Sounds Like Sustainable Computing

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Mann et al. (2010) describe the challenge of incorporating sustainability into education. One of the barriers is a paucity of resources describing people who have already made personal and professional journeys in the field of sustainable computing. Alstrum et al. (2008) described the Computing Educators Oral History Project (CEOHP). This is a collection of interviews with computing educators (currently 25 interviews http://www.ceohp.org/). Alstrum et al. (2011) describe how the CEOHP can be used in teaching:

While the interviews in the CEOHP collection contribute to the historical record by capturing life stories from a variety of computing educators, if leveraged appropriately these materials can encourage students to consider careers in STEM fields and, in particular, can provide role models and inspiration for female students.

In 2011 we began a weekly radio show “Sustainable Lens: Resilience on Radio”. Each week the team take a sustainable perspective on current topics in the world around us. Regular features aimed at drawing out connections lead into an extended discussion with invited guests. The show is broadcast live on Otago Access Radio, streamed on www.oar.org and podcast on www.sustainablelens.org (and iTunes).

To date we have broadcast 70 hours of material. Guests have included leading politicians, researchers, teachers and activists. People have come from a wide range of disciplines including business, psychology, tourism, education, art, conservation and computing. There currently 12 people from computing fields on the website. There are also people in related fields, especially design and business:

Dawna Ballard studies the role of time. She questions the use of productivity as critical measure in work.

Mary Barreto connects visibility, awareness and accountability through social translucence.

Stefan Kreitmayer has a varied background developing interactive and reactive computer graphics for live performances. Stefan tells us how this background led to the development of the 4decades simulation game. 4Decades is a game developed to enable large groups to explore and critique scientific models of global climate economics. It is based on a real-time dynamic simulation that teams interact with via distributed tablets and public displays.

Gilly Leshed and Maria Håkansson are exploring the how individuals and groups accomplish tasks and socialize and the roles technology plays in these interactions. They talk about their backgrounds and a farm family study.

Lisa Nathan’s research is motivated by the high potential for interactions with information systems to have a long-term influence on the human condition. In this interview she tells us a bit of her background and then something of her research. Through a range of projects she investigates theory and method for designing information systems that address societal challenges, specifically those that are ethically charged and impact multiple generations (e.g., sustainability, colonialism, genocide), and information practices that develop and adapt as we use these systems.

Juliet Norton describes the interaction between the arboretum and computer science labs at the University of Central Florida. She describes her community guild software.

Michael Goldweber says that students are looking to make a positive social impact. We can do this without sacrificing rigour within the discipline by using social good as the motivating examples in courses.

Juan Pablo Hourcade from the University of Iowa is the passion behind the hicforpeace.org. In this interview he describes how this community is using computing technologies to promote peace and prevent conflict.

Olaf Schroth works for the Collaborative for Advanced Landscape Planning at the University of British Columbia in Vancouver. CALP focuses on accessible solutions that bridge research and practice by bringing rigorous science and modeling, visualizations, innovative environmental design and participatory processes to community and landscape planning. Olaf talks about participatory collaborative planning through visualisation.

Six Silberman works at the intersection of art, economics, design, computing, business, sociology (this list goes on). He has come around to describing himself as a systems analyst.

John C. Thomas is a psychologist who has been a pioneer in the development of Human Computer Interaction since the early 1970s. Most recently he helps lead the people side of IBM’s Smarter Cities initiative. He was also a leader in the application of design patterns to computing.

Bill Tomlinson is Director of the Social Code Group at the University of California Irvine. Author of Greening through IT, Bill is the lead author on Collapse Informatics which recently won the CCC Sustainability Award.

We believe that podcasts are useful resources in their current form. We do have plans, however, to develop learning support materials in the same manner as the CEOHP.

REFERENCES


This poster paper appeared at the 3rd annual conference of Computing and Information Technology Research and Education New Zealand (CITRENZ2012) incorporating the 25th Annual Conference of the National Advisory Committee on Computing Qualifications, Christchurch, New Zealand, October 8-10, 2012. Mike Lopez and Michael Verhaart, (Eds).