Project Title: Development of hydrogen safety protocols (based at UNSW, Sydney)

Project background and description:
With the increasing impacts of climate change being felt globally, there is an urgent need to shift our energy sector away from carbon-based fossil fuels. Hydrogen presents a promising solution to these limitations of our current approach to energy generation, storage and distribution. However, the emerging hydrogen economy has left an urgent need for the development of a standard approaches to safety for the implementation of hydrogen generation systems.

Aim/objectives: This project will work develop a portfolio of safety-related hydrogen resources to inform the broader community on best practice approaches to hydrogen generation. This includes the following:

- Understand hydrogen generation systems on a large scale, in both acidic and alkaline environments
- Link with industry, partner universities and advisory organisation to prepare and disseminate key outcomes.
- Develop of a portfolio of safety-related hydrogen resources including P&IDs and corresponding HAZOP documents

Environment
The GlobHE Training Centre is offering 12 Higher Degree by Research (HDR) Scholarships (PhD) that will provide a unique training opportunity through:

- World-class and state-of-the-art facilities and experts across the participating universities, research institutions, industry partners and other organisations
- An integrated Training Centre research agenda with inter-disciplinary projects across 5 themes area
- Opportunity to work or placement with partner organisations and industry partners
- Research skills, career development workshops and relevant industrial training
- Competitive support for national and international conference travel and networking opportunity
- Generous project support and excellent mentorship
- Delivering the next generation of highly skilled workforce to give Australia the ability to build home-grown hydrogen solutions and economic models.

Eligibility
The minimum requirement for admission to a PhD programme is:

- an appropriate Bachelor degree with upper second class Honours from one of the above universities; or
• a completed Masters by Research from one of the above universities with a substantial research component and demonstrated capacity for timely completion of a high quality research thesis; or
• an equivalent qualification from a tertiary institution as determined by the Faculty Higher Degree Committee (HDC)

The minimum requirement for Scholarship with admission to a PhD is:

• a four-year Bachelor's degree with Honours Class I from an Australian institution or equivalent research qualification experience. This qualification must be in a field relevant to the proposed area of research.

Please note that ALL applicants, whether domestic or international must provide evidence that their language ability meets the minimum English language* requirements. The following table provides guidelines on common English language test acceptable for meeting English requirement:

<table>
<thead>
<tr>
<th>IELTS (Academic)</th>
<th>TOEFL (Internet based test)</th>
<th>Pearson Test (Academic)</th>
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<tr>
<td>Overall: 6.5 (min 6.0 in each subset)</td>
<td>Overall: 90 (min 23 in writing, 22 in reading, listening and speaking)</td>
<td>Overall 64 (min. 54 in each subset)</td>
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</tbody>
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### Selection Criteria

• Bachelor (honours) or Masters degree from relevant disciplines include chemical engineering, mechanical, or social policy; at 1st class or upper second class level, or equivalent
• Proficiency in computer programming/modelling is required for some of the projects.
• In assessing applications, preference will be given to applicants who can demonstrate an ability to work across disciplines, have excellent interpersonal, communication and management skills
• When applying for a particular project, please state briefly and clearly the relevance of your degree and/or your experience to the project description

### PhD Stipend

PhD scholarships will be available for a period of three and a half (3.5) years. The PhD stipend rate is $33,413 per annum tax-free. International applicants are encouraged to apply and maybe eligible for Tuition Fee Scholarship. See International Research Scholarship.
Application Process

Interested applicant must email the following to be considered for Scholarship:

- CV
- Academic transcripts for all completed/pending completion degree
- Testamurs of previous study
- Statement addressing interest relevant to selection criteria
- Name of referees (can be academic or former employer)

Applicants are encouraged to use the HDR Self-assessment Tool: https://selfassessment.research.unsw.edu.au/ to give indication of eligibility and competitiveness for a scholarship (please also send the outcome of this self assessment).

Closing date:

Scholarship application outcomes are released progressively from the ‘Offers Released’ date. To find out more on ‘Offers Released’ date for your application round, visit Key Dates for specific Universities. Please note that there are different deadlines for Domestic and International applicants.

Enquiries

For general enquiries regarding the Training Centre, please contact Professor Rose Amal: r.amal@unsw.edu.au, Professor Francois Aguey Zinsou Kondo: f.aguey@sydney.edu.au

For enquiries on PhD project, please contact e lovell@unsw.edu.au