PHD POSITION FOR NORM-DISCOVERY IN GAME THEORETIC EXPERIMENTS

Applications are invited for a 4-year PhD scholarship in the Department of Computer Science at Royal Holloway, University of London, as part of the Leverhulme funded project entitled “Social Mechanisms and Allocations” seeking to understand how social norms develop and sustain themselves. The successful applicant will be working in the area of game theoretic experiments using agent-based modelling and multi-agent systems learning, under the supervision of Professor Kostas Stathis (project co-investigator) in close collaboration with Professor David Levine (the Leverhulme fellow and the project’s principal investigator based in the Department of Economics) and Professor Ryan McKay (the other project co-investigator based in the Department of Psychology). Topics of interest include, but are not limited to:

- Adaptive agent-based models;

- Agent-based modelling with human-like behaviours;

- Norm-emergence in agent-based models;

- Platforms for game-theoretic simulations.

The student will be expected to work in an interdisciplinary team of economists, psychologists, and computer scientists for a third of their time. The position will be hosted in the Centre for Intelligent Systems, in Computer Science located in the state-of-the-art premises of the School of Engineering, Physical and Mathematical Sciences in Egham. For more information about the project, the research areas, and the post, please contact Prof Kostas Stathis ([kostas.stathis@rhul.ac.uk](mailto:kostas.stathis@rhul.ac.uk)).

THE DEPARTMENT OF COMPUTER SCIENCE, ROYAL HOLLOWAY UNIVERSITY OF LONDON

The Department is one of the UK's leading centres for research into Computer Science. We carry out outstanding research and deliver excellent teaching at both undergraduate and postgraduate level. We ranked 17th overall among UK computer science departments in the Research Excellence Framework (REF 2021, Times Higher Education ranking). We have strong research groups in the broad areas of Intelligent Systems, Machine Learning, Algorithms and Complexity, and Programming Languages and Systems, as well as good connections with the Information Security Group. We are involved in multiple inter/multidisciplinary activities, from electrical engineering to psychology and social sciences. Our research strength generates significant interest and collaborative opportunity from universities and third-stream partners.

INFORMATION ABOUT THE SCHOLARSHIP & ELIGIBILITY

The scholarship is available to students who wish to start their studies in September 2023 and provides support of £18,641 per year over period of 4 years for a full-time student. It also includes a fee waiver to cover fees at the home fees rate (£4,712 for the 2023/2024 academic year). Students who have already started their study programme are not eligible.

REQUIREMENTS

Applicants should have a first-class honours degree in Computer Science or a related discipline, an MSc in Artificial Intelligence (AI) and/or Machine Learning (ML), as well as  software development skills in Python and/or Java/Prolog. Among desirable skills we expect candidates to have experience with agent architectures, game-theoretic simulations, the formalisation of norms, as well as the application of computers in economics. Industrial experience in the area of AI/ML will also be a plus.

APPLICATION PROCESS

Please complete an online application here:

<https://www.royalholloway.ac.uk/studying-here/applying/research-degrees/how-to-apply/>

Please select "PhD Computer Science" as the course title within the application form and prepare the following documents: (1) a covering letter that describes your reasons for wishing to pursue a PhD in this area indicating their special topic(s) of interest from the four specified above; (2) a copy of your most recent CV, including your actual or expected degree class(es), and results of all University examinations; and (3) two academic references.

In the online application, you will be asked to nominate a supervisor for the research you are looking to pursue. So please ensure that you specify the name of Prof Kostas Stathis and provide also a clear statement that you are applying for the scholarship entitled "NORM-DISCOVERY IN GAME THEORETIC EXPERIMENTS". You can also enter details towards the end of the application form, how you intend to fund your research studies, and again you can mention you will be applying for a PhD studentship.

IMPORTANT DATES

4th June 2023: scholarship application deadline

Mid-June 2023: selection interviews

End of June 2023: decision of the scholarship

Early July 2023: formal confirmation of the scholarship granting