

Job Title: Associate Professor in Applied Mathematics
Grade: 9
Salary: £57,696 to £64,914 per annum
School: Computing and Mathematical Sciences
Hours/Contract: Full-time or job share considered, Permanent
Job Family: Teaching and Research
Reference: 9641

Role Purpose

To draw on extensive academic excellence to underpin and carry out activities across a range of areas of academic and university life that aligns with [the University's strategic themes](#) of 'World Changing Research', 'Research Inspired Education' and 'Our Citizens', together with the University's values.

The successful candidate will be expected to make a significant contribution to the research profile of the School in computational mathematics, mathematical modelling, statistics, statistical mechanics, (stochastic) dynamical systems, mathematics of Planet Earth, Artificial Intelligence, data science, or other areas consistent with our existing strengths and future ambitions. You will be expected to undertake high-quality inspirational teaching, tutoring, and project supervision across a range of mathematics and statistics courses. You will contribute to the development of new programmes and courses in mathematics and undertake administrative duties to support School's operations.

Our approach to the academic career structure recognises the plurality of academic careers and encourages a balance between breadth and specialisation. This is underpinned by the Academic Career Map, which articulates the expectations of academic staff at each stage of their academic career, and clearly establishes what they can do in order to progress their academic career at Leicester.

Main Duties and Responsibilities

World Changing Research

- To make a significant contribution to research in mathematics, consistent with the School's existing activities in computational mathematics, mathematical modelling, statistics, statistical mechanics, (stochastic) dynamical systems, mathematics of Planet Earth, mathematical ecology, Artificial Intelligence, data science, preferably with applications in Life Science, Space, Climate, Earth Observation, ecology or related areas.
- Maintain an emergent portfolio of internationally recognised publications that are world-leading in terms of originality, significance and rigour as appropriate to the field or discipline, and which have an impact on society, economy, culture, industry, government, policy or practice
- Engage in research and enterprise leadership, making significant contributions to promoting and embedding an inclusive and respectful research culture
- Secure sustained external research income on an individual and collaborative basis, as appropriate to the field or discipline
- Provide high quality PGR supervision and training, contributing to securing funding for postgraduate and early career researchers and increasing PGR recruitment within the subject discipline



- Participate in and lead strategic national and/or international research networks, partnerships and collaborations
- Support the research development of PGRs and colleagues, through mentoring, coaching and training

Research Inspired Education

- Undertake research-led teaching on undergraduate and/or postgraduate taught courses, incorporating innovative teaching methods and the latest educational concepts.
- Contribute to the development, enhancement and achievement of the academic strategy in the School, through leading and engaging in activities/projects that drive innovation and have a beneficial impact
- Lead the development, revision and updating of programmes at undergraduate and/or postgraduate level, ensuring that they are inclusive, embed key skills, and incorporate sustainable development goals
- Lead teaching delivery and assessment to ensure consistent high quality teaching practice, providing timely formative student feedback and assessment for coursework and examinations
- Provide support and contribute to shaping a comprehensive range of student support initiatives at School, College, and/or University level, including, placement support, links with industry, personal tutor support, employability activities/projects and open days support
- Work with students to provide world class teaching and learning opportunities and an excellent student experience, regularly collecting and responding to student feedback
- Demonstrate wider educational impact through contributions to projects or scholarly discourse aimed at enhancing pedagogy or improving student outcomes
- Engage with scholarship and pedagogical research to continuously develop own teaching practice and that of others, leading to improved delivery and outcomes, with due regard for sector best practice

Our Citizens

- Contribute to initiatives and activities that inform national and international policies and decisions, generating a positive impact beyond the University and making a tangible contribution to society.
- Contribute to the practice or debate around policies or practice, based on research evidence and/or scholarly activity
- Participate in public engagement activities, including authoring articles in non-research publications and online, which raise the external profile of the University and share the benefits of Higher Education and research
- Actively engage with the academic discipline both nationally and internationally, undertaking roles on external committees, reviews and panels and/or contributing to conferences and volunteering initiatives which demonstrate impact beyond the University





- Participate in and undertake leadership roles at School, College, and/or University level, contributing to management and administrative processes and committee structures
- Lead and support the recruitment, management and development of staff and students, through coaching, mentoring and supporting recruitment activities

Internal and External Relationships

Develop mutually beneficial, effective relationships across other Schools/Departments in the University and with national and/or international partners, that support and deliver the University strategy.

Represent the University nationally and internationally, including at committees, conferences and meetings.

Work collaboratively with other members of the module delivery team and participate in teaching team meetings.

Coordination with central University offices.

Planning and Organising

Shape the strategic direction in the research area, developing clear long term (many months/years) plans for sustaining and enhancing the research programme.

Long term planning and organisation of the delivery of teaching and assessment.

Participate in the departmental operational planning process, supporting the strategic direction of the Department/School and College.

Qualifications, Knowledge and Experience

Degrees

- An undergraduate degree in mathematics, statistics, computer science, physics, or related subject *
- A PhD and/or post-doctoral research track record in an area relevant to the activity of the School in computational/mathematical modelling, statistical mechanics, mathematics of planet Earth, mathematical ecology, (stochastic) dynamical systems, Artificial Intelligence or data science *

World Changing Research

Applicants should be able to evidence:

- Track record of publication of high-quality research papers with world leading outputs. *
- Sustained external research income. External income may include collaborative grants as a CoI and innovation-based funding.
- National and/or international recognition for research that positively impacts upon society, economy, culture, industry, government, policy or practice. *
- Record of high-quality supervision and training of PGRs, and nurturing and supporting colleagues at all career stages. *
- An emergent record of excellence in research and enterprise leadership.

Research Inspired Education





Applicants should be able to evidence:

- A credible volume and sustained excellence in leading teaching delivery and assessment – evidenced through both quantitative and qualitative measures *
- Continual updating of practice to ensure the application of flexible, innovative and appropriate teaching methods in line with the latest educational ideas
- Leading programme review and development which has a sustained positive impact on recruitment and student outcomes (eg, NSS, continuation, completion & progression metrics)
- Successful leadership and impact in driving innovation and improvement within the provision of education
- HEA Fellowship

Leadership / Citizenship contribution

Applicants should be able to evidence:

- Engagement with their academic discipline both nationally and internationally evidenced through for example undertaking roles on external committees, reviews and panel, external examining and attendance at conferences *
- Participation and leadership in School, College or University roles
- Development of self and your colleagues
- Contribution to wider citizenship activities

Skills, Abilities and Competencies

- Ability to teach and to supervise projects within the general area of mathematics or statistics, at both undergraduate and postgraduate level *
- High level of proficiency in English (both in writing and verbally), sufficient to undertake research, teaching and administrative activities utilising English Language materials and to communicate effectively with staff and students at the University of Leicester *
- Ability to write research grant proposals and high-quality journal papers *
- Demonstrate commitment to equality, diversity and anti-discriminatory behaviour. (Staff to undertake equality and diversity training and all other mandatory training)
- Willingness and ability to travel and work overseas
- Good interpersonal and personal skills and traits including:
 - Selflessly balancing the needs of colleagues the organisation against your personal goals
 - Time management and prioritisation
 - Commitment to accountability, integrity, and trustworthiness
 - Ability to work in teams and to be able to balance organization and personal goals
 - Solution-focussed and problem-solving mentality

****Criteria to be used in shortlisting candidates for interview***

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 expected to support key university activities such as clearing, graduation ceremonies, student registration and recruitment open days. We expect all staff as citizens to work flexibly across the University if required.

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

Equity and Diversity

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 equity 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 equity, diversity and inclusion.

