



THE UNIVERSITY  
of ADELAIDE



Faculty of Sciences, Engineering and Technology

# MULTIFUNCTIONAL STRUCTURAL PANELS FOR NEXT-GENERATION INFRASTRUCTURE PHD PROJECT

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Up for a challenge? Join us to work on a research project with the School of Civil, Environmental & Mining Engineering

## At a Glance

### Who can apply?

- Australian Citizens & Permanent Residents
- Onshore International students
- International applicants
- New Zealand Citizens
- Permanent Humanitarian Visa Holders

### Industry partner or funding body

- ARC, Discovery grant funding

### Program of Study available

- Doctor of Philosophy (PhD)

### Total annual stipend amount

- \$28,854pa (2022 rate, indexed)

### Start date

- Plan for a start date no later than 1/07/2022

## About the project

This project aims to develop a multifunctional prefabricated structural panel for current and future infrastructure applications for both land and offshore environments. Prefabrication enables enhanced product control as well as the

ability to rapidly construct whole structures or their components. The panels utilise an inner lightweight foam and fibre-reinforced polymer (FRP) composite core with strong outer panels made from FRP sheets and high-strength concrete. The expected outcomes include experimental and numerical validation of the system, that will give designers and asset owners the confidence to adopt this new panel.

The panel system presents an upward step change in construction technology and built infrastructure performance.

## Eligibility criteria

- Applicants with strong numerical modelling skills in solid and structural mechanics, particularly in development of new plate theories for laminated composite panels and/or constitutive models (damage-plasticity based) for fibre reinforced composite materials and/or concrete, and their implementation within an advanced finite element program such as ABAQUS will be considered favourably.
- Excellent students who hold a Bachelor/Master of Civil/Mechanical/ Aerospace Engineering with experience and/or exposure in the above research area would be especially suitable and encouraged to apply.
- Applicants with well-developed written and verbal communication skills will be considered favourably.

## Benefits

- Access to authorised travel and research project funds available
- Work alongside world leading researchers
- Our CarST program: Free professional development to enhance your employability skills
- Exposure to experts in the field
- No Tuition fees! These are waived for eligible candidates
- Access state of the art technology
- Become a field expert and make a real and contribute to solving global challenges
- Publish your contributions and impact our communities and society.

## How to apply

- Complete an [expression of interest](#) and email together with a copy of your CV and transcripts to [Abdul.sheikh@adelaide.edu.au](mailto:Abdul.sheikh@adelaide.edu.au)
- Once your initial eligibility assessment is approved, formally lodge an application for admission only via the Adelaide Graduate Centre 'How to Apply' [link](#). Application dates are listed on the website.

## Researcher Profiles

- Use our [Researcher Profiles](#) to find out more about potential supervisors

## More about SET

The faculty is committed to delivering outstanding research that helps solve complex global problems and contributes to national priorities.

We're home to a number of world-class research institutes and centres, where our students learn from internationally renowned academics at the cutting edge of research and discovery.

We address global needs in collaboration with industry, government and the broader community.

Our campuses are home to a number of co-located industry partners, affiliated researchers and research institutes of international significance. This close proximity offers a unique opportunity for our students to gain practical and theoretical knowledge through dynamic national and international research projects.

Many of our academic staff are leaders in their fields and graduates are highly regarded by employers.

Learn more about the Faculty of Engineering, Computer and Mathematical Science's Research capabilities at:

<https://set.adelaide.edu.au/our-research>

**The University of Adelaide is an Equal Employment Opportunity employer. Women and Aboriginal and Torres Strait Islander people who meet the position requirements are strongly encouraged to apply.**

## FURTHER INFORMATION

**For a confidential discussion contact:**

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