



# ARC Training Centre in Energy Technologies for Future Grids

## PhD scholarship Advertisement

### PhD Scholarship from the ARC Training Centre in Energy Technologies for Future Grids

The ARC Industrial Transformation Training Centre in Energy Technologies for Future Grids (ARC Future Grids ITTC) is a 5 year, \$8.5M investment program, including \$5M from the Australian Research Council (ARC), designed to support the transition of Australia's power and energy industry to a more sustainable, competitive and resilient position based on the development of human intellectual capital through training a new generation of innovators while simultaneously fostering an R&D culture within the electricity sector to leverage new skills for advancing Australia's transition to a clean energy future.

Led by the University of Wollongong, the ARC Future Grids ITTC brings together 6 Universities (The University of New South Wales, The University of Queensland, University of Tasmania, Deakin University, and Curtin University) and 14 industry partners (CSIRO, Hydro Tasmania, TasNetworks, Powerlink, ZECO Energy, GHD, ACEN Australia, TPS Energy, Shoalhaven Water, Ingeteam Australia, Abel Energy, 123V, Essential Energy, and The Australian Power Institute) across five Australian states to deliver the next generation of industry leaders and specialists in future grid technologies to ensure Australia can smoothly manage the transition required in decarbonising its electricity sector. More information about the ITTC is at <https://www.uow.edu.au/engineering-information-sciences/research/arc-training-centre-in-energy-technologies-for-future-grids/>. The ARC Future Grids Training Centre is hosting a major event – 2023 IEEE International Conference in Energy Technologies for Future Grids (IEEE ETFG 2023) to be held at Wollongong, Australia on 3 – 6 December 2023 (<https://attend.ieee.org/etfg-2023/>).

**Project:** Effects of SiC and GaN-based variable speed-motor drives and grid power quality

**Location:** School of Electrical Engineering and Telecommunications, UNSW Sydney

#### **Descriptions:**

A PhD/ MPhil scholarship equivalent to the Australian Government's RTP (Research Training Program) is available for a SiC and GaN-based variable speed-motor drives and grid power quality project. The ARC Industrial Transformation Training Centre will fund the scholarship.

The project will involve

- A detailed study of the effect of the high switching frequency of the WBG (Wide Band Gap) converters.
- Establish an analytical framework for the effects
- Using the theoretical framework, propose novel mitigation techniques.

A student with a strong background in **Electrical Motor Drives and Power Electronics** is being sought. It is expected that this student will be working as a member of a team and have close

cooperation with other researchers both at UNSW and UoW. The student will also have opportunities to participate in industry internships.

**Selection criteria:**

Same as required by the UNSW for admission and scholarship (<https://research.unsw.edu.au/graduate-research>). If the applicant is an international student, he/she must secure the Tuition Fees Scholarship from UNSW and must meet the English Language requirement.

**Scholarship:** Standard RPT rate for 2023 - \$29,863 per annum. In addition to this a top-up scholarships, up to \$7,000, may also be available for high performing talent students.

If interested, please contact-

AProf Rukmi Dutta ([rukmi.dutta@unsw.edu.au](mailto:rukmi.dutta@unsw.edu.au))

School of Electrical Engineering and Telecommunication  
UNSW Sydney