

UK-Japan Workshop on Biologically Inspired Soft Robotics

Sidney Sussex College, University of Cambridge, 14-15 July 2016

Throughout the full two-day workshop, 27 oral presentations as well as 12 poster presentations were given, which attracted 54 participants in total including students and interested professionals. The presentations were organized into four different subtopics within the research field of Bio-Inspired Soft Robotics.

The first session focused on cutting edge research to grasp the landscape of this research field. This session was then followed by a panel discussion of the representatives including the editor in chief of the Journal of Soft Robotics, Prof. Barry Trimmer. The main discussion topic was on the challenges and breakthroughs of this research area, where a broad range of issues were raised such as theoretical challenges, technological breakthrough, industrial applications and knowledge transfer, as well as funding and education challenges.

The second session was more dedicated to discussing the applied research topics, including the use of advanced materials for wearable and elderly care applications. This session was then followed by the presentations of funding agencies, namely representatives from JSPS London as well as the EPSRC. Here we discussed funding options to support this research domain as well as potential opportunities about UK-Japan collaborations. The discussion was also brought into the social dinner after the end of the first day.

In between the sessions, breaks were organised together with poster presentations. We had a total of 12 posters that were mainly presented by the participating young researchers and students. Though we had a relatively short time slot for each talk, this poster sessions helped consolidate the detailed discussions of the research topics.

On the second day, the first session covered a broad spectrum of research topics related to biology, starting from bacteria and insects, to humans and dinosaurs. Interestingly, despite the large variation of topics, all of these presentations were related to each other through the exploitation of soft materials in nature, which were very inspiring for all of the engineering participants. This session was then followed by another panel

discussion about communication and education of interdisciplinary and international research projects.

The last session discussed theoretical frameworks from the different standpoints of control engineering, physics, informatics, and cognitive science. These theoretical issues gave a good foundation of the long-term perspectives of this research field, and the guidance of discussion about international and interdisciplinary collaborations. The final panel part of this session discussed the next collective actions to be taken in this research community.

-Dr Fumiya Iida, University of Cambridge



Symposium Participants