

Preface

Welcome to the Proceedings of the 4th European Conference on Smart Sensing and Context hosted by the Centre for Communication Systems Research, University of Surrey, in Guildford, UK.

Smart Sensing and Context are the key enablers for effective autonomous systems, providing transparent technologies to realise the vision of ubiquitous computing, intelligent services and networking. (Wireless) sensor and actuator networks, tightly integrated into the structure of the Internet provide the underlying manifestation of the physical world into the Internet of Things. Networked sensors can infer context from raw data and capture user and application needs to provide smart adaptive services. Higher-level context can be deducted locally or remotely by combining and abstracting information from smart sensors. The 4th European Conference on Smart Sensing and Context explores new techniques, algorithms and architectures on utilising context and context-aware services and their applications. The conference builds on the success of the past editions held in Zürich, Switzerland in 2008, in Kendal, UK in 2007 and in Enschede, The Netherlands in 2006. EuroSSC is a forum to exchange ideas and to discuss the most recent developments in smart sensing and context field. It explores the latest findings and state-of-the-art developments in technology, human and user aspects. The main topics discussed this year focused on embedded applications, context-aware platforms, context processing, semantic technologies, mobile platforms and real world deployment and exploitation scenarios. The development of integrating sensor and actuator networks and context-platforms in a wider scale setting has added a new dimension to global networks and has enabled users and applications to interact with the physical world more efficiently. The vision of integrating millions of interconnected resources which are accessible through different services to intermediate interaction between the physical world and the digital world will form the structure of the future Internet and services and will create a platform for networked knowledge. At the conference and also during the poster and demo session research outcomes were presented with this vision in mind. We hope the presented work and demonstrated systems will help the researchers and developers in this field to discuss and exchange innovative ideas and plans. A total of 16 full papers were accepted to the conference. Each paper received at least three peer reviews. The Program Co-chairs selected the accepted papers based on their technical merit and the review reports. The conference and proceedings were structured into 6 main tracks which discussed the key themes addressed by EuroSSC 2009: Activity recognition, Information aspects of context-aware sensor and actuator systems, Context-aware service platforms, Context processing, reasoning and fusion, Real-world experiences with deployed systems, and Context-aware frameworks in mobile environments.

Amit Sheth from Kno.e.sis Center, Wright State University, and Marimuthu Palaniswami from ARC Research Network on Intelligent Sensors, Sensor Net-

works and Information Processing (ISSNIP), the University of Melbourne were invited to give keynote speeches. Amit Seth's keynote entitled "Computing for Human Experience: Semantics empowered Sensors, Services and Social Computing on Ubiquitous Web". He discussed how sensing, semantics, and social computing work in concert to enrich the Web based interactions; multisensory devices, computing and ubiquitous connectivity involving multimodal information engage transparency in human activities to enrich them in ways not possible before. Marimuthu Palaniswami's talk focused on "Large Scale Sensor Network Deployment: Research Challenges and Opportunities". Marimuthu Palaniswami presented different issues regarding deployment of large scale sensor networks - making the transition from the lab to the real world - through case studies in environmental monitoring and healthcare.

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We owe special thanks to the 90 contributing authors and to the Technical Program Committee members and reviewers of the papers. We would also like to thank Safa Sway who helped with the local arrangements and who worked hard to make everything run smoothly and pleasantly. Our gratitude also extends to numerous volunteers who helped us during the organisation and running of this conference.

September 2009

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EuroSSC 2009 is organized by Centre for Communication Systems Research (CCSR), University of Surrey.

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Table of Contents

Activity recognition

Episode Segmentation Using Recursive Multiple Eigenspaces	1
<i>Aziah Ali, Surapa Thiemjarus, Guang-Zhong Yang</i>	
Keep on Moving! Activity Monitoring and Stimulation using Wireless Sensor Networks	12
<i>Stephan Bosch, Mihai Marin-Perianu, Raluca Marin-Perianu, Paul Havinga, Hermie Hermens</i>	
Time-lag as Limiting Factor for Indoor Walking Navigation	26
<i>Andreas Riener, Markus Straub, Alois Ferscha</i>	

Information aspects of context-aware sensor and actuator systems

A Query Service for Raw Sensor Data	40
<i>Dónall McCann, Mark Roantree</i>	
A Context Lifecycle For Web-Based Context Management Services	54
<i>Gearoid Hynes, Vinny Reynolds, Manfred Hauswirth</i>	
Semantic Annotation and Reasoning for Sensor Data	68
<i>Wang Wei, Payam Barnaghi</i>	

Context-aware service platforms

Semantic Rules for Context-Aware Geographical Information Retrieval . .	79
<i>Carsten Keßler, Martin Raubal, Christoph Wosniok</i>	
A Context Provisioning Framework to Support Pervasive & Ubiquitous Applications	95
<i>Michael Knappmeyer, Nigel Baker, Saad Liaquat, Ralf Tönjes</i>	
Context-aware Recommendations on Mobile Services: The m:Ciudad Approach	109
<i>Andreas Emrich, Alexandra Chapko, Dirk Werth</i>	

Context processing, reasoning and fusion

Context Cells: Towards Lifelong Learning in Activity Recognition Systems	124
<i>Alberto Calatroni, Claudia Villalonga, Daniel Roggen, Gerhard Tröster</i>	

Automatic Event-based Synchronization of Multimodal Data Streams from Wearable and Ambient Sensors	138
<i>David Bannach, Oliver Amft, Paul Lukowicz</i>	
Using Dempster-Shafer Theory of Evidence for Situation Inference	152
<i>Susan McKeever, Juan Ye, Lorcan Coyle, Simon Dobson</i>	
Real-world experiences with deployed systems	
Recognizing the Use-Mode of Kitchen Appliances from their Current Consumption	166
<i>Gerald Bauer, Karl Stockinger, Paul Lukowicz</i>	
Wireless Sensor Networks to enable the Passive House - Deployment Experiences	180
<i>Tessa Daniel, Elena Gaura, James Brusey</i>	
Context-aware frameworks in mobile environments	
Mobile Context Toolbox an extensible context framework for S60 mobile phones	196
<i>Jakob Eg Larsen, Kristian Jensen</i>	
Statistic-based Context Recognition in Smart Car	210
<i>Jie Sun, Kejia He</i>	
Author Index	222