

TITLE OF POST: Senior Lecturer/Associate Professor in Programming Languages and Algorithms

LOCATION: University of Limerick

REPORTS TO: Head of Department and second line report to Co-Directors ISE

CONTRACT TYPE: Multiannual

SALARY SCALE: Senior Lecturer - €77,159 - €101,702 p.a. (maximum starting salary: €89,422 p.a.)
Associate Professor - €89,411 - €119,509 p.a. (maximum starting salary: €89,411 p.a.)

JOB DESCRIPTION

QUALIFICATIONS:

- Doctoral degree (level 10 NFQ) in computer science, software engineering, or related discipline.

OVERALL PURPOSE OF THE JOB:

Immersive Software Engineering will transform the research and education model of Computer Science. ISE is a four year integrated BSc/MSc programme and a fully funded Research @ ISE programme (R@ISE). You will join the growing ISE team in the CSIS department, invent new ways of teaching software engineering, and strengthen their research programme in the area of **Programming Languages and Algorithms**. You will work with ISE's investing companies and other organisations to produce software development platforms, tools and methods of tomorrow, and apply them in many industrial and societal contexts. The depth of involvement with our industry and investors ecosystem is unparalleled. Your relationships with ISE's companies will be supported by our Industry Coordinators.

Your position is fully funded through philanthropic donations in the first 5 years. You will be expected to do research, shape the future of IT education, and teach in the integrated BSc/MSc program Immersive Software Engineering that starts this September. In addition, you will work to further the department's strategic objectives as well as participating in course delivery, management, and development.

Collaborative research and innovation will be welcome within the Department, UL and with the research centres Lero (the Science Foundation Ireland Research Centre for Software), Confirm (Centre for Smart Manufacturing), CRT-AI (the Science Foundation Ireland Centre of Research Training in AI) and the Healthcare Research Institute (HRI).

DESCRIPTION:

Essential Criteria: Senior Lecturer/Associate Professor

- Doctoral degree (level 10 NFQ) in computer science, software engineering, or related discipline.
- Research activities and a minimum of 5 years teaching experience with a strong emphasis on programming languages, algorithms, and their applications, ideally in an industrial context or with industrial partners.
- Teaching experience across a range of computer science areas, including foundational topics.
- Experience of teaching both undergraduate and taught postgraduate students.
- Experience in course management and research management, including mentoring PhD students.
- A recognised research track record of more than five years after PhD.

- Experience directing independent research projects and obtaining external funding.
- Evidence of collaboration with industry and international partners.
- Significant international recognition, e.g. in senior roles in conferences, journals, professional associations, research initiatives and committees.
- An active research and publication record in at least two of the following areas:
 - Programming languages, programming paradigms.
 - Algorithms and data structures.
 - Automata, graphs and their applications to design and verification.
 - Logics and their applications.
 - Model driven development, formal methods for low-code and no-code development.
 - Automation of software analysis and synthesis, generative approaches.
- Ability to apply Programming Languages and Algorithms to domain specific problems, spanning two or more of:
 - Programming languages and frameworks for system evolution.
 - Automata learning, model learning, decision support systems.
 - Real time systems, resource constrained systems.
 - Text, image and video processing.
 - (Natural) language processing.
 - Privacy, security, compliance, governance, digital forensics.
- Experience of outreach to industry, and to specialist and general public audiences.

Essential Criteria: Associate Professor in addition to the above

- A significant international collaboration record and recognition in the research community.
- Significant achievements in research, in terms of publications and impact.
- Evidence of roles of responsibility directing independent research projects and obtaining external funding.
- International recognition at top level, e.g. editorship of journals, leading roles in conferences, associations.

Desirable Criteria: Senior Lecturer/Associate Professor

The ability to demonstrate competence in the following area will be an advantage:

- Experience of delivering studio-based education, block based teaching, team based teaching, and teaching in hybrid or virtual environments, or hybrid teaching using a VLE.

Applicants are required to include a:

- Teaching plan (up to 1500 words in length) detailing how the candidate would organise and deliver intensive team-based education in the ISE context, in which blocks, and how this connects to their prior experience.
- Research and Impact plan (up to 1500 words in length) describing how the candidate would contribute to the research that will be undertaken specifically within the context of the ISE program's unique industrial partnership network.

Note: Applications lacking the Teaching or Research and Impact plan will be deemed incomplete and not further considered.