

Creative Science 2011, Nottingham Trent University, UK, 25-26 July 2011

Creative Science 2011 (CS'11)

Meet the Authors

Nottingham, UK. 25-26th of July 2011

During Creative Science 2010 (CS'11) we realised that SFP's provide a very personal view of the future closely connected with the author's background research and character. As a consequence we thought that knowing something about authors, and their reasons for writing there SFP, would be of great interest to readers. Thus, as an experiment for Creative Science 2011 we asked authors to provide an additional page with a photograph, a short biography and an explanation of what motivated them to write their Science Fiction Prototypes (SFPs). We told authors that there was no constraints on the content (apart from complying with the law, IOS format requirements and keeping it less that a single A4 page) . We also suggested the less 'sterile' they could make it, the better! What follows is the result; we hope this adds to your enjoyment and understanding of the Science Fiction Prototypes!

Brian David Johnson – Intel Corp (brian.david.johnson@intel.com)

Simon Egerton – Monash University (simon.egerton@infotech.monash.edu.my)

Vic Callaghan – Essex University (vic@essex.ac.uk)

22nd May 2011

GARY GRAHAM

Interaction Space, Gary Graham (Leeds University Business School, UK)



My research interests were really inspired in 1999 with the rise of Napster and the way it fractured the landscape of the music industry. In order to make sense of this disruptive technology and its impact I turned to the works of Mauss “The Gift” and Mark Granovetter, Schumpeter’s “Creative Destruction” and Paul Hirsch’s visionary 1972 work on the music industry supply chain (written as an undergraduate). In 2005, I changed tack when I was invited by Dr David Murphy (who sadly died one month ago) to work alongside him to write about the internet erosion of business models and value chains in the news media industry. The highlight of my research so far was a scholarship in 2008 to work in the School of Journalism (UNC-Chapel Hill). I am shortly to return back to UNC in September 2011. Finally, I recently organized two quite fascinating British Academy funded workshops with senior news media executives entitled: “Paywalls and the Future of Regional News Media: a Comparison between Germany and the UK”. These events took place in Dresden on the 11th of March and Leeds on the 14th April 2011.

The first story “I Made You” was written very quickly without a lot of agonizing like taking dictation. Maybe I was channelling someone but hopefully not. I hope I just made it up. The Heptapod B character is my adapted version of the alien “heptapods” who made their first appearance in SF literature in a Tedd Chiang story entitled: “Story of Your Life.” which appeared in a Brian Aldiss edited book entitled: “A Science Fiction Omnibus”, published by Penguin in 2007 (Chapter 22, pp. 329-377). While the ingenuity of “Alien Embassy” by Garry Kilworth (ibid., Chapter 33, pp. 485-497) set my imagination racing on the future of fertility treatment.

I wrote “The Appraisal” in a great rush over a period of three days in the small hours of early mornings, in odd moments at my desk at work and even at the wheel of my car as I drove my battered second hand Astra to Manchester over the Pennines from Leeds. What prompted me to write it. Well it was an incident at work that catalysed my story, which really came in a period of unhappiness both in my professional and personal life, and this story was written really in a fit of frustration. Soon after the story, I changed jobs, met a wiser partner and came out of the cold. in the act of consumption.

Hsuan-Yi Wu and Victor Callaghan

The Spiritual Machine, Hsuan-Yi WU (Digital Marketing Planner, Delta Electronics Inc, Taiwan), Vic Callaghan (School of Computer Science and Electronic Engineering, Essex University, UK)

As anyone that has ever watched such films as “*Sliding doors*” or “*The Adjustment Bureau*” will know, it is difficult to say what leads any of us to a particular situation in life! So what led us to writing this SFP together, was it fate, chance or a mix of these?

Well, without having met during the early summer of 2010, this story would never have happened. A key element of that was the decision by Hsuan-Yi Wu to come to the UK in the fall of 2009, to complete an MSc in Innovation Management and Entrepreneurship at Manchester Business School. Her thesis was based on the “Social Innovation of Living Labs” and one of her case studies was the “iSpace” at the



University of Essex, run by Vic Callaghan. A chance discussion about films such as “Blade Runner”, “Cyborg She” and the “Thirteenth Floor” (to name but some) and a collaboration on reviewing Johnson’s book “Science Fiction prototyping: A Framework for Design” ended up in many hours of fascinating conversations and an instant and enduring friendship – the beginning of this SFP!

So that’s how the authors met and became friends, but where did the story form. It was actually the idea of Hsuan-Yi Wu, and draws on a number of inspirations. Firstly, she has long been motivated by, and drawn to, understanding how to balance the material and spiritual life to achieve human and social well-being. Secondly, from her unique research background in technology, business, and innovation studies, she argues that the driving force of modern technology is taking people into a new era where there are hidden risks for long-term mental health. In part, this view is inspired from her own experience of suffering from over-exposure to information technologies, where the pace and volume of social and business activities, enabled by these new technologies can easily overwhelm the senses. This SFP sought to combine Hsuan-Yi Wu’s ideas with Vic Callaghan’s technology research to write this imaginative and speculative story, ‘The Spiritual Machine’, which we hope readers will find enjoyable, thought provoking and bring forth introspection and reflections on their lives.

Hsuan-Yi Wu holds an MSc Innovation Management and Entrepreneurship from Manchester Business School and a BAA in International Business from the National Taiwan University. She is currently employed by Delta Electronics in the Renewable Energy and UPS Business Unit. She is passionate about travel, cooking and friendship. Her ambition is to have the chance to spread the values she holds dearly, to improve people’s quality of life. How this will happen, she has yet to discover, but that journey of discovery is part of what motivates and encourages her.

Vic Callaghan is a professor of computer science at the University of Essex, an active researcher in AmI environments and a founder of the ongoing series of International Conference of Intelligent Environments. For Vic, science is a tool that helps to unravel the mysteries of this life, perhaps the greatest being the fact we exist; thus combining with Hsuan-Yi Wu, and her deeply thoughtful ideas on life and spirituality was the perfect union of interests.

Erkan Bostanci and Adrian Clark

Living in the Past, in the Future (Erkan Bostanci, Adrian Clark, Essex University, UK)

Erkan Bostanci holds B.Sc. and M.Sc. degrees in Computer Engineering from Ankara University, Turkey. He is now a PhD student and a member of the VASE Laboratory in

the University of Essex, Department of Computer Science and Electronic Systems. His previous research included image processing, 3D reconstruction of an ancient site and real-time simulations of military battlefields. He is currently working on vision-based user tracking methods for augmented reality.

Adrian Clark has a first degree in Physics and a PhD in Image Processing. His research explores computer vision and computer graphics, both as individual disciplines and, increasingly, in



combination. His augmented reality research in the early noughties resulted in a system that employed GPS and a wearable computer to perform real-time, in situ reconstructions of the buildings in the Gosbecks Archaeological Park in Colchester as the user walked around the site. (Colchester was the first Roman capital of Britain.) He has subsequently researched vision-based systems that allow location to be determined more accurately than is possible with only GPS.

The authors are motivated by the vast amount of potential applications for cultural heritage for different civilizations in different parts of the world.

Yevgeniya Kovalchuk

The Ministry of Interfaces, *Yevgeniya Kovalchuk (School of Computer Science and Electronic Engineering, University of Essex, UK)*



Is it possible? Is it possible to meet an author? Who is the author, to begin with?

I personally see the person writing a paper as a ‘representative’ or ‘interpreter’ of the human (world) experience to date rather than an ‘author’. The truth is already out there. Any formulated thought is an interpretation of it. It is similar to a kaleidoscope that requires a user to shake it mixing the bits inside in order to generate a next picture. Any written paper is an alternative combination of various parts of the general content inside the kaleidoscope. It is an instant snapshot that comes and goes. The filter that is applied over that general content is a combination of a person’s (shaker’s) experiences to date. This combination is unique and thus provides an original picture, although made from the same ingredients. The combination of accounting-guitar-football experiences provides a different perceptual/operational system from the one of accounting-guitar-gaming and yet another from the history-gardening-painting. Our interpretation of the world depends not only on the context of a situation, but also our personal experiences. Let us take a random number, say 385. It can be a product number, an office number, a number of a flight, or the road to drive. The striking fact is that an accountant would still see it as the number in his ledger even if read on a door in a corridor. That is how experiences stored in our memory work. Every experience counts. Some of them we choose, others choose us, and yet another are forced against our will. The mundane routine we go through every day shapes the crystal of our lives.

I am not a philosopher. But I have experienced many businesses and cultures. I have learned to translate crocodiles into music notes, for example, or the gradient

descent algorithm into a skiing technique. It strikes me that people in different fields apply similar concepts, but term them differently. We need to learn to reduce them to a common denominator, as that would help experts from various subject areas to understand each other and establish a common platform. We can only understand the world if working jointly pulling together findings made in each discipline separately. This observation has inspired me to write my SFP. It has many layers, from esoteric, through scientific, to those accepted and used by general public. Every sentence can be rolled out into a separate story on its own. Some people may find it difficult to read or understand some parts of the SFP; these parts are those that are not in the experience repertory of the reader. A second go might provide more sense. In general, the SFP can be read many times and at different times; it will always reveal something new, as the filter in the reader's kaleidoscope is changing constantly, with his every inhale.

Every living being has contributed to creating the story, in one way or another. I am a representative, not the author. And yet, the special and genuine 'thank you' I would like to express to Prof. Victor Callaghan who is responsible a great deal for shaping the filter that provides the picture the reader can hopefully enjoy.

Tiina Kymäläinen

Song of Iliad, Tiina KYMÄLÄINEN, (School of Art & Design, Aalto University, Finland)



The author, Tiina Kymäläinen, lives in Tampere, Finland. She has a Master of Arts degree from AALTO University, the University of Art and Design, where she is also currently carrying out postgraduate studies in the Department of Design. The author also works as a research scientist at VTT Technical Research Centre of Finland, where she has been studying future user interfaces and smart spaces for more than ten years. To date, her dearest projects have been virtual space computer games with floor sensor controls (Lumetila, 2001) and an interactive playground for children (UbiPlay, 2003). Her current work is related to Do-it-Yourself Smart Experiences for smart spaces.

The author's background lies in human-centred design research, and the writing of "Song of Iliad" benefited from the huge amount of work spent in writing scenarios, use cases and concept stories for evaluations. Although the science fiction prototyping process was unfamiliar to the author, it was apparent from the very first punch to the keyboard that the best part of the method is, that there is no need the limit the creative flow of writing with such minor details as technological limitations of prevailing time. It pays to give thought to the hypothetical research conditions and technologies of the future, given that the human factor in the human-technology interaction relationship will remain more or less the same.

The short story "Song of Iliad" refers to "DIYSE Music Creation Tool" development process that was carried out as part of the Eureka/ITEA2 DIYSE project, in a cooperation involving VTT Technical Research Centre of Finland, Rinnekoti Foundation and Laurea University of Applied Sciences, with financial support from the Tekes Ubicom programme. The author would especially like to thank her project co-workers at VTT – Senior Research Scientist Johan Plomp and Research Scientist Matti

Luhtala – and the music therapist at Rinnekoti Foundation, Heikki Raine. Special thanks are also due to the HTI coordinator, Senior Research Scientist Eija Kaasinen, for encouragement and smart remarks about the context.

Hazel Grian

The Lonely Companion (Hazel Grain, Independent Artist, Bristol, UK)

I write science fiction then I make it happen for real. With a background in film, theatre and radio I have in the past five years been using the internet and any bits of new technology I can get my hands on to reach an audience and tell trans-media stories. I've always been an experimentalist and I'm dedicated to developing innovative forms of entertainment and vivid experiences for everyone. I am both an independent artist working with R&D funding and a commercial freelancer working for digital agencies. I'm a senior resident of the *Pervasive Media Studio*, Bristol, UK and I've worked with *BBC*, *Bebo*, *Hewlett Packard Labs*, bands such as *Portishead* and *Goldfrapp*, *British Red Cross*, *Paramount Studios* and *Warner Bros*.



As a writer and director working outside the mainstream I find any means possible of telling stories. By happy accident this way of working proves to be a lot more interesting than being stuck in a well-worn production regime. As biologist Tim Hunt says 'You've got to enjoy swimming in this sea of unknowingness, otherwise what's the point?' (*Beautiful Minds*, BBC Productions 2010)

I have a head full of half-nascent ideas that for years I've been meaning to write as short stories. It seems a lot easier than experimenting with a one-off multi-platform live event, which is what I have been doing. An SFP is a perfect way to explore all aspects of an idea through many iterations; it is incredibly easy for the audience to interact with it, the writer's imagination can run riot and it's very cheap. Now that appeals to me.

Examples of recent work by Hazel Grian:

- *Star Trek*, 2010 Paramount Film & Rubber Republic. Alternate Reality Game. Hazel Grian writer co-director. Fan video of game experience: <http://www.youtube.com/watch?v=p4diJ-S3O3w>
- 221b, *Sherlock Holmes*, 2009 Warner Bros. & HideandSeek. Online game. Hazel Grian AI writer. <http://www.hideandseek.net/2010/05/01/221b/>
- *The Tweeture*, 2010 Slingshot & Arts Council England. Social robot. Hazel Grian story and scriptwriter. Example of coverage: <http://ttrumble.com/tweeture-toys-with-twitter/>
- Hazel Grian blog: <http://hazeligrian.blogspot.com/>

Neil MCBRIDE

Meltdown, Neil McBride (Centre for Computing an Social responsibility, De Montfort University, UK)

Neil McBride is a Reader in IT Management in the Centre for Computing and Social Responsibility. He has written over 70 papers in areas as diverse as chaos theory and information systems, management of software quality and ICT strategies in developing countries. He is currently developing an approach to professional ethics in IT based on virtue Ethics. He has a PhD in molecular biology, and postgraduate experience in genetic engineering as well as extensive commercial experience in commercial systems development.



My motivation for writing the Meltdown story is multifaceted. I have for some time written poetry and radio plays which often have a scientific underpinning. As part of my role as a researcher in the CCSR I am look at the use of stories, poems and plays to identify and explore ethical issues associated with emerging technology. My interest in how biological systems develop, starting with homeotic genes, systems biology and developmental biology has led me to begin to consider alternative computing paradigms. The SFP provides a good way of beginning to express these ideas.

Marek KULTYS

The End of Hearing, Marek Kultys (Central Saint Martins College of Art and Design, University of the Arts, London, UK)

I am a designer, who pursues his dream of being a scientist. Initially, I was trained as a product designer in the Academy of Fine Arts, Warsaw. I graduated in 2008 with the “Graphic Handbook: Biology” project. It was my first professional encounter with science, in which I used design tools, such as infographics and interactive animations, to communicate complex scientific knowledge to general audience. Since then it has been used as an educational aid in schools in Poland and USA. Starting from there, I became interested in the relationship of design and science. In 2009 I started an MA course in Central Saint Martins College of Art and Design in London, where I focused on exploring the ways design and science can meet and correlate. My personal illumination came while writing my MA dissertation: “Lingua Extraterrestris”, in which I try to inform design thinking through investigating into the scientific attempts and fictional depictions of communicating with an alien civilisation. The results of this exploration proved to me that fiction can be a medium for animating and informing both science and design. It opened to me a whole new area of research. From “Lingua Extraterrestris” stems my latest project: “The End of Hearing”. Being both the science-fiction prototype written for the 2nd International Workshop on Creative Science in



2011 and my final MA project, it explores potential futures of our hearing in the time of noise pollution and rapid scientific progress.

Why science-fiction prototype? “The End of Hearing” started as an exploration of sound and human hearing. During my research I built a number of simple radio and audio prototypes, conducted some surveys, and I also started writing stories. Gradually, it became an investigation into how science fiction can inform design practice and redefine the role of a designer. I decided to write my “The End of Hearing” stories as a science-fiction prototype for three main reasons: 1) the SFP combines science-fiction storytelling with a critical view on its impact on scientific or design practice, and thus helps in reshaping the role of a designer; 2) the SFP provided me with a structured and purposeful form of writing; 3) the SFP prompted thinking about science-fiction stories in a wider context—not only as a setting for future events, but also a way of leading the discourse with an audience.

Mike Atherton and Toby Moores

Nickelbricking, Toby Moores, Mike Atherton, (Sleepydog Limited, Media Production, Market Harborough, Leicestershire, UK)



My name is Mike Atherton, or Mike Sizemore, or just Sizemore. I write stuff. I wrote for fun, then for money, then for websites, then for magazines, then for a book and now for TV and film. It's still fun. I read a fair bit too. I have a very dusty Master's Degree in Literature and some very overloaded bookshelves. I live in London and on the Internet. I try and drink in LA, NYC and San Francisco as often as possible. Scandinavia, not as often as I'd like. Right now I'm working on *Slingers* and a couple of other TV things. Hollywood, in its wisdom, has also asked me to have a play with a few movie things.



My name is Toby Moores. I try not to write stuff. I am an entrepreneur and investor in disruptive technologies, most notably in the biotech and mobile sectors. I am owner and CEO of content and licensing business Sleepydog Ltd, best known for creating *Buzz! The Music Quiz* for the PS2. It became one of SCEE's fastest selling original titles in their history to reach \$100m of sales. It remains the world's biggest music for video games licence ever. It was sold in a record 32 countries and was Sony's first game ever to be translated into thirteen languages, including Russian, Croatian, Finnish and Arabic. Sleepydog went on to make a further seven titles in the franchise. At peak, the *Buzz!* franchise had 6 titles and a peripheral in the PS2 All Time Top 100 on play.com. <http://play.com/>. Television is a recent addition to my sectors of interest. I am currently advising the BBC Archive and a number of the YouView partners on Social TV. Sleepydog has acquired a small library of 29 film titles, delivered a travel show to National Geographic (called *Weird & Wonderful Hotels*) and produced a pilot for a new music show. We are currently in development of *Slingers*, a SciFi show (think *Ocean's 11 in Space*). I am a Visiting Professor at De Montfort University's IOCT and at Bucks New University, each

dealing with the cutting edge of new media research. I also run a network called Amplified, that has provided Social Media reporting services to Thompson Reuters, the World Bank and the three main political parties in the UK, amongst others. Neither of us are academics.

Xinyi JIANG

Happy Eggs, Xinyi Jiang (Design Ethnographer, University of Dundee, Scotland)



I graduated with BA (Nanjing University) and MA (Fudan University) in English and was a lecturer in Shanghai's Fudan University before coming to the UK. I have a PhD in Media and Cultural Studies from Cardiff University, and conducted sociological research on race, immigration, health, science and technology in Cardiff, London and Dundee. This story relates to my experience as a Design Ethnographer in a collaborative project between the School of Computing and the College of Life Sciences in the University of Dundee, 2006-08. Working with scientists, I gained some knowledge of science, and wrote up ethnographic reports and anonymised stories. I have moved on to a different job since, but to do something more about that experience has remained a deep wish.

I have an interest in creative writing but usually not in science fiction. There are a number of reasons: drawn to ordinary people and their daily life scenario, I don't find the action/thriller elements in SF appealing; as a techno-phobic, I have neither the knack nor the patience with tech terms. This story wouldn't have come into being if it were not because of Professor Peter Gregor, who passed me the CS'11 website link. As one of co-coordinators of the above-mentioned project, Peter had read some of my ethnographic stories. Whilst I protested about the seemingly strange and remote idea of SF, Peter said, 'I think you might want to write up something about your ethnographic work done with the life scientists', in his quiet but convincing way. I thought again, rummaged into that drawer of memory, battled with the alien-ness of SF, and ended up with the story of 'Happy Eggs'. To my surprise, it has turned out to be a rewarding experience. Although I still don't think the story I wrote up is strictly SF, I have started to realise its potentials in both creative writing and in research.

I want to thank Professor Peter Gregor for proof reading my drafts, Dr Alexia Ferrand for helping with the description of the workflow, and Professor Victor Callaghan for his support with submission and for making communicating with the CS'11 such a pleasant experience.

Paul McCullagh

Internet of Mysterious Things, Paul McCullagh (Computer Science Research Institute, University of Ulster, Northern Ireland)

I work as a Reader in Computing & Mathematics, University of Ulster. I attended Queen's University (Oct 76 - June 79) and obtained a BSc. in Electrical & Electronic Engineering. I continued to research and obtained my PhD entitled, "Computer



Simulation of the Auditory Periphery". This era is a backdrop to in the story. I completed the first Belfast marathon, with four research companions for inspiration.

I subsequently worked as a researcher in the Department of Mental Health – again at Queens, where I programmed mini and microcomputers to analyse the electroencephalogram (EEG) and record event related potentials. Throughout this time Belfast was a divided city with a wall to separate feuding communities (locally known as the ‘Peace Line’, see photo). Belfast at this time was synonymous with sectarian violence. This wall exists in some places, long after the fall of the Berlin wall.

I moved to University of Ulster in 1993, working as a Lecturer in Computing. My research interests include health informatics and biomedical engineering. Projects include EU FP7 BRAIN: BCIs with Rapid Automated Interfaces for Nonexperts, EPSRC SMART2–Self Management Supported by Assistive, Rehabilitation and Telecare Technologies,



Design for Ageing Well (New Dynamics of Ageing: ESRC) and Evaluation of Mobile Tele-Consultation to Support Stroke Care in the Community. These come under a banner of Ambient Assisted Living.

In my spare time, I play sport (mostly 5-side-football) and listen to music. In the 70s-80s, I was a fan of David Bowie, who lived in Berlin. More recently, I was reminded of this music by the novel “Alone in Berlin” – a key component of the story, which I found by chance in an airport bookshop last year. In the past 2-3 years I have taken up running (again, evidence attached, complete with technology!) and I have set myself the goal of running this year’s Berlin marathon, which is a motivation for the story. I will wear some technology for this.

I would recommend the Hans Fallada novel (above) to those with an interest in suspense, and the plight of the ordinary citizen in Berlin, during the war years. I’m sure most have heard the Bowie music. If not, you can revisit his back catalogue, on the Internet, of course!

Kevin Tassini

The Magician’s Assistant, Kevin Tassini (The Human-Computer Interaction Institute, Carnegie Mellon University, USA)

Kevin Tassini recently finished his Masters degree in Human-Computer Interaction from Carnegie Mellon University. He is currently a research associate at the Human-Computer Interaction Institute at CMU. His current research focus is in HCI applied to mental health and the public health domain. He gives much thanks to his girlfriend, a writer at the University of Pittsburgh, for encouraging him to write this story and helping to edit it. Kevin



enjoys scuba diving, hiking, classic films, and Thai food. He currently resides in Pittsburgh, Pennsylvania.

Denisa Kera and Marc Tuters

Social Stomach Denisa Kera (Faculty of Arts and Social Sciences, National University of Singapore) Marc Tuters (Humanities, University of Amsterdam, Holland)

Inspired by radical food practices and trends across Asia, we started an informal design collective in 2009 and organized a series of workshops and discussions (Tokyo, Singapore, Jogjakarta, Amsterdam, Prague) involving various artists' collectives, Hackerspaces and universities. We formalized these activities in Singapore in 2010 under the "Secret Cooks Club" (<http://www.SecretCooks.org>) which brings together food & tech savvy people to inspire them to experiment with critical design prototypes and events. We are hacking rice cookers to create cheap sous-vide equipment for paleodieters, organizing underground restaurants, doing food ethnography of the wet markets in Indonesia to support indigenous food design, or using Facebook to connect people over leftovers in their fridges and inspire them to cook together. Our design prototypes look beyond the future of eating to reflect more generally on the role of complex system from farm to fork to phenotype. Hacking food systems from the genome through individual bodies to social body as well as local and global ecosystem, offers us an experimental approach to Science, Technology and Society (STS) issues related to food. We hope to bring together STS and design, community building and prototype testing to tackle global health and food issues.

Denisa Kera (Singapore & Czech Republic) is an Assistant Professor at the National University of Singapore where she teaches Interactive Media Design, and a fellow at the Asia Research Institute doing research on STS issues related to biotech. She follows community labs and alternative R & D places (Hackerspaces, FabLabs) across the world to map the convergence of web technologies and biotech around (Do It Yourself) DIYbio movements, consumer genomics and various citizen science projects. She has extensive experience as a curator of exhibitions and projects related to art, technology and science, and previous career in internet start-ups and journalism.



Marc Tuters (Netherlands & Canada) is a PhD candidate and lecturer in new media theory at the University of Amsterdam. He has two graduate degrees in interactive media from Concordia (CDN) and University of Southern California (USA), and has worked as an artist and researcher in organizations including the Annenberg Centre, the Banff Centre, National University of Singapore, Waseda University. He is currently researching "traceability" in industrial, graphic and interaction design practices concerned with sustainability. His past work in media art contributed the concept of "locative media".



Regina Peldszus

Surprise Payload Rack: A User Scenario of a Conceptual Novelty Intervention System for Isolated Crews on Extended Space Exploration Missions, Regina Peldszus (Design Research Centre, Astronautics and Space Systems Group, Kingston University London, UK)

Regina Peldszus is a space human factors designer and researcher with focus on the emotive aspects of human-systems interaction in extreme environments. Her main focus is the development of design strategies to mitigate psychological challenges such as monotony and isolation during extended space exploration missions. She's currently affiliated with the Design Research Centre and Astronautics & Space Systems Group, Kingston University London, UK.



Regina regularly consults on space design and human factors aspects in the aerospace and creative industries. She has worked on projects for the European Space Agency and contributed design concepts to two ground-based mission simulations. She completed the International Space University's Space Studies Program at NASA Ames Research Center (Life Science Department) and is a member of the Space Architecture Technical Committee of the American Institute of Aeronautics & Astronautics.

In view of designing for unprecedented scenarios, part of Regina's work addresses the interface of speculative and evidence-based design approaches in foresight studies for future systems. This involves ongoing research into science fiction production design for space, including a comparative case study of set and prop development of Stanley Kubrick's *2001* in relation to real space habitation design, and also how speculative design can function as heuristic tools in a real context to support issue generation and critique.

Markus Scholz, Yong Ding, Predrag Jakimovski & Hedda R. Schmidtke

Half a Century of Renovating, Markus Scholz, Yong Ding, Predrag Jakimovski And Hedda R. Schmidtke (TecO, Karlsruhe Institute Of Technology, Karlsruhe, Germany)



Markus Scholz is a PhD candidate at the Karlsruhe Institute of Technology (KIT) where he is a research assistant at the Pervasive Computing Systems Group/TecO. His research interests include novel sensor technologies especially those suited for activity and context recognition and environmental sensing, he is further interested in WSN and HCI technologies to improve safety of personal working in harsh environments. Mr Scholz holds an MSc in computer science from the University of Leipzig.

Yong Ding's research focus is on context awareness, recognition and prediction in distributed systems and human-computer interaction. He is especially interested in developing machine learning approaches and automatic control concepts for recognizing and adapting to real-



world situations. He is further researching possibilities of enabling behavioral change of energy consumption based on network solutions within Smart Grid issues.



Predrag Jakimovski is a research assistant in the Telematics Department at the Karlsruhe Institute of Technology, where he is a member of the Research Group Pervasive Computing Systems – TecO. His research interests are highly scalable communications for wireless sensor networks, printed organic electronics, as well as artificial intelligence using vector symbolic architecture. He has a MS in computer science from the Technical University of Karlsruhe.

Hedda R. Schmidtke holds a doctoral degree in computer science from the University of Hamburg. From 2006 to 2009, she worked at the Gwangju Institute of Science and Technology (GIST). In 2009, she joined the Distributed and Ubiquitous Computing group at the Technical University of Braunschweig. Since 2010, she works at Karlsruhe Institute of Technology in the position of the research director of TecO. Her research focus lies in the areas of context-awareness and contextual reasoning. She publishes in the areas of Ubiquitous Computing, Artificial Intelligence, Knowledge Representation and Reasoning, and Cognitive Science. Main research achievements include a theory of size-based granularity and uncertainty and an ontology-based approach to the formal verification of context-aware systems.



Motivation - Most of the technologies we research and work with on a day to day basis are technologies which we believe will play a significant role in the further development of ubiquitous computing. Sometimes, however we tend to focus too much towards intermediate goals which may not have a strong impact on the evolution of our field of research. Hence, we decided to write this SFP in order to construct a more distant vision of our work from which we hope to derive thoughts and ideas influencing our current research. On the other hand, we wanted to create a platform to discuss our vision of the bundling of these seemingly heterogeneous research areas into a novel embracing calm Ubicomp future.

Derek Hales

The Decadence of Mimetic Science: Against Nature 2.0. Derek HALES, (Architect, Art, Design and Architecture, University of Huddersfield, UK)



Hales is an Architect and has been a member of the RIBA since 1992. He is recognised for his work in digital media and artist-led research and development (R&D) in work supported by the Arts Council of England since 2001. Hales' research interest is in different readings of simulacra and in fictional worlds of art, design and architecture. Between 2006-2008 Hales worked collaboratively with architects, digital design agencies, artists, musicians and filmmakers on publicly funded R&D projects in Future Media, Future Technologies and Futures Studies. Hales returned fully to his own research, studio practice and research supervision in 2009 and is currently a research student at the London Consortium, on their Cultural Studies and the

Humanities programme, where he is researching counterfactual history, weird science and the speculative culture of people doing strange things with electricity.

Clarissa Ai Ling Lee

Schrödinger's Notebook, Clarissa Ai Ling Lee (Literature Department, Duke University, USA)



Clarissa AL Lee did undergraduate training in physics before transitioning into the humanities via an MA in English Literature, both at the University of Malaya, Kuala Lumpur. Between the tail end of her MA and before coming to the Duke, she has worked in media, publishing, politics, and education, as well as a series of non-academic research jobs, in the space of 4.5 years. Her story submission reflects not only her eclectic interests and background but also her hyper-consciousness over the

meaning of technological progress and enterprise. For Clarissa, understanding critical theories in literature and philosophy are as important as understanding the philosophical aspect of scientific theories.

In the fields of media archaeology, media studies and the digital arts that she is also a part of, Clarissa is exposed at all times to scholars and developers working together to connect questions preoccupying those in the humanities to the questions asked by scientists and engineers with the hope that better interfaces and more useful tools can be built and developed. While not all the work that the humanists do involve areas of high-technology, they are acutely aware of how technological evolution has permeated the contents of their intellectual endeavours, be they historical, political or literary, and how one's ideological relationship to a technological apparatus influences one's world-view.

As a science and comparative media studies scholar, Clarissa does not conduct original research as a scientist, but, instead, works in the intellectual history and philosophy (that includes scientific philosophy) with a desire to understand the implications of various scientific and technological movements and how they inform the way we view our world(s). She tries to follow original research as much as she can so as to keep track of the direction of scientific applications. However, fundamental philosophical questions in the basic sciences, particularly physics, form the foundation of her work.



The science fiction prototype Clarissa has submitted is a part of her fictive modelling through a novel that will encompass different mediums and platform. After developing the content of the story, she is interested in applying and also including visualization and gaming techniques to create a digital reflexive environment that will one day be fertile ground for the cross-fertilization of concepts and applications, ethics and philosophies. The narrative of the novel will follow a forking-path so as to experiment with different permutations of events while playing with constraints. The 'constraints' Clarissa hopes to develop will become the creative 'obstacles' for challenging the flexibility of her prototype.

Creative Science 2011, Nottingham Trent University, UK, 25-26 July 2011

Clarissa is a PhD candidate with the Duke Literature Program. She wants to spend time learning how to draw again so that she can have more visuals instead of texts in her presentations and creative projects. In the limited spare-time she has, she likes to cook, try out new food, do yoga, swim, play music, attend concerts and enjoy the great outdoors. She would like to add singing and acting sometime.