Hertfordshire Branch

Committee Report for 2015 - 2016

The committee of the Hertfordshire Branch of the BCS has pleasure in presenting this report on the Branch's activities for the 2015-16 season. The committee delivered a programme of ten events at our venues in Hatfield (University of Hertfordshire-UH) and Hemel Hempstead (Sopra Steria) and two visits.

Branch Events

We kicked off our season in October at UH with our second Ada Lovelace Commemorative Lecture to celebrate her life and achievements. Lady Lovelace was the daughter of Lord Byron and collaborator of Charles Babbage. She was a computing pioneer and is considered by many to be the first programmer. The lecture was followed by a talk by Professor Kerstin Dautenhahn explaining how social robotics has become increasingly important with robots being used in many application areas such as entertainment, therapy and assistive technology - where interaction with people is key to the success of the robot. The talk outlined a positive future where robots can be useful and have their roles in society, taking advantage of the strengths and abilities of both robots and humans.

In November, Nasser Abouzakhar, Senior Lecturer, University of Hertfordshire spoke about Cybersecurity for Critical Industrial Systems. As most industries depend heavily on networks for their operations, the increase in online operations throughout industry has led to an increase in cyber-attacks. The presentation introduced the major risks to critical infrastructures and highlighted the importance of the penetration testing life cycle for critical systems.

Our desire to use different venues took us to County Hall in Hertford, the headquarters of Hertfordshire County Council, for our December event. Unfortunately, heavy rain and severe wind that evening meant we had very few members attending. Nevertheless, we marched on with Jen Rodvold, a Principal Sustainability Consultant from Sopra Steria who posed the dilemma of how digital exclusion is a drain on the economy, society and on one's business. The smaller audience meant that the meeting turned into a lively discussion. We explored digital exclusion globally and in the UK and discussed why it should matter to us and what those of us working in IT should be doing to minimise this divide.

We returned to UH in the new year with Bioinformatics Scientist, Peter Saffrey who shared his experiences and spoke about the strengths and weaknesses of Linux in a talk titled, Linux for Human Beings. Practical guidance on when you buy a desktop or laptop, should you consider a Linux machine? What will you gain and what will you lose by doing so?

"Turning Data into Things: Where we are with 3D printing and what is coming next?" was the topic in February with Nicolai Marquardt, Lecturer in Physical Computing, University College London. 3D printing changes the way we can create and manufacture individually customised physical objects. The talk guided us through the current state-of-the-art digital fabrication techniques, described the hardware and tools for creating 3D-printable data, showed many examples of 3D printing in action and discussed future challenges and opportunities.

Having broken new ground in March 2014 with our first practical workshop, we ran a third session in March this year, once again with our Committee Members, Stephan Barnard supported by David Hubbard, where each attendee was given to keep a kit (containing electronic components such as light and temperature sensors, switches, LEDs, and a

prototyping breadboard) which they built during the talk. We went deeper under the hood of the digital computer and learnt how electronic components work and how they are arranged in simple circuits capable of performing Boolean logic.

In April with Sarah Gallacher, Senior Research Associate, University College London we covered Civic Engagement with the Internet of Things (IoT). The IoT, in its different guises, already affects many aspects of our lives. In this talk we learnt how the IoT can support civic engagement by reaching beyond the typical community champions and giving a voice to all.

Our May meeting was held at Sopra Steria in Hemel Hempstead with Information Consultant and former committee member, Mike Barwise. Under the heading of Seduced by the Matrix, Mike examined some of the most popular approaches to risk assessment and identified the reasons they failed to deliver as assumed. A lively debate followed the talk.

Our first visit for the year was to Renewable Energy Systems (RES), one of the world's leading renewable energy companies that provides global services and expertise, to develop, engineer, construct and operate projects that contribute a low carbon, sustainable future. The zero emissions development generates 100% of its energy through renewable means on-site. It included a natural borehole cooling system and a 50m wind turbine visible from the M25. A passionate and knowledgeable host, Sandie Taylor made it an enjoyable evening to those attending.

September brings our AGM with a visit to Rothamsted Research (est. 1843), an independent scientific research institute with the longest running agricultural research centre in the world. Following the AGM, we will have a talk on the topic of Experimental Statistics and Computing. This will be followed by a tour of the facilities.

Attendance at our Events

Average attendance for the year, excluding the AGM, was 41, a decline over the numbers from the previous three years (2007 to 2015 averages 31, 29, 33, 24, 25, 29, 46, 48, 56). Analysing the figures, we had an average of 42 at our main location, Hatfield, a significant drop from 71 from the previous year (6 events: Member/non-Member split 24/18; compares with Member/non-Member split 30/41 for the previous year. An average drop of 23 non-Members). We plan to increase our publicity at the University to increase our number of non-Members in the next season. The Branch continues to leverage technologies such as LinkedIn, Facebook and Twitter to publicise the events.

Adding Value beyond Branch Events

The Branch link with UH has not been limited to using the location for events. The Committee (Senior UH staff part of the Committee) has worked closely with the University in awarding two prizes to final year students for Innovation and Collaboration. These prizes were awarded at the School of Computer Science CS@50 Gala Lunch at Hatfield House in December, where BCS Herts Branch helped the school celebrate 50 years of Computer Science degrees at the University of Hertfordshire. A final year student was recognised for his exemplary Collaborative achievements in leading peer assisted teaching in the school, and a post graduate student for his display of outstanding innovation and Initiative during his final project. Each student received a £100 prize and a one-year subscription to membership of the BCS.

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Members of the Committee have gone further to support the BCS at national level with continued membership of the Member's Best Practice Policy Committee where they are actively involved in the bi-annual branch conventions and they also responded to requests from HQ, Branch members and local residents for help and guidance. In addition, they represent the BCS on the University of Hertfordshire's Industrial Advisory Board which reviews an advises on the syllabus for that institution's bachelors and masters degrees in computer science.

In addition to our established web-site www.herts.bcs.org we have continued with our Facebook page for the branch www.facebook.com/BcsHertfordshireBranch. This has proved a valuable channel of communication with members and non-members for promoting our events and getting members feedback on topics of discussion. Currently running at over 180 "likes", and growing, the Facebook page shows an interesting demographic of over 57% under 34s leading us to be encouraged that we are reaching a younger audience of members or potential members. Topics that have generated the greatest engagement have been Internet of Things (IoT) and Computer Hands On Build Event, these Facebook statistics are useful in guiding our choice of topics for future events. We have also created a YouTube account www.youtube.com/user/BCSHerts where we have placed a number of recordings from our Branch meetings.

Acknowledgements

We wish to record our gratitude to the speakers for their enthusiasm, to the University of Hertfordshire and Sopra Steria for their continuing support and hosting of our events, to BCS HQ for support and advice and to our members for supporting our events and providing valuable feedback.

The Coming Year- Programme 2016-17

The Committee has once again worked hard by consulting our members during the spring and summer months to develop our Programme 2016-17 for the Branch with eight Branch Events (using Hatfield-UH, Hemel Hempstead-Sopra Steria and Stevenage-Fujitsu venues) and two Visits (including the AGM). The Committee hopes our members will enjoy participating and support us in building a stronger BCS Hertfordshire.

If you would like to join the Committee, please volunteer at the appropriate point in the AGM proceedings.