Flinders University - Teacher in Residence – Daniel Seymour

I recently had the opportunity to spend time at Flinders University as a part of the ATP ‘Teacher in Residence’ program. This initiative was developed by the Advanced Technology Industry Schools Pathways Program (ATP) and is facilitated by the Southern Knowledge Transfer Partnerships office at Flinders.

The program aims to give academics and teachers reciprocal insights into their respective curricula. I was particularly interested in the robotics and engineering programs, along with the ‘Design and Technology Innovation’ program that is due to welcome its first intake next year. I met with two academic staff, Sandy Walker, Associate Professor in Product Design, and Dr Nassir Agari, Director of Engineering Studies.

Sandy Walker joined Flinders University at the beginning of 2015, taking charge of their new Design and Technology Innovation program. The unique approach of this program, as compared to Design programs at other tertiary institutions, is the blend of design, entrepreneurship and innovation skills through the use of technologies. Students will undertake collaborative projects with considerable industry involvement, and take advantage of industry internships with local, national and international organisations. To aid the connection between education and industry, the Hills Innovation Centre shares the same building at the redeveloped Tonsley site. The have provided students with access to their 3D printer, worth around $300,000. The reason for the hefty price tag is due to its ability to blend two different materials in specific concentrations and microstructures, so as to produce a composite material that can vary in translucency, pliability and thermal resistance.

A project that epitomises how educational institutions and industry can work together for mutual advantage, is the newly developed Nurse Call pendant. Developed by two students that Sandy Walker mentored while working at UniSA, the pendant replaces the Nurse Call ‘button’ that provided significant issues for elderly people, especially those with arthritis. Having recently gone into production, the pendant will be installed throughout the new Royal Adelaide Hospital.

Click on the image below to view the YouTube video.
I was also fortunate to spend time with Dr Nasser Asgari and Baxter, a research robot produced by Rethink Robotics. Rethink Robotics was founded by Rodney Brooks, a graduate of Flinders University, and more recently Robotics Professor at MIT (Massachusetts Institute of Technology). Baxter is a collaborative robot, designed to work in close proximity to people. Its Compliant Motion Control takes advantage of sensors throughout its arms and joints, enabling it to react to unexpected resistance, for example if it were to make contact with a person standing nearby. Therefore it does not require any safety cages. Its AI (Artificial Intelligence) capabilities also allow it to alter its behaviour based on environmental inputs.

I’m incredibly excited about the opportunities that will come from these recent connections with Flinders University. We are already looking at projects that our respective students can collaborate on.

Click on the image below to see a video of Baxter.

Daniel Seymour