

JOB DESCRIPTION

Job Title:	Research Fellow in Lattice Boltzmann Methods	Grade:	AC2
Department:	School of Computing and Mathematics	Date of Job Evaluation:	May 2024
Role reports to:	Project Supervisor	SOC Code:	2119
Direct Reports	N/A		
<p>This role profile is non-contractual and provided for guidance. It will be updated and amended from time to time in accordance with the changing needs of the University and the requirements of the job.</p>			

PURPOSE OF ROLE:

To conduct high quality research in contribution to the Leverhulme Trust funded project “Lattice Boltzmann Methods for Compressible Multiphase Flow”, which is a collaboration between the University of Greenwich and Cardiff University. The project will focus on developing a new numerical tool for computational fluid dynamics that can simulate weakly compressible multiphase flow on parallel computing architectures. The person appointed will be expected to:

- Engage in research relevant to the project and in so doing contribute to the research profile of the Department/School and to the 2029 REF submission of the Computational Science and Engineering research group
- Develop new algorithms based on the lattice Boltzmann methodology for multiphase flow applications
- Implement the algorithms, likely on HPC or GPU computing facilities
- Disseminate their research at leading conferences and in peer-reviewed journals
- Engage with project investigators at different universities, discussing progress and plans regularly (in person and remotely)
- Contribute to the effective operation of the Research Group and any associated facilities

KEY ACCOUNTABILITIES:

Team Specific:

- Contribute to the successful delivery of the research project
- Engage in subject specific research leading to the publication and/or dissemination of original work
- Contribute to the research profile of the academic unit and to the REF submission of Computational Science and Engineering research group
- Undertake defined research and/or enterprise activities under the leadership of a principal investigator

- Support the development of funding bids which contribute to the acquisition of internal and external resources to fund research and/or enterprise
- Support the disseminate research and enterprise findings at national conferences and symposia.
- Engage with the national or regional public/cultural sectors/business, industry/professional bodies in relation to research or enterprise
- Proactive contribution to research group/department/school plans, activities and efficient working practices
- Promote your work and represent your discipline and the work of the University internally and externally
- Support relationship management and engagement with key national or regional public/cultural sectors/business, industry/professional bodies in relation to research and/or enterprise

Generic:

- Assist the Computational Science and Engineering Research Group in achieving the Department/School's KPIs
- Contribute to department/school plans, activities and efficient working practices
- Demonstrate a commitment to equality, diversity and inclusion through engagement with University initiatives
- Promote your work and represent your discipline and the work of the University internally and externally, and take a proactive approach to ethical, good practice

Managing Self:

- Keep abreast of developments within the field and seek continuous improvement of own professional practice
- Actively participate in established professional development framework activities
- Behave in a manner which reflects the University values and creates a positive environment for work and study

Core Requirements:

- Adhere to and promote the University's policies on Equality, Diversity and Inclusion and Information Security;
- Ensure compliance with Health & Safety and Data Protection Legislation;
- Support and promote the university's Sustainability policies, including the Carbon Management Plan, and carry out duties in a resource efficient way, recognising the shared responsibility of minimising the university's negative environmental impacts wherever possible
- Adhere to current legal requirements and best practice relating to digital content and accessibility, including Web Content Accessibility Guidelines when creating digital content.

Additional Requirements:

Undertake any other duties as requested by the line manager or appropriate senior manager, commensurate with the grade.

This is a professional, demanding role within a complex organisation with an ambitious strategic plan and agenda for change. The role holder will be expected to show flexibility in working arrangements, including working hours, to ensure that the School of Computing and Mathematical Sciences delivers the required level of service.

KEY PERFORMANCE INDICATORS:

Research outputs including journal publications and conference presentations.

KEY RELATIONSHIPS (Internal & External):

- Dr Timothy Reis (Principal Investigator, University of Greenwich)
- Prof. Timothy Phillips (Principal Investigator, Cardiff University)

PERSON SPECIFICATION

Essential	Desirable
<p>Experience</p> <ul style="list-style-type: none"> • Research experience in computational fluid dynamics and numerical methods • Experience writing and running code in a relevant language, such as C++, Python, Fortran, or Julia <p>Skills</p> <ul style="list-style-type: none"> • Ability to work independently and as part of a team • Effective communication skills • Outstanding organisational, IT, communication and interpersonal skills <p>Qualifications</p> <ul style="list-style-type: none"> • PhD in a relevant discipline <p>Personal attributes</p> <ul style="list-style-type: none"> • We are looking for people who can help us deliver the values of the University of Greenwich: Inclusive, Collaborative and Impactful 	<p>Experience</p> <ul style="list-style-type: none"> • Familiarity with the lattice Boltzmann methodology • Writing and running code on HPC or GPUs. • Author or co-author of research published in peer reviewed journals or conference proceedings • Supervision of student research activities. • Dissemination of research and/or enterprise findings at conferences or symposia <p>Skills</p> <p>N/A</p> <p>Qualifications</p> <p>N/A</p> <p>Personal attributes</p> <p>N/A</p>