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# Reflections on the 35<sup>th</sup> BCS Human-Computer Interaction Conference at Keele University

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**The following are short reflections from interactions gallery chairs, workshops organisers and members of the host organising committee.**

## 1. INTERACTIONS GALLERY

*Organisers: Tom Flint and Tanis Grandison*

The Interactions Gallery at BCSHCI2022 was housed in the foyer and connected rooms of the Denise Coates building at Keele University. The spacious environment made for an excellent place for displaying and gathering around individual works. The shape of the building afforded malleable space that was sympathetic to the form of each submission. There were a number of exhibitions that were stationed along the expansive foyer. Each work was displayed on a table. This included arcade machines from Stewart et al's Let's Play Project, a mixed reality experience on knowing

care identity from Morrison et al's work. Museum and heritage were well represented with Alan Dix's tools for heritage and work on digitising cuneiform tablets from Woolley et al's.

It was excellent to see so many exhibitors be part of the Interactions Gallery for the first post covid British HCI. Large scale exhibits were housed in specific rooms around the venue including a work by Craig Appleby using interactive lighting for choreography with dancers and Grandison et al demonstrating tactile talking maps made by children. Hall et al. filled an entire room with several artefacts by artists responding to cybersecurity through arts practice. Lechelt et al displayed a long form film made during the Creative

Informatics project. This film was displayed in a salon format, affording a breakout space and venue for personal discussion.

Overall this was an excellent demonstration of practice informed HCI research. It was enlightening to engage in discussion around these exciting projects with delegates at the conference. This was also an opportunity to support new and established researchers promoting their artefacts and encouraging debate around practice as research in HCI.

## 2. FINDING OUT WHAT PEOPLE REALLY WANT AND GENERATING, DEVELOPING AND EVALUATING IDEAS SYSTEMATICALLY.

*Organisers: Gordon Rugg, Hyde and Rugg Associates*

We ran two workshops, one on elicitation methods, and the other on systematic generation of ideas. They were designed to complement each other, without depending on each other.

The elicitation workshop covered card sorts, laddering, and think aloud, plus the theoretical framework for choosing and combining methods. The session went well, with positive responses from participants. An insight from this session, in the context of recent lockdowns because of Covid, involved the differences between using physical methods and online versions of the same methods. This is well recognised in card sorts research for practical reasons; it's much easier to do card sorts on life-sized printed screenshots of web pages than to do them via software. For other methods, people tend to prefer the physical version, for reasons that they struggle to articulate. During this session, two possible explanations became apparent. One involves the visual feedback from other people's expressions while using a method, giving a social interaction aspect to the method that can be missed in online versions. The other involves sensory channel balance, where the tactile and proprioceptive aspects of physical methods provide a broader range of sensory input than online versions, which are mainly visual.

The idea generation workshop covered methods for generating ideas via serial processing, and for generating ideas via parallel processing, followed by a method for developing those ideas (Idea Commenting) and then methods for shortlisting the developed ideas and choosing which to proceed with (paired scale like/dislike plots, and Multi-Criterion Decision-Making). It also covered the use of hexagonal tiles to generate sidestepping solutions that go around a problem. The session went well, with very positive responses from participants. One issue which was repeatedly mentioned was that participants were surprised by

their own creativity using these methods. Another was how democratic the methods were, in terms of giving all the participants an equal voice in producing, developing and selecting ideas within a safe, supportive structure.

Overall, our key insight from these sessions was that concepts developed within HCI in the broad sense are useful both outside computing and at the interface between computing and other disciplines, where they can help tackle long-standing problems by providing new understanding and practical guidelines.

## 3. DESIGNING DOMESTIC SMART ENERGY FUTURES

*Organisers: Rowanne Fleck, Dave Kirk, Clara Crivellaro, Laura Benton, Patrick Gould, Ian Stone, Mina Vasalou*

The UK has ambitious targets to reduce its greenhouse gas emissions to Net Zero by 2050, with Scotland aiming to reach this by 2045. Achieving those targets whilst keeping the cost of energy affordable will require a significant increase in the amount of innovation in the energy sector to change how we generate, distribute and use energy. As we move into the future our increased use of clean, renewable energy sources will bring with it new challenges for balancing the variable energy supply to demand, which may impact how and when we use energy in our homes. We will be relying more and more on electricity, requiring us to rethink how we travel and heat our homes, and putting new strains on our existing networks.

The Designing for Domestic Smart Energy Futures workshop aimed to bring together experts from various sectors to challenge the HCI community to consider the ways they could support the systemic changes needed to tackle climate change—with a particular focus on designing new domestic smart energy futures that support these changes and that are equitable and inclusive.

We started the day by sharing perspectives from industry, academia and government regulation to seed later creativity and discussion in the afternoon. We heard about the goal of demand side response and projects starting to explore how this might work for people in their homes in practice, ways in which we could be rethinking domestic transport, the possible role of hydrogen in a green energy future, issues around the security of our smart energy technologies and thinking differently about designing our future energy interactions inspired by the idea of 'slow technologies'. We also heard about initiatives and policies to promote inclusivity and protect the most vulnerable.

In the afternoon we ran parallel creative design discussions delving into the concepts of a multi-

modal integrated transport network for the future, possibilities for local community energy networks, and ways of ensuring future systems are accessible and inclusive.

The workshop was only the start of these discussions, which we hope will be ongoing. We're publishing a blog summarising thoughts from the day, are hoping to run other similar events in the future, and have created an email subscription list for anyone who'd like to be part of the conversation. Subscribe at:

<https://www.jiscmail.ac.uk/cgi-bin/webadmin?SUBED1=ENERGY-FUTURES&A=1>

#### **4. DIVERSITY, ACCESSIBILITY AND INCLUSIVITY IN CYBER SECURITY (DAI) WORKSHOP 2022**

*Organisers: Paul Whittington, Huseyin Dogan, Edward Apeh and Duncan Ki-Aries*

The 2nd Workshop on Diversity, Accessibility and Inclusivity in Cyber Security (DAI) was held as a virtual session at BCS HCI 2022 on Monday 11th July 2022. The Workshop aimed to investigate the recent developments to ensure that cyber security is accessible and inclusive to all users, without creating discrimination or marginalisation. The half-day Workshop consisted of two paper presentations and a Panel discussion with the Workshop organisers from Bournemouth University. The first presentation focussed on the development of a platform to improve the numbers of women entering the cyber security domain. This platform will assist women in their career choices, inspiring them to undertake a cyber security career. The second presentation discussed the development of the Authenticity Pass application that provides a method for people with disabilities to authenticate themselves and provide accessibility requirements to organisations. The aim of this application is to improve customer satisfaction and assist organisations in becoming aware of customer accessibility needs.

The Panel was an opportunity to discuss the two papers with academics from Human Computer Interaction, Assistive Technology and Cyber Security backgrounds. The discussion focused on accessibility considerations being incorporated in all online systems, including websites and web applications. Although the development time may be increased, there will be benefits for an inclusive approach in the longer term. This will also conform to the National Cyber Security strategy, as well as the Equality Act 2010 and Accessibility Regulations 2018.

Organising the DAI Workshop at BCS HCI 2022 enabled this topic to be explored with academics and researchers in the HCI domain. Bournemouth University will propose a 3rd Workshop at BCS HCI 2023, to have a greater focus on assistive technology, an evolving research domain with new developments to improve the quality of life for people with disabilities.

The organising committee would like to thank BCS HCI 2022 for hosting our successful DAI Workshop this year.

#### **5. THE ORGANISING TEAM**

*Organisers: Sandra Woolley, Ed de Quincey, Marco Ortolani, Goksel Misirli, Nadia Kanwal, Bappaditya Mandal and Tim Collins*

The organising team were grateful for excellent support from Keele University's Digital Society Institute, Faculty of Natural Sciences and School of Computer Science and Mathematics, and for university support in the provision of excellent conference venues. The support of Keele University and all conference sponsors enabled the reduction of registration fees for all delegates, particularly students.

In addition to the quality of papers and sessions, the key conference reflections of the host team were i) the outstanding quality of all three of the keynote talks, ii) the vibrancy of the workshops and doctoral consortium and iii) the scale and quality of the Interactions Gallery.