

Postgraduate Scholarship Information Sheet (Advert)

Scholarship Project Title	Modelling and Simulation of solid Green Propellants for micro-launcher application and validation with laboratory-based Rocket Test Bench
Advert Reference number	TURISE_2024_103
Supervisor(s)	<i>Dr Ashish Vashishtha (SETU Carlow)</i> <i>Dr Ramesh Raghavendra (SETU Waterford)</i> <i>Dr Eoin Murphy (SETU Carlow)</i> <i>David Rudge (SUAS Aerospace Ltd)</i>
Research Group	<i>engCORE (SETU Carlow) / SEAM</i>
Department /School/Faculty	<i>Faculty of Engineering, Department of Aerospace & Mechanical Engineering</i>
Duration	4 Years/48 Months
Status: Full-time / part-time	Full Time
Funding information	TU Rise PhD Scholarship Program
Value of the scholarship per year for four years	Stipend: €19,000 Fees of €5,750 per annum Research costs- €5,000 per annum with an additional €1,650 awarded for the purchase of a laptop in year 1
Closing date and time	July 17th 2024 at 4pm Irish Time
Interview date	August 2024
PhD commencement date	01 Nov 2024

Project Key Words: (enter 3 to help advertise on online platforms) *Solid Propellant, Rocket Propulsion, Chemical Analysis*

Post summary:

Fully Funded PhD Scholarship in the domain of Solid Rocket Propulsion to develop ADN (Ammonium Dinitramide) based green solid propellants for micro-launcher application by performing 0D/1D modelling, combustion simulation and developing small experimental test-setup at South East Technological University (SETU) Carlow Campus in collaboration with South East Applied Materials (SEAM) Research Centre, School of Engineering, South East Technological University (SETU) Waterford and SUAS Aerospace Ltd., Cork, Ireland.

Person Specification:

We are looking for an enthusiastic, self-motivated researcher with interests in rocket propulsion, chemistry modelling and combustion simulation, and/or experimental setup development. The PhD candidate should have the following qualifications, experience and competencies:

Qualifications:

Essential

- Honours Degree (minimum 2:1) in a relevant discipline (Aerospace Engineering, Mechanical Engineering/ Chemical Engineering) from an internationally recognised institution.

Desirable

- A Master's level qualification in Aerospace/Mechanical/Chemical Engineering would also be desirable.

Knowledge & Experience

Essential

- *Knowledge of rocket propulsion systems and a good understanding of combustion.*
- Strong analytical and problem-solving skills.

Desirable

- *Experience / knowledge on handling energetic materials.*
- *Experience / Knowledge on experimentation systems / combustion modelling.*
- *Experience / Knowledge on micro-launcher systems.*

Skills & Competencies

Essential

- Applicants whose first language is not English must demonstrate on application that they meet [SETU's English language requirements](#) and provide all necessary documentation. See Page 7 of the Code of Practice
- In order to be **shortlisted for interview**, you must meet the SETU English speaking requirements so please provide evidence in your application.

Desirable

- *Excellent written and verbal communication skill*
- *Willingness and motivation to learn and experience new theoretical and technological areas.*

Further information

For any informal queries, please contact Dr Ashish Vashishtha on email @ ashish.vashishtha@setu.ie

For queries relating to the application and admission process, please contact the Postgraduate Admissions Office or telephone +353 (0)51 302883.

For queries relating to the funding programme, please email scholarships2024@setu.ie

University Website <https://www.setu.ie/>

Application procedure

Download the [Research Postgraduate Application Form](#) from here and return the completed application to researchadmissions@setu.ie quoting **TURISE_2024_103** in the email subject line.

Please note that paper submissions will not be accepted.

The University may decide to interview only those applicants who appear from the information they provided, to be the most suitable in terms of experience, qualifications and other requirements of the post.

The University will short-list and interview those applicants who provide the most suitable information in terms of experience, qualifications and other requirements relevant to the scholarship.

SOUTH EAST TECHNOLOGICAL UNIVERSITY (SETU) IS AN EQUAL OPPORTUNITIES EMPLOYER



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