, academic transcript and a personal research proposal aligned with the Desert Rose House Vision. Please quote SDME2018/Architecture. Candidates will be assessed on academic merit and relevant experience.

Please submit your application to Rhondalee Cambareri, Research Manager: [rc@uow.edu.au](mailto:rc@uow.edu.au)

**The deadline for all applications is: 0900 AEDT 15 June 2017 for commencement in Spring Session 2017**

For further details and informal discussion please contact either:

Professor Tim McCarthy  
[tim\\_mccarthy@uow.edu.au](mailto:tim_mccarthy@uow.edu.au)  
+61 2 42214591

Dr Lyn Phillipson  
[lphillip@uow.edu.au](mailto:lphillip@uow.edu.au)  
+61 2 42214773

## About Solar Decathlon Middle East 2018

The Solar Decathlon is an international competition, sponsored by the US Department of Energy (DoE), *“challenging university teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency”*. The competition started in the US in 2000 and has since been hosted in Europe, China and South America. The first Solar Decathlon Middle East began in October 2016 with the final competition being held in Dubai in late 2018. It is sponsored by the Dubai Energy and Water Authority (DEWA) and the US DoE. The University of Wollongong is the only Australian University to be selected for the finals where we will compete against 21 other teams from 16 countries.

In 2013 Team UOW competed in the Solar Decathlon China contest in the city of Datong. **Their house, The Illawarra Flame**, was the first retrofit entry in the history of Solar Decathlons. Of the ten contests in the decathlon, Team UOW won Gold in 5 and Silver in three and took out the top prize overall with a world record score.

To support our entry to SDME2018, the University of Wollongong is offering a range of PhD/MPhil scholarships to be held over the period 2017-2020. We are seeking an outstanding graduate in disciplines of Architecture, Architectural Technology or Building Design, Social Sciences, Public Health or Psychology to join our multi-disciplinary research team that is going to solve one of the wickedest problems of the 21st century: **How to support our ageing population through world class sustainable architecture, engineering and social policy**. Our goal is to design and build a net-zero energy dementia-friendly house, named Desert Rose House, that is stylish, affordable, sustainable and one that will grow and adapt to the occupants' needs as they continue to age. It will incorporate dementia friendly architecture and technology and will be fully accessible.

## About the Sustainable Buildings Research Centre

The [Sustainable Buildings Research Centre \(SBRC\)](#) is a multi-disciplinary facility that brings together a wide range of researchers to holistically address the challenges of making our buildings sustainable and effective places in which to live and work.



Our mission is to assist in the rapid decarbonisation of our built environment. Thus, a major focus of the SBRC is the retrofitting of existing buildings, since replacement of existing building stock occurs at between only one to two percent per year. The SBRC brings together researchers, students and industry to:

- Develop, prototype and test sustainable building technologies and designs for residential and commercial applications
- Perform in-depth experimental and theoretical analysis of the thermal design of buildings
- Develop architectural and structural design tools to facilitate the inclusion of ecological costing throughout the design phase of buildings (e.g. water, embodied energy, carbon)
- Investigate day-to-day behaviour of building occupants to improve our effectiveness of building use and design and improve the uptake of environmentally sustainable technologies
- Develop novel control systems and sensor technology for improving building performance
- Develop novel modelling tools to aid sustainable design