UNIVERSITY OF LEICESTER

Job Summary

Job Title: Research Associate in Fluid Dynamics
Grade: 7
Salary: £39,906 to £41,064 per annum due to external funding restrictions. Pro-rata if part-time
Department: Engineering
Hours/Contract: Full-time, fixed tixed term contract from 01 April 2026 to 30 September 2026
Reference: 12706

Role Purpose

To have specific responsibilities with an established research programme. To work collaboratively and independently as part of a research team to achieve defined milestones and produce high quality research as part of a wider programme.

Main Duties and Responsibilities

Research

- To lead in the collection, evaluation and interpretation of the research data from the resolvent calculation and work autonomously to attain project milestones.
- To contribute to the development of the choice of techniques, critiques, approaches, models and methods.
- To contribute to the overall research programme using innovative research models, novel approaches and techniques.
- In agreement with the line manager, liaise with the project funder to progress the research.
- To lead in writing up research findings for dissemination amongst the research team and broader international community, and develop ideas and contributions for future grants, technical outputs.
- To represent the research group by disseminating results/findings at national and international conferences and broader community.
- To contribute to research outputs as a co-author to journal articles, technical papers, monograph, book chapter.
- To contribute as a team member to the development of a broader programme, this may include contributing to the writing of research bids/grants.
- With the support of colleagues, identify opportunities to apply for fellowships and/or further project grants.
- To provide guidance to other staff and students (involved in the research programme).
- To actively seek opportunities to carry out multi-disciplinary research with other research groups at the University or stakeholders external to the University, with the approval of the Principal Investigator (PI).

Professional Development

- Duties and opportunities to engage in work that support your own professional development.

Impact and Knowledge Exchange

- Network and contribute to the maintaining and furthering of the wider research programme and research area.
- To engage positively and pro-actively in research impact.

Leadership and Citizenship

- Guidance to other team members both research staff and students.
- Pro-actively build networks and collaborations.

Internal and External Relationships

- Regular meetings with members of the programme research group
- Meeting members of the School of Engineering for critical discussion of the research and exchange of new ideas and approaches that might benefit the research.
- Liaison with external collaborators.

Planning and Organising

You will be required to effectively manage your time to plan your research activity and to deliver on the priorities of the project:

- Prioritise tasks within agreed work schedules;
- Plan for specific aspects of research incorporating issues such as deadlines, project milestones and overall research aims;
- Adapt daily and weekly plans to accommodate new developments and be flexible to the changing priorities of the research project.

Qualifications, Knowledge and Experience

Essential

- PhD in Applied Mathematics, Physics or Mechanical / Aerospace Engineering, or equivalent in appropriate discipline or the equivalent professional qualification and experience*
- Evidence of a contribution to peer-reviewed journal papers or equivalent e.g. technical report/writing a piece of software*
- Evidence of proven analytical problem-solving capability*
- Expertise in some numerical analyses of fluid flows based on linear algebra methods (e.g., resolvent analysis, linear stability analysis, POD, SPOD, DMD, etc.)*

Desirable

- Knowledge of linear stability analysis and transition to turbulence
- Knowledge of stratified flows

Skills, Abilities and Competencies

Essential

- Evidence of continued development of subject expertise in Fluid Dynamics
- Excellent communication skills – written and verbal evidenced by the ability to communicate complex information*
- Ability to work independently
- Collegiate member of a research team

Desirable

- Proficiency in MATLAB

Criteria to be used in shortlisting candidates for interview

Reason for Fixed Term Contract

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

Supporting University Activities

As a University of Leicester citizen, you are encouraged to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We encourage all staff as citizens to work flexibly across the University if required. If supporting these activities is likely to affect your workload, please speak to your line manager in the first instance

University Values

Inclusive - We are diverse in our makeup and united in ambition. Our diversity is our strength and makes our community stronger.

Inspiring - We are passionate about inspiring individuals to succeed and realise their ambitions. We challenge our community to think differently, to get involved, and to constantly embrace new ideas.

Impactful - As Citizens of Change we will generate new ideas which deliver impact and empower our community

Freedom of Speech

The University is committed to upholding freedom of speech and academic freedom within the law throughout our recruitment processes. We ensure that all candidates are considered based on merit and suitability for the role, without regard to their lawful viewpoints or the expression of challenging or controversial ideas. Our recruitment policies and practices are designed to protect applicants from discrimination or adverse treatment on the basis of their opinions, and to foster an environment where open debate and diverse perspectives are valued as essential to our academic mission.

Equity and Diversity

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We believe that equity, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.