

Curriculum Vitae

Katharine S. Willis

Personal Details

Address: Antique House, Harrow Road, Knockholt, Kent, TN14 7JT, UK

Telephone: +44 (0)1959 533510

Nationality: UK British

Date of birth: 30th September 1972

Research Experience

September 2005-present

Doctoral candidate, Spatial Cognition Program, University of Bremen, Bremen

(funded by DAAD Research Scholarship)

Supervisor: Prof Christian Freksa

Study of human spatial knowledge acquisition in the context of the use of new technologies to navigate and orientate in large-scale urban environments. Work includes a general characterisation of the process of spatial knowledge acquisition, navigation and wayfinding. Detailed studies on the role of the cognitive map in developing mental representations or environmental images, and the nature of this process as affected by various types of static and dynamic spatial assistance, such as maps and mobile maps.

Identified and investigated the features and application of mobile contexts and context awareness in spatial knowledge acquisition and exploration, as afforded by increased mobility and proliferation of ubiquitous and pervasive computing applications.

Feb 2005- May 2005

Research Assistant, Spatial Cognition Program, University of Bremen, Bremen

Research on wayfinding and navigation strategies in urban environments. The role of environmental features, structure and configuration, developed from studies such as 'Image of the City' by Kevin Lynch in 1960's were also investigated, in an attempt to understand the role of the environment in learning about space and the creation of individual spatial identity. Extending from this study the complex characteristics of spatial identity and perception of the physical environment, and their role in concepts of 'sense of place' and belonging were investigated. The nature of the need for identification with our surroundings and a relationship to them was analysed as a fundamentally a situated process, since perceptions of self, identity and memory are inextricably linked with our sense of belonging in a spatial setting.

2003-2005

Interactive Artist and Researcher (self-employed), London, UK

Projects focussed on the nature of spatial identity and interactive technologies in urban public space, particularly exploring ways in which individuals interact within urban environments. This was achieved through an investigation on navigation, wayfinding and identity and new approaches to understanding how we can create legible cities, which were practically realised through a series of permanent interactive artworks across UK and Europe. Research was undertaken into innovative and highly specialised application of interactive technologies, in particular sensors and new lighting technology such as LED and fibre-optics. The work also included development research on into detailed aspects of visual distraction and perception during pedestrian navigation and car driving.

2001-2003

MARch

Bartlett School of Architecture, University College London, London, UK

Supervisor: Dr Rachel Armstrong

Dissertation title: 'To Investigate the Potential of Using Virtual Reality Navigation Techniques to Design an Augmented Reality Interface for Informing Motion in Urban Environments'.

The project involved investigation of the nature of navigation in virtual reality environments, completed under the supervision of Dr Ruth Conroy, Space Syntax Centre, Bartlett School of Graduate Studies, UCL. Perception and action realised through navigational features and strategies in virtual environments were identified that were individual to these spaces. The results from these studies were used as a foundation for the design of an augmented interface, which supported both visual perception and mental workload by augmenting human capabilities of structuring and adapting to complex

information input. The interface was linked to a series of interventions in urban space, which took the form of 'virtual landmarks' characterising the route in the same manner that physical landmarks occupy individuals mental and visual images of the city.

1998-2001

Imagination Ltd., London, UK

Explored future applications of communications technologies within everyday environmental situations. Working within a creative interdisciplinary team of specialists, and also with the research teams from communications companies such as BT Research Labs in UK and Ericsson, Sweden. Work included a historical study of the nature of the complex nature of spoken interaction or 'talk' through the last hundred years. This resulted in a series of installations for the public designed to show how better communications in the future will rely as much on individuals improving their own talk skills as on new technologies. The outcomes of this project was published in a book in 2000.

Published Work and Academic Papers

- Chapter entitled "Sensing Place: New Media Technologies and Urban Space", in Frers, L., Meier, L. (Eds.) (2006 to appear). *Encountering Urban Places; Visual and Material Performances in the City*. Ashgate Press, UK
- Paper entitled "Space/Place: Urban Public Space and New Media Technologies" and invited panel speaker on Urban Spaces and Private Quarters Panel at Conference for Technological and Aesthetical Transformations of Society, TU Darmstadt on 12th-14th October 2005.
- Paper entitled "Situating Cognition in the Use of Mobile Devices for Wayfinding Tasks", Mobile Maps 05 Workshop at MobileHCI05, Salzburg on 19th September 2005.
- Paper entitled 'Mind the Gap: Mobile Applications and Wayfinding', User Experience Design for Pervasive Computing, Pervasive 2005, Munich on 10th May 2005.
- Participated in invited panel entitled 'Future phones: mobile, connected and interacting learners?' at NESTA Futurelab, Bristol, UK on 7th June 2005.
- Paper entitled "Passing Through: Perception of Place and Mobility" (to be published in 2006) at Cruising Country Conference, Sydney, Australia, 26-28th May 2005
- Paper entitled "The Potential of GPS Technologies to inform an Approach to Understanding Visual Sequences for the Observer in Motion", Generative Art Conference, Milan, Italy, December 2004
- Paper entitled "Knowhere", Transmediale Conference, Germany, 2004
- Dissertation entitled "To Investigate the Potential of Using Virtual Reality Navigation Techniques to Design an Augmented Reality Interface for Informing Motion in Urban Environments", Bartlett School of Architecture, UCL, London, 2003

Lectures and Teaching

- *12th May 2005*, Lecture entitled Space/Place, University of Manchester, Manchester, UK
- *November - July 2004*, In-School Artist, "Download" Research Project, Whitechapel Art Gallery, London, UK (See: <http://www.whitechapel.org/download/adapt/intro.html>)
- *10th December 2002*, Lecture entitled 'Responsive Environments', Manchester School of Architecture, Manchester, UK
- *10th December 2001*, Presentation of Current Work, Royal College of Art, London, UK
- *10th June 2001*, Lecture entitled 'Cognitive Mapping, Spatial Identity and Wayfinding in Urban Environments', University of Manchester, Manchester, UK
- *1st September 1999 - 15th May 2002*, Visiting Critic, School of Architecture, University of Manchester, UK

Academic Qualifications

- *September 2005-present*, PhD (2005/2006 supported by one year DAAD PhD Scholarship), Spatial Cognition Program, University of Bremen, Germany
- *2003*, Masters in Architecture (commendation), Bartlett School of Architecture, U.C.L., University of London
- *1998*, Diploma in Architecture (commendation), Bartlett School of Architecture, U.C.L., University of London
- *1993*, BA(Hons) Architecture, University of Manchester, Manchester, UK

Languages

German (spoken semi-fluent), French (good), Spanish (good), mandarin Chinese (basic)