PhD opportunities in human-robot interactions, specifically in the area of social robotics and robotic companions.

Research Topic: End-user personalisation of social/companion robot for long-term engagement.

We invite applications for PhD studentships in the area of Human-Robot Interaction to join the Adaptive Systems Research Group at the University of Hertfordshire. The PhD study will be in the area of social robotics under the supervision of Dr. Kheng Lee Koay (K.L.Koay@herts.ac.uk) and Prof. Farshid Amirabdollahian, and are invited to contact Dr. Kheng Lee Koay for more information.

Robots are becoming more widespread in domestic environments, a trend which may see them playing an import role in the future in peoples' everyday lives. This has led to increasing research in the area of robotics for domestic environments such as Social Robots and Companion Robots. These robots are intended to be used to provide assistance and companionship in different contexts to support human activities in daily living. They are expected to perform tasks according to social expectation and to interact with people in a socially acceptable fashion.

The area we are particularly interested in is end-user personalisation of companion robots in order to improve long-term user interaction. Personalisation is an important aspect of Human-Robot Interaction (HRI) that aids long-term user engagement with a robotic companion beyond an initial habituation period. Personalisation goes beyond just robot appearances, specifically into aspects that allows end-users to teach a robot to perform new tasks in ways that matches users' expectation. Robots that can adapt to users' needs will be more personalised, useful and appreciated by the users. This will help the robots form a stronger relationship with their users, which previous studies have found that the ability of a socially assistive agent/robot to form a relationship with its user is important to maintain its continued use.

Potential investigations in this area includes, but is not limited to:

- Software architecture and planning for social robots
- Task abilities and functionalities to support activities of daily living and long-term engagement with users.
- Perception of users' control and trust in companion robots
- Expressive robot behaviours
- Adaptive multimodal HRIs
- End-user personalisation

The ideal PhD candidate should have a strong first degree or (preferably) a specialist Master's degree in Computer Science, Machine Learning, Artificial Intelligence, Robotics or a related field with a strong background in mathematical and statistical knowledge, as well as technical and programming skills in Python or C++. Prior knowledge and experience in programming mobile robots and experience or interest in social sciences or psychology is desirable. Candidates are expected to have excellent English oral and writing skills.

For more information about the field, please contact:

Dr. Kheng Lee Koay (K.L.Koay@herts.ac.uk)