Joe Marshall: Curriculum Vitae

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Summary

- Leverhulme Early Career Fellowship – 2012 – 2015, title: *Interaction in Motion*
- Have published extensively in high profile venues
- Achieved high public impact though public events and high profile media coverage
- Successful involvement in consultancy and commercial collaborations

Employment

2008 – present: Research Fellow - School of Computer Science, University of Nottingham

In this job, I have been involved in two major projects as part of the Horizon Digital Economy research institute. In *Day in the Park*, I studied theme park rides, and took a lead role in developing interactive rides which respond to their riders in real time. I took a leading role in the software development for the *Vicarious* project, creating a system for recording and visualising physiological signals, which is supporting a wide range of research work in the school and in other schools, and supported us in achieving commercial funding from Nissan for a 9 month follow on project studying and visualising the 'thrill' of driving. During this work I have developed an independent research agenda to study interactive systems designed for use while taking part in extreme movement activities, which forms the basis of my Leverhulme Early Career fellowship.

2005-2008: PhD Studentship – School of Computer Science, University of Nottingham

My PhD studied how to make our interactions with computers more expressive and performative – specifically focusing on how to support users to create magical illusions with the help of computers. To study this, I developed novel computer vision technologies, and used them to create 3 artistic performances, a circus act, a magic show, and a gallery based installation; this work led to peer reviewed publications in fields including human computer interaction (full paper at ACM CHI 2010), computer vision (BMVC), and art (Leonardo Journal).

2004-2005: Software Engineer - Northgate Blue 8, Nottingham

My work at Northgate focused on the development of control room and analytical software for the emergency services. This software used innovative genetic algorithms to analyse past incidents and predict the best locations for emergency response vehicles at any given time.

2002-2004: Software Developer – Yamaha R&D, London

At Yamaha, I developed software to support Yamaha's range of musical devices, including development of online sheet music download services for their keyboards.

2000-2002: Software Developer – Sibelius, London

At Sibelius, I worked on their music notation software. I developed key features of the software, including the 'Arrange' feature, which provides an intelligent system for re-orchestrating music, for example by creating orchestral arrangements from piano music.

Academic History

July 2009: PhD Computer Science, *Creating Illusion in Computer Aided Performance*: University of Nottingham, UK

June 2000: BA Computer Science, 1st Class, University of Cambridge.

Research Funding

Personal funding

2012-2015 *Interaction in motion*: 3 year Leverhulme Early Career Fellowship to study the design of mobile devices and software for active use during a wide range of movement activities, from walking in the street, to extreme sports performed in harsh environments.

Named researcher on projects funded by Horizon Digital Economy Research (RCUK)

2012 *Nissan Thrill Laboratory*: 9 month project funded by Horizon & Nissan, studying the thrill of driving, and presentation of this study as a promotional campaign for the new Nissan Juke vehicle.

2011-2012: *Vicarious*: 2 year project funded by Horizon which studied the use of physiological data in television production. I was a lead developer for a software architecture which is used in this project to integrate physiological sensing data from a range of sources with video.

2009-2011: *Day in the Park*: 2 year project funded by Horizon in which we studied theme park visiting and theme park rides. As part of this project, I led the creation and study of an interactive breathing controlled Bucking Bronco ride.

Dissemination of Research

Invited Talks

Glasgow School of Computer Science: Presented our work studying interactive theme park rides.

Canonical Ltd, London: Presented talk discussing the use of deception in interaction design.

BBC R&D Salford: Joint talk describing and demonstrating our physiological sensing software.

Design Camp 8, New Zealand: Demonstrated computer vision based juggling tracking system.

Selected Publications

Benford,S., Greenhalgh, C., Giannachi, G., Walker, B., Marshall, J., Rodden, T. 2012, Uncomfortable Interactions. *Proceedings of CHI 2012: ACM SIGCHI Conference on Human Factors in Computing Systems*, ACM, New York, NY, USA. **Awarded best paper award (top 1% of submissions)**

Marshall, J, Benford, S., 2011. Using fast interaction to create intense experiences. *Proceedings of CHI 2011: ACM SIGCHI Conference on Human Factors in Computing Systems*, ACM, New York, NY, USA 1255-1264

Marshall,J., Rowland, D., Rennick Egglestone, S., Benford, S., Walker, B., McAuley, D. 2011. Breath control of amusement rides. *Proceedings of CHI 2011: ACM SIGCHI Conference on Human Factors in Computing Systems*, ACM, New York, NY, USA, 73-82

Marshall, J., Chamberlain, A., Benford, S., 2011. I Seek the Nerves under Your Skin: A 'Fast' Interactive Artwork. *Leonardo*. 44(5), MIT Press, Cambridge, MA, USA 401-404

Media Coverage

Discovery Channel: Daily Planet, 2011: Feature on our Thrill technology work, focusing on my interactive Bucking Bronco ride (first showing audience of 7 million+).

The Times, 2010: Feature on Bucking Bronco ride (audience approx 500,000)

BBC TV (The One Show, Bang Goes the Theory, Blue Peter), 2008-2010: 'Thrill Laboratory' consultancy work in which we put various TV presenters onto rollercoasters with physiological sensing equipment, and demonstrated the effects on their physiology (audiences up to 4 million).