



THE UNIVERSITY
of ADELAIDE



Faculty of Sciences, Engineering and Technology

STRUCTURAL LOGISTICS OF REPAIR IN LUNAR HABITAT DESIGN USING SINTERED REGOLITH BLOCKS

Up for a challenge? Join us to work on a research project with the School of Architecture & Built Environment

At a Glance

Who can apply?

- Australian Citizens & Permanent Residents
- Onshore International students
- International applicants

Industry partner or funding body

- N/A

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 27/05/2022

About the project

This project lies at the intersection of In-Situ Resource Utilisation (ISRU), Robotic Construction, and specific disciplinary challenges of Form and Tectonic Culture.

Based at the Andy Thomas Centre for Space Resources, it engages with new materials and technologies being developed at the University of Adelaide. The project will develop a structural solution that engages small building blocks developed from laser sintered regolith as an alternative to monolithic 3D printed solutions. It will further help develop construction logistics based on new work being done in the area of swarm robotics, especially using soft robots. Beyond the use of new materials and processes, the project will focus on the specific challenges of reparability and falsework in the lunar context. It will address the environmental concern of micro-meteorite attacks by incorporating design solutions and processes for repair that reduce dependencies on falsework and human labour.

adelaide.edu.au

Eligibility criteria

- Applicants with strong design and research skills in architecture and construction, particularly in structural form finding and material research will be considered favourably.
- Excellent students who hold a Master of Architecture or a double degree with Civil Engineering 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 industry networks and 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 amit.srivastava@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

<https://researchers.adelaide.edu.au/profile/amit.srivastava#>

More about SET

The Faculty of Sciences, Engineering and Technology is home to world-class research institutes and centres, and internationally renowned academics at the cutting edge of research and discovery.

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://ecms.adelaide.edu.au/research-impact>

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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