BMVA Meetings seem to have risen in popularity since I last attended one. With 80+ attendees from both academia and industry, the Vision for Robotics meeting was not only a success but also a very good platform for discussion and networking.

At 10am, shortly after everyone had registered and had their caffeine fix, the meeting started. An introduction by chair John Illingworth quickly led into the first keynote speaker. Andrew Davison (Imperial College) gave a very interesting talk on “Scene Understanding for Domestic Robots”, where he presented some of the work that has been done at Imperial’s Dyson Robotics Laboratory. After a brief introduction to Simultaneous Localisation and Mapping (SLAM), Davison showed a very sleek presentation of the Dyson360. The talk then organically moved onto SLAM frontends and finished of with a very interesting demonstration of SLAM using event-based cameras. Jeremy Wyatt (University of Birmingham) then gave an interesting talk about compositional hierarchy and its use in visual recognition to guide dextrous grasps. Margarita Chli (University of Edinburgh) talked about the use of vision systems for UAV navigation. She discussed the fundamental aspects of a SLAM system and gave a short introduction to the sFly Project, which was able to have autonomous UAVs flying and mapping an environment. Paul Siebert (University of Glasgow) finished the morning session with a presentation on a robot that is able to perform dextrous manipulation of clothing. Dextrous Blue (the robot) is able to sort clothes by color, identify the type of clothing, unfold and fold garments.

Lunch allowed some much needed relaxation and food, as well as important time to talk to other researchers and network. The afternoon session started with a very interesting talk by Bruno Siciliano (University of Naples Federico II), who discussed Visual Servoing for industrial applications, monocular ball catching, the ARCAS Project and some very cool tracking of deformable materials with a demo using pizza dough. Diego Boesel (CSEM) followed with a similar talk, except his Visual Servoing involved much larger scales and moving robotics platforms. Zeeshan Zia (Imperial College) moved the conversation back to SLAM. He proposed SLAMBench, a multi-platform, multi-language benchmark platform and language (PAMELA). This session ended with Johannes Hiltner (MVTec), who gave an industrial talk about HALCON, an off the shelf image processing library and prototyping tool.

A coffee break followed, along with the last session of the day. The keynote, Paul Newman (University of Oxford), gave a presentation about Vast-Scale Localisation (Vast-Scale meaning space AND time). His main goal is to become extremely good at localising in a well mapped area. He has hours of footage of the same trajectory in different weathers, lighting and even traffic levels. This allows his localisation algorithm to be illumination invariant, suppress distractions (such as busses) and use ‘place dependant’ features to make weak localisations. During all this, he made the point
that with how cheap memory is, storing large maps is no longer prohibitive. Pedro Cavestany (Cranfield University) followed, he presented his work on low-cost ground-based robots (Rovio) that perform collaborative Structure from Motion (SfM). The event ended with Frederic Fol Leymarie, Prashant Aparajeya and Daniel Berio (Goldsmiths University) who showed us a very well structured and thought out way of doing human-robot gesture transfer. They demonstrated it by tracking the motions of a graffiti artist and reproducing them using a robot hand.

As the day ended, people gathered outside the seminar room and continued to discuss their work. We were soon told the discussions could carry on at the pub, where we headed for drinks.

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