Post Doc Position at the AASS Learning Systems Lab

Open Post Doc Position

A new 2-year Post Doc position with possible extension to 3 years is available at the AASS Learning Systems Lab, Örebro University, Sweden. This position is fully-funded within the EU project HANDLE.

Örebro University

The University of Örebro (http://www.oru.se) is a young university currently enrolling more than 14000 students. It is located in Örebro, a city with 100'000 inhabitants, which is situated in central Sweden at 59°16'N 15°13'E. More information about Örebro can be found, for example, at http://en.wikipedia.org/wiki/Örebro.

The AASS Learning Systems Lab

The Centre for Applied Autonomous Sensor Systems (AASS Research Centre, http://aass.oru.se) carries out multi-disciplinary research at the intersection of robotics, machine learning, artificial intelligence, computer vision, computer science, and measurement technology. The research and human environment at AASS is young and enthusiastic. Researchers come from different countries and have different scientific and cultural backgrounds. AASS also frequently hosts international researchers and is involved in several international projects. This means that, particularly in the HANDLE project, enrolled PhD students will have the opportunity to travel and to cooperate with people in other countries.

The Learning Systems Lab is one of three research groups within AASS. Our research is recognized world-wide with its focus generally on the development of algorithms and robotic/sensor systems for real-world tasks. Some of the main directions are: Teaching-by-Demonstration, Dexterous manipulation, Robotic Map Learning and Safe Operation in Dynamic Shared Environments. Further information can be found at http://www.aass.oru.se/Research/Learning. Currently, the staff of the Learning Systems Lab includes 6 PhD students, 5 postdocs and 3 professors.

Research Topic

This position is funded within the EU project HANDLE (www.handle-project.eu) where one of the objectives is to develop models of human manipulation skills from human demonstrations in order to create equivalent robotic skills that will be used on a 5-finger dexterous robot hand. The Post Doc is expected to work on one or more of the following topics:

- Modelling and reconstruction of human grasping and manipulation skills from human demonstrations.
- Development of motion primitives for in-hand manipulation with a 5-finger dexterous robot hand.
- Various machine learning problems related to grasping and manipulation such as: modelling and generalization of hand-object relational trajectories; grasp and gesture recognition; learning of object affordances.

A more specific topic will be defined depending on the experience and research interests of the applicant. This position does not include teaching duties but the researcher is expected to participate in the supervision of PhD students within the HANDLE project.

Requirements and Application Process

Candidates should have a Ph.D. or equivalent in one of the areas of Computer Science, Automatic Control, Machine Learning or Artificial Intelligence. Candidates are also expected to be experienced with programming in C++ and Matlab. The appointment will be full time for a period of two years with a possible extension to three years.

To apply for the position, please send a motivation letter along with detailed curriculum vitae (including at least two academic references) and copy of PhD diploma and the PhD thesis by e-mail to Boyko Iliev (boyko.iliev@oru.se). Applications can be sent immediately and will be considered until the position is fixed.

We are looking forward to your application!

Dr. Boyko Iliev (boyko.iliev@oru.se)
AASS Learning Systems Lab

The HANDLE Project

The HANDLE project aims at understanding how humans perform the manipulation of objects in order to replicate grasping and skilled in-hand movements with an anthropomorphic artificial hand, and thereby move robot grippers from current best practice towards more autonomous, natural and effective articulated hands.
The focus of this project is on technological developments and, in addition, fundamental multidisciplinary research aspects in order to endow the proposed robotic hand with advanced perception capabilities, high level feedback control and elements of intelligence that allow recognition of objects and context, reasoning about actions and a high degree of recovery from failure during the execution of dexterous tasks.
More information can be found at: http://www.handle-project.eu

More Information

Contact Person:	Dr. Boyko Iliev
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Contact Person, Web Page:	http://www.aass.oru.se/Research/Learning/biv.html
HANDLE Project:	http://www.handle-project.eu
Learning Systems Lab:	http://www.aass.oru.se/Research/Learning/index.html
AASS:	http://www.aass.oru.se
Örebro University:	http://www.oru.se