PhD Studentship: Reinforcement Learning and Argumentation-Based Analytics, University of Southampton's School of Electronics and Computer Science, United Kingdom

Closing Date: Friday 31 August 2018

A PhD studentship in the area of reinforcement learning and argumentation-based analytics is available in the Agents, Interaction and Complexity (AIC) Group at the University of Southampton's School of Electronics and Computer Science. The studentship is aligned with the Collaborative Intelligence Spaces (cispaces.org) and DAIS ITA (dais-ita.org) projects and will be supervised by Professor Tim Norman (ecs.soton.ac.uk/people/tjn1f15) and Dr Gopal Ramchurn (sramchurn.com), in collaboration with Dr Geeth De Mel (IBM Research).

The area of the studentship is in artificial intelligence/machine learning and its application to making sense of situations from sparse evidence. The particular focus of the research will be in the development of reinforcement learning techniques to identify potential links among chunks of interconnected and (possibly) contradictory evidence, and to anticipate plausible futures. The use of argumentation to model and reason with evidence will also play a role in the research. The project may range from theoretical work on the interface between automated reasoning and machine learning, to the development of reasoning tools and the empirical evaluation of systems involving collaborations between humans and intelligent agents and robots.

The AIC group undertakes world-leading research into the science and engineering of complex socio-technical, socio-economic and socio-ecological systems that underpin the most pressing challenges currently facing society. The School of Electronics and Computer Science also hosts the Centre for Machine Intelligence (cmi.ecs.soton.ac.uk), which brings together researchers with interests in Artificial Intelligence, Machine Learning and Autonomous Systems from across disciplines. The project itself is part of an on-going collaboration (since 2006) with IBM, DSTL and others in the develop of novel algorithms, methodologies and tools for human-agent collectives.

Candidates should normally have or be about to complete a Master's level qualification in computer science or a closely related discipline, with a strong component in artificial intelligence and mathematics.

Duration: four years (full-time)

Funding: full tuition fees, for UK/EU students, and a tax-free stipend of £14,777 per year

Interested candidates may contact Tim Norman (t.j.norman@soton.ac.uk) or Gopal Ramchurn (sdr1@soton.ac.uk) for more information.

To apply, please use our on-line system: ecs.soton.ac.uk/phd/how-to-apply