Robot Assisted Therapy for Children with Autism

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Interactive robots are increasingly being used in projects that aim to support children's learning and development. The research team at University of Hertfordshire led by Prof. Dautenhahn has been investigating for more than 15 years the use of robots for therapy and education of children with autism, see KASPAR (http://www.kaspar.herts.ac.uk/) and Aurora projects (http://www.aurora-project.com/) for more details. A key research issue relevant to both projects concerns the adaptation of the robot's behaviour e.g. to the individual needs and preferences of the person. A personalized robot companion needs to know its users, and be able to adapt in long-term interaction.

The PhD project will be associated to the KASPAR and Aurora projects, investigating the use of humanoid and non-humanoid robots for the therapy and education of children with Autistic Spectrum Conditions (ASC) who have problems communicating and interacting with other people. The research team at University of Hertfordshire have pursued this research direction for more than 15 years and has a significant track record in this area. The general aim is for the PhD student to investigate the development of personalized games and a robot that can adapt to the children.

The PhD project will use existing state of the art robot hardware, and focus on software development and evaluation with children with ASC. The design, preparation, implementation and analysis of human-robot interaction experiments will form an important part in this project.

The PhD student will be part of a larger research team consisting of researchers working on human-robot interaction. The PhD student will have the opportunity to work with state of the art humanoid robots, including KASPAR (http://kaspar.feis.herts.ac.uk/) which was developed by our research group.

Applicants are required to have a strong first degree or Master’s degree in Computer Science, Robotics or a related area relevant to the project. An additional background in human-computer interaction, cognitive science or psychology is highly desirable. Excellent programming skills are essential (including C++), the ability to interface robot sensors and develop software on robots is a necessary requirement of this studentship, as well as a general interest in interdisciplinary research and willingness to collaborate with researchers from other disciplines. The ideal candidate will be self-motivated with good writing and communication skills. The PhD will be supervised by Prof. Kerstin Dautenhahn (K.Dautenhahn@herts.ac.uk), whom interested candidates are invited to contact via email in the first instance. Note, all applications must be made formally via our Research Office as specified in the advert.