

The 5th International Conference on Intelligent Environments,  
Technical University of Catalonia, Barcelona, Spain, 20-21 July, 2009

# The Fifth International Conference on Intelligent Environments (IE09): A Report

*Vic Callaghan, Achilles Kameas, Dolors Royo,  
Angelica Reyes, and Leandro Navarro*

- The development of intelligent environments is considered an important step toward the realization of the ambient intelligence vision. Intelligent environments are technologically augmented everyday spaces that intuitively support human activity. The IE conferences traditionally provide a leading-edge forum for researchers and engineers to present their latest research and to discuss future directions in the area of intelligent environments. This article briefly presents the content of the Fifth International Conference on Intelligent Environments (IE09), which was held July 20–21 at the Castelldefels campus of the Technical University of Catalonia near Barcelona, Spain.

The Fifth International Conference on Intelligent Environments (IE09) was held July 20–21 at the Castelldefels campus of the Technical University of Catalonia near Barcelona, Spain. The general chairs were Dolors Royo, Angelica Reyes, and Leandro Navarro of the Technical University of Catalonia. Vic Callaghan of the University of Essex, UK, and Achilles Kameas of the Hellenic Open University and Computer Technology Institute, Greece, served as program chairs. This article presents a report of the conference.

The IE conferences traditionally provide a leading-edge forum for researchers and engineers from around the world to present their latest research and to discuss future directions in the area of intelligent environments. The previous four editions of the IE conference have been held at the University of Essex, UK (in 2005), at the National Technical University of Athens, Greece (in 2006), at the University of Ulm, Germany (in 2007), and at the University of Washington campus in Seattle, Washington, USA (in 2008).

The development of intelligent environments is considered the first and primary step toward the realization of the ambient intelligence vision. Intelligent environments are technologically augmented everyday spaces that are able to host ubiquitous computing applications that will intuitively support human activity. Consequently, the realization of intelligent environments requires input from research and contributions from several scientific and engineering disciplines, including computer science, software engineering, artificial intelligence, architecture, social sciences, art, and design. IE conferences are unique in the sense that they bring together researchers from the various disciplines contributing to the area on intelligent environments and foster cross-disciplinary discussions, debate, and collaborations.

This year, a total of 79 papers were submitted to the conference. Of these, 58 were selected for inclusion in the conference program, which lasted two days and had two parallel tracks, which in total contained 12 special sessions. All papers were included in the conference proceedings, which were published in time for the conference by IOS Press. Additionally, this year, for the first time, five workshops (three full day and two half day) were organized on July 19. Workshops have a looser structure and aim at facilitating cross-fertilization of ideas by giving participants the opportunity to engage in discussion and debate. The proceedings of the workshops were published as a companion volume by IOS Press.

In addition to the paper presentations, the conference program included three keynote speeches. Marcus Brunner of NEC Europe discussed how the future Internet will support the deployment of

## The 5th International Conference on Intelligent Environments, Technical University of Catalonia, Barcelona, Spain, 20-21 July, 2009

intelligent environments; Carles Montenegro of Technical University of Catalonia analyzed how ambient intelligence can result from large-scale wireless sensor networks that are connected to the Internet; Brian David Johnson of Intel described his science-fiction prototyping methodology and its application to the development of ambient intelligence products based on user experiences. To demonstrate his approach, Johnson staged a reading of a short play he prepared based on a paper that was presented in IE07. The reading took place during the conference dinner, in front of the conference attendees; it was so amusing and successful that it will become a permanent feature of future IE conferences. At the banquet, two awards were given. The best paper award, sponsored by IOS Press, was presented to Marios Daoutis, Silvia Coradeschi, and Amy Loutfiichael for their paper "Integrating Common Sense in Physically Embedded Intelligent Systems." Daan van Bel was awarded a free registration to the 2010 summer school sponsored by the Panorama Coordination Action of the EU Pervasive Adaptation proactive initiative for his paper "Social Connectedness: Concept and Measurement."

About 120 delegates attended the workshops and the conference. These included representatives from academe, industry, and government labs and from specialties including software engineering, artificial intelligence, human factors, architecture, pervasive computing, and even psychology, law, art, and design. Attendees and authors came from the United States, the United Kingdom, Germany, Spain, Portugal, Japan, Egypt, France, Finland, Norway, Italy, The Netherlands, Switzerland, Malaysia, Greece, Canada, New Zealand, Sweden, Czech Republic, and Belgium.

The conference was honored by Joan Sau i Pages, Mayor of Castelldefels, Daniel López Codina, delegate of the rector of the Technical University of Catalonia, and Jordi Berenguer, director of the Castelldefels School of Technology, who attended the opening ceremony of the conference. The Castelldefels School of Technology provided us with all the facilities we needed to make this conference possible.

This year the conference was endorsed for the second time by the Association for the Advancement of Artificial Intelligence. The Sixth International Conference on Intelligent Environments will take place on July 2010 in Kuala Lumpur, Malaysia.

**Vic Callaghan** is a professor in computer science at the University of Essex. He is the head of the Inhabited Intelligent Environments Group and performs research in the areas of ambient intelligence, ubiquitous computing, intelligent buildings, robotics, and embedded agents.

**Achilles Kameas** is an assistant professor at the Hellenic Open University, where he teaches software engineering. He is the director of research Unit 3 at the Computer Technology Institute, where he performs research on the design of ambient intelligence systems, specializing in architectures, middleware, knowledge management, and ontologies.

**Dolors Royo** is an associate professor at the Technical University of Catalonia, where she teaches operating systems. She is vice-dean of Castelldefels School of Technology (EPSC) and performs research in the areas of ambient intelligence, mobile ad hoc networks, and collaborative applications.

**Angelica Reyes** is a collaborating lecturer at the Technical University of Catalonia, Department of Computer Architecture, and a member of the Computer Networks and Distributed Systems research group.

**Leandro Navarro** joined the Computer Architecture Department of the Technical University of Catalonia as an associate professor in 1988, after receiving his graduate degree in telecommunication engineering from UPC. His research interests include the design of scalable and cooperative Internet services and applications.