

Deep Reinforcement Learning for Robot Dexterous Manipulation

Applications are invited for a three year Postgraduate Research Studentship, supported by the School of Engineering and Applied Science to be undertaken within the **Computer Science Research Group at Aston University**, Birmingham, UK. The successful applicant will join an established experimental group working on artificial perception and machine learning towards robot dexterous manipulation. **The position is available to start in January 2019.**

The Ph.D. candidate will work within the context of the CHIST-ERA InDex project (Robot **In**-hand **D**exterous manipulation by extracting data from human manipulation of objects to improve robotic autonomy and dexterity) that will start early 2019. It is expected the candidate will collaborate with our partners (Sorbonne University, Technische Universität Wien, University of Genoa, and University of Tartu) during the course of the project.

Background of the Project

It is expected that the Ph.D. candidate will design and develop an approach based on deep reinforcement and transfer learning to endow a robot to autonomously learn and adapt its strategy to interact with objects during in-hand manipulation tasks, and also being able to transfer this knowledge to other contexts. Beyond of learning from human demonstrations, learning from a synthetic environment (simulations) can be an alternative, where transfer learning will play an important role to use the knowledge acquired from that environment to be applied to a real-world context.

Financial Support

This is a full studentship for home/EU students, which includes a fee bursary to cover the home/EU fees rate plus a maintenance allowance. Applicants from outside the EU may apply for this studentship, however will need to pay the difference between the 'Home/EU' and the 'Overseas' tuition fees.

Person Specification

The successful applicant should have a first class or upper second class honours degree or equivalent qualification in Computer Science or Electrical Engineering or other related degrees. Preferred skill requirements include knowledge of machine learning, artificial perception and/or robotics. We would particularly like to encourage application from women seeking to progress their academic careers. Aston University is committed to the principles of the Athena SWAN Charter, recently recognised by a prestigious Silver Award to the School of Engineering and Applied Science, and we pride ourselves on our vibrant, friendly and supportive environment and family atmosphere.

How to Apply (Deadline: 20/11/2018)

Send an email to Dr Diego R. Faria: d.faria@aston.ac.uk and/or Dr George Vogiatzis g.vogiatzis@aston.ac.uk. Attach your motivation letter, CV and transcripts, and provide names of 2 references before submitting your application. Note that, submissions without these documents will not be considered.

Shortlisted applicants will be invited to an interview (by Skype) between 22 and 26/11/2018.