

Funded PhD/Graduate Teaching Assistant (GTA) position in Computing and Informatics

The Industry and Innovation Research Institute draws on expertise and facilities across the university to deliver innovation in materials, computing, science and engineering. We provide solutions to key global challenges including secure and sustainable energy supply and management; smart, digital and low carbon technologies; security of individuals, institutions and international communities and their environments; and technologies to support an ageing society.

We have **two** Graduate Teaching Assistant positions in Computing and Informatics to fill for 2021/22 entry, with an anticipated start date of **01 October 2021**. An expected annual stipend is £15,609. p.a. and this scholarship will cover the home fees according to the [university rate](#).

The GTA scholarship awards will be for 3.5 years. The maximum number of teaching-related activities is 180 hours across the academic year and not more than 6 hours in any one week, in line with [University policy](#). The teaching will begin in October/2021 after commencing the PhD.

Research Community

As a postgraduate research student at Sheffield Hallam, you will be part of the University's Doctoral School and a community of postgraduate researchers across the University.

Your research degree will give you opportunities to develop a range of personal and professional skills as well as becoming an expert in your chosen project area.

You will be an integral part of the University's research culture, with the opportunity to attend and/or contribute to a range of seminars, workshops, training and conferences. We will encourage you to attend conferences, deliver papers and publish your work.

Visit our website for further information about our [Doctoral School](#).

How to apply - requirements

Applicants are invited to submit their own research proposal, [alongside the university's application form](#), within one of the identified areas as well as the indicative teaching expertise. The process will have two parts:

PART-1: Selecting a research area (which must be based on our Unit of Assessment 11 in the research excellence framework) and an identified Director of Studies (DoS)/Supervisor:

- Information Systems and Organisations: management of enterprise systems to enhance organisational efficiency and effectiveness, software engineering, microservices.
- People and Technologies: human and societal perspectives upon technology use, adoption, and innovation, digital transformation.
- Ad-hoc and Sensor Networks: resource optimization and enhancing network performance, limited power, bandwidth and connectivity of ad-hoc and sensor networks; 'm-health' monitoring; cyber-threats.
- Machine learning and Robotics: theories of learning in children; improving the human acceptance of robots in education and social care settings, issues of using AI in society (race, gender, bias).
- Conceptual Structures: computing formal concepts; Formal Concept Analysis; Conceptual Graphs and ontologies; genetic algorithms for document analysis.

We welcome applications from suitably qualified candidates across all our research areas. This call will prioritize the engagement of Early Career Researchers as part of the supervisory team. You must contact the Postgraduate Research Tutor, Dr. Marjory Da Costa-Abreu (m.da-costa-abreu@shu.ac.uk) for further information on how to develop your application with a valid supervisory team.

PART-2: Selecting a teaching expertise area from the list below.

Games & Artificial Intelligence Subject Group

- Unity, Unreal, DirectX
- General programming (C++, C#, Java)

- Web development (HTML/CSS/JavaScript/ASP.NET)

Computer Science & Software Engineering Subject Group

- Concurrency (C++, CUDA)
- General programming (C++, C#, Java)
- Compiler design and implementation
- Programming against the services offered on AWS and Azure
- Software Testing

Cyber Security & Computer Networks Subject Group

- Secure Programming, reverse engineering skills, socket programming
- Digital Forensics and Investigative Forensics
- Ethical Hacking & Penetration Testing
- Cisco Networking - up to CCNP standard
- Information Security Management
- Cloud Technologies - ESXi, containers, kubernetes

Digital Analytics & Technologies Subject Group

- Enterprise Resource Planning (ERP/SAP)
- Service Management
- Project Management
- Information Systems Development
- Web development (HTML/CSS/JavaScript/ASP.NET)
- Digital Marketing

Smart Computing Subject Group

- Web development (HTML/CSS/JavaScript/ASP.NET)
- Programming Smart Devices

If you have any questions about the teaching topics, or applying for a research degree, you can contact Postgraduate Research Tutor, Dr. Marjory Da Costa-Abreu (m.da-costa-abreu@shu.ac.uk). We recommend that you contact us early in your decision making process to discuss your research ideas.

Who should apply?

The successful candidate will have a research potential in Computing and Informatics, in addition to evidence of teaching experience or experience matched to teaching needs. The full-time studentship is open to all applicants, but will cover only the home fees.

We welcome applications from all members of our community and are particularly encouraging those from diverse groups, such as members of the LGBTQIA+, BAME and disabled communities.

How do I apply?

The successful applicant will propose a research topic in collaboration with a Director of Studies for their PhD in Computing and Informatics ([research degree](#)). The proposal will be considered as part of their application.

Applicants must submit the following as part of their formal application:

- [Formal application to University](#)
- Research Proposal (1,500 words max, excluding references)
- Two letters of reference, where one of must be from an academic and both must be dated within the last 2 years
- Copy of the highest degree certificate
- Non-UK applicants must submit IELTS results taken in the last two years and a copy of their passport. An overall IELTS score of 7.0 or above, with at least 6.5 in each component.

Applicants **must** develop their project ideas and proposals in consultation with potential supervisors within the Industry and Innovation Research Institute that supervise in the listed areas of Computing and Informatics **before** formal application.

Only proposals and applications that have agreed written support from potential supervisors will be considered.

The selected candidates will be required to prepare a research proposal presentation as well as teaching activities as part of the interview process.

For queries about the application process, please contact the Postgraduate Research Tutor in Computing and Informatics, Dr. Marjory Da Costa-Abreu (m.da-costa-abreu@shu.ac.uk).

When is the deadline?

The deadline for submission of the application is 30/06/2021.