

I'm a lecturer at Aston University, Birmingham, UK. I hold a doctorate in psychology from the University of Zurich, and have a background in psychology, computer science and neurobiology. I'm the main author of the large-scale neural systems simulator iqr, have developed models of insect cognition, and conceptualized and realized a number of complex, real-time interactive systems. My research follows an interdisciplinary approach that brings together psychological and neurobiological models of behavior regulation, motivation, and emotion with mixed and virtual reality. At the core of my current research interests is the development of models of personality and nonverbal communication. These models are embodied in virtual humans and interact with biological humans in real-time.

Education and training

1999 -2007 PhD in Psychology at the Institute of Neuroinformatics, ETH/University of Zurich
1991-1999 Master in Psychology at the University of Zurich
Bachelor of Science 1st Minor: Computer science, 2nd Minor:
Neurophysiology at the University of Zurich

Work experience

2017 – Lecturer in Computer Science Aston University, Birmingham, UK
2012 – 2017 Post-doc Simon Fraser University, Canada
2016 Short-term visiting researcher, Institute of Creative Technologies, University of South California, Los Angeles, USA (2 months)
2015 Lecturer, Bachelor Program in Cognitive Systems, University of British Columbia, Vancouver, Canada
2008 – 2011 Lecturer CSIM Master Universitat Pompeu Fabra, Spain
2006 – 2012 Senior Research Fellow Laboratory for Synthetic, Perceptive, Emotive, and Cognitive Systems, Universitat Pompeu Fabra, Spain
1999 – 2006 Doctoral Fellow Institute of Neuroinformatics, ETH/University Zurich, Switzerland
1998 – 1999 Technical assistant Institute of Neuroinformatics, ETH/University Zurich, Switzerland

Research experience

2012 – 2017 Post-doc Simon Fraser University, Canada

- Developing and evaluating models of human social interaction using virtual characters
- Empirical studies to better understand expert cognition in the domain of performative and everyday movement

2006 – 2012 Senior Research Fellow Laboratory for Synthetic, Perceptive, Emotive, and Cognitive Systems, Universitat Pompeu Fabra, Spain

- Development of the mixed reality space “eXperience Induction Machine” (XIM)
- Designing and conducting experimental psychological studies using XIM that investigate the subjective sense of presence, recollection, navigation, non-symbolic emotion expression, and social interaction in mixed reality
- Development of a model of allostatic control in rodents.
- Development and implementation of a number of installations that explore the realm of physical interaction, and real-time mixed-reality interaction

1999 – 2007 PhD studies in Psychology at the Institute of Neuroinformatics, ETH/University of Zurich

- Development of the large-scale neuronal systems simulator iqr (iqr.sourceforge.net)
- Modeling and experimental work with robots on the path integration and behavior regulation system in insects.

1991 – 1999 Undergraduate and graduate studies at the University of Zurich

- Work on social motivation based on the cybernetic Zurich Model of Social Motivation
- Empirical model parameter estimation and evaluation using flight simulator experiments