Title: Interactive and Cognitive Environments

Motivation and objectives:

Interactive and Cognitive Environments is a growing multi-disciplinary research field that aims to study and develop innovative ICT concepts, algorithms and services to enable user interactions in multi-sensor physical environments with the final goal of improving quality of life, supporting human everyday tasks and fulfilling urgent society needs. It focuses on a multiple user perspective through: (I) user centred interaction design, (II) cognition, emotion, behaviour understanding and (III) context awareness.

This special session calls for innovative and high-quality papers describing theoretical and practical approaches in the following topics belonging to the Interactive and Cognitive Environments field:

- **Assistive Technologies for Health and Autonomous Living**. Technologies for improving autonomy and independence of individuals, to assist people with disability or illness in their daily activities.
- **Networked Embedded System**. Embedded systems and networks of the future, presenting advances for the development of intelligent pervasive applications.
- **People Inspired Technologies**. Advanced methodologies and tools related to artificial intelligence, machine learning, simulation environments, HCI, psychology and safety, taking inspiration from the need to integrate areas such as social sciences and humanities.
- **Design for Social Interaction**. Designing of software and hardware architecture of intelligent systems, products and related services characterized by: (I) sensor based input, (II) context awareness and adaptive signal processing, and (III) actuator controlled output.
- **Multi-sensor Surveillance**. Techniques for detecting, localizing and tracking multiple objects in cluttered scenes as well as study of novel algorithms for robust scene understanding based on data-fusion techniques, advanced architectures and Graphical Models (Bayesian Networks, Multilevel Markov Random Fields, DEKFs).

This special session is related to the research fields covered by the ICE-PhD programme (www.icephd.org). Contributions in form of papers are welcomed from research organizations working in any of these fields.

Short biography of the organizers

Dr. Wei Chen received her B. Eng. degree in 1999 and M. Eng. degree in 2002 on telecommunication systems and smart sensor systems, from School of Electrics and Information Engineering, Xian Jiaotong University, China. She obtained her Ph.D. degree in 2007 on performance monitoring and impairment mitigation for optical communication systems, from the Department of Electrical & Electronics Engineering, The University of Melbourne, Australia. She worked at Bell Laboratories Germany, Alcatel-Lucent, Stuttgart, Germany as an intern in 2005 and she was a research assistant in 2007 at the Department of Electrical & Electronics Engineering, The University of Melbourne, Australia. Since July 2007, she has been an

Assistant Professor at the Department of Industrial Design, Eindhoven University of Technology, the Netherlands. Her research interests include medical monitoring system design using wearable sensors, patient health monitoring, wireless body area networks, smart sensor systems, ambient intelligence and smart environments. From 2009 to 2013, she served as Chair of the Theme Health Care at the Department of Industrial Design, Eindhoven University of Technology, the Netherlands. She is a Senior Member of IEEE.

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Dr. Albert Samà received the M.Sc. degree in control and robotics in 2009 and the B.Sc. degree in Computer Science in 2008. He completed a Ph.D. in Control, Vision and Robotics in the Automatic Control and Department of the Universitat Politècnica de Catalunya (UPC) in 2013. During 2006 and 2007 he worked as a J2EE and PL/SQL software developer. Since 2008, he has been involved in several national and European projects both in the CETpD (Universitat Politècnica de Catalunya, Vilanova i la Geltrú Spain) and ESADE (Universitat Ramón Llull, Barcelona, Spain). His research interests include machine learning, signal processing and human movement analysis applied to ambient assisted living and dependency care. He has been working as assistant professor in electronic engineering courses at Universitat Politècnica de Catalunya since 2010

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