Candidate Information

Position:	Lecturer in Mathematics
School/Department:	School of Mathematics and Physics
Reference:	25/112648
Closing Date:	Monday 28 July 2025
Salary:	£43,605 - £60,284 per annum
Anticipated Interview Date:	Thursday 2 October 2025
Duration:	Permanent

JOB PURPOSE:

The School of Mathematics and Physics, at Queen's University Belfast, seeks to employ a new lecturer to augment teaching in mathematics, with specific initial educational responsibilities involving machine learning and artificial intelligence. The successful candidate will be expected to develop an ambitious, high-quality internationally competitive research profile and to undertake a reasonable level of administration and outreach activity. The area of research endeavour is not prescribed but it should align with, or complement, ongoing activities in the School and should be such that teaching in machine learning and artificial intelligence is genuinely research-informed.

ABOUT THE ROLE:

The successful candidate will support teaching on a new postgraduate MSc in Data Science with Machine Learning and AI, as well as more general teaching activities in mathematics within the School. In addition, they will be expected to engage in scholarly activity, developing independent research at a world-class level. In this respect, they will be expected to seek and obtain external grant funding and create high-quality scholarly output. While the administrative burden placed on junior members of academic staff tends to be relatively modest, the post holder will nevertheless be expected to be involved in some such activities.

MAJOR DUTIES:

Teaching:

1. To deliver high-quality teaching across a variety of postgraduate and undergraduate taught or project-based modules, which may include lectures, assessments, tutorials and laboratory practicals. The initial focus will be in mathematics, with specific duties relating to data science, machine learning and artificial intelligence.
2. To supervise undergraduate and postgraduate taught students in practical and project-based work, including placements, dissertations and final year projects.
3. To contribute to the development of new teaching delivery methods by, for example, engaging in new blended learning and research-led teaching.
4. To undertake initiatives to improve the overall student experience, through innovative and effective methods of assessment, feedback and student engagement.
5. To contribute to student recruitment and student support.

Research:

1. To undertake and lead research programmes, commensurate with ongoing activity in the School, which enable research-informed teaching in machine learning and artificial intelligence.
2. To secure, or contribute to securing, substantial external funding to enable such research activities.
3. To publish in peer-reviewed journals with high editorial standards and engage in relevant national and international conferences.
4. To engage in knowledge transfer and innovation activity, where possible, with an expectation of delivering research impact.
5. To contribute positively to the internationally recognised research profile of the School.
6. To engage, mentor and develop postgraduate and/or postdoctoral researchers.

Administration/Contribution to the Community:

1. To contribute to the School of Mathematics and Physics outreach and internationalisation strategies by developing external links.
2. To carry out designated School administrative duties including, for example, committee work, working group leadership or course administration.
3. To participate in relevant committees at School, Faculty and University levels.
4. To engage positively with Equality, Diversity and Inclusion initiatives and policies.
5. To contribute to the wider discipline through peer review, conference and workshop organisation and other relevant initiatives.
6. To participate in the Personal Development Review (PDR) process.

ESSENTIAL CRITERIA:

1. Hold or be about to obtain a PhD in Mathematics, Physics, Statistics, Data Science or a closely related discipline.
2. Have a strong record of publications in high quality peer reviewed journals, REF returnable, commensurate with career stage.
3. Demonstrable evidence of independent contributions in research projects and in the generation of outputs, commensurate with career stage.
4. Demonstrable evidence of significant expertise in machine learning / AI within research portfolio.
5. Evidence of the potential to establish independent, sustainable research programmes.
6. Have evidence of delivering high quality lecturing, project supervision or assessment activities at undergraduate or postgraduate level, commensurate with career stage, in one or more of the following curriculum areas:
   • Mathematics
   • Data Science
   • Machine Learning
   • Statistics
7. Ability to communicate complex information effectively to a variety of audiences.
8. Ability to communicate effectively in English, both orally and in writing.
9. A commitment to creating an inclusive and supportive academic environment enhancing equality, diversity and supporting early career academics.

DESIRABLE CRITERIA:

1. A record of successful grant applications.
2. Significant research measures of esteem in relevant areas depending on academic position.
3. A record of successful supervision of postdoctoral researchers and/or post-graduate students.
4. Experience of successful research collaboration and participation in collaborative networks or research teams.
5. Strong record of plenary or invited talks at international conferences, commensurate with career stage.
6. Evidence of contribution to a wider range of community/outreach activities.
7. Experience with Virtual Learning Environments such as Canvas, Blackboard or similar platforms.
8. Experience with automated assessment tools such as Numbas, Moebius or similar software.
9. Experience using Data Analytics and Statistical packages in programming languages such as R or Python.
10. Experience using AI, machine learning, or data-driven technologies to enhance teaching, assessment, or research practices.
11. Completed a Postgraduate Certificate in Higher Education Teaching (PGCHET) or equivalent teaching qualification or membership of professional teaching body e.g. HEA.
12. Teaching awards.
13. Strong teaching evaluations or peer review feedback on teaching.
14. Successful supervision of undergraduate/postgraduate student projects.

ADDITIONAL INFORMATION:

Informal enquiries may be directed to: Dr. Thomas Huettemann, email: t.huettemann@qub.ac.uk