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Grid and Pervasive Computing Workshops

International Workshops, S3E, HWTS, Doctoral Colloquium
Held in Conjunction with GPC 2011
Oulu, Finland, May 11-13, 2011
Revised Selected Papers

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Preface

GPC 2011 was the sixth in a conference series that provides a forum for researchers and practitioners in all areas of grid and cloud computing as well as pervasive computing. Two workshops were held in conjunction with the GPC 2011 conference: the International Workshop on Health and Well-being Technologies and Services for Elderly (HWTS 2011) and the International Workshop on Self-Managing Solutions for Smart Environments (S3E 2011). In addition, PhD students received valuable feedback for their doctoral studies in the doctoral colloquium from the colloquium panelists and their peers.

The conference would not have been possible without the support of many people and organizations that helped in various ways to make it a success. In particular, we would like to thank Infotech Oulu and the MOTIVE program of the Academy of Finland for their financial support. We are also grateful to the workshop organizers, committee members and the external reviewers for their dedication in reviewing the submissions. We also thank the authors for their efforts in writing and revising their papers, and we thank Springer for publishing the proceedings.

October 2011

Mika Rautiainen
Timo Korhonen
Edward Mutafungwa
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Workshop on Self-Managing Solutions for Smart Environments (S3E 2011) Preface

This volume contains papers presented at S3E 2011: the First International Workshop on Self-Managing Solutions for Smart Environments, held on May 11, 2011, as part of the 6th International Conference on Grid and Pervasive Computing (GPC) at the University of Oulu, Finland.

Smart environments are small worlds where different kinds of smart devices are continuously working to make inhabitants' lives more comfortable, safe, or economic. Smart homes, smart workspaces, smart cars aim at automating repetitive tasks and increasing their efficiency, at raising humans' awareness of the state of the environment, and at allowing more control over this state. Smart environments as a research area is at the intersection of such fields as ubiquitous computing and the Web of Things, intelligent systems, and semantic interoperability. The S3E workshop focused on how to manage the inherent dynamism of smart environments and to provide enhanced intelligence for their proactive behavior.

The workshop received nine submissions originating from six countries. Each submission was reviewed by at least three Program Committee members, and five papers were selected. The problems, which the papers presented at the workshop focused on, included context-awareness, activity recognition, machine learning, security and cross-device interoperability in smart environments.

In addition to the presentation of the regular papers, the workshop also included a keynote speech by Vagan Terziyan, Professor in Distributed Systems at the University of Jyväskylä, Finland. The abstract of this keynote is also contained in this volume. In addition, the workshop included a demo session.

We would like to thank the members of the Program Committee for helping in assuring the quality of the workshop program. The organization of the workshop was in part supported by the project SOFIA, which is a part of EU's ARTEMIS Joint Undertaking.

May 2011

Eila Ovaska
Artem Katasonov
Antti Evesti

Organization

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Workshop on Health and Well-Being Technologies and Services for Elderly (HWTS 2011) Preface

The International Workshop on Health and Well-Being Technologies and Services for Elderly (HWTS 2011) was held in conjunction with the 6th International Conference on Grid and Pervasive Computing (GPC 2011) in Oulu, Finland, during May 11–13, 2011. This volume contains the full papers that were presented at the Workshop.

We received ten submissions that were each reviewed by two or three Technical Program Committee (TPC) members. Finally, the TPC selected seven full regular papers for presentation at the conference and inclusion in this LNCS volume. The papers selected for presentation highlighted some novel approaches and/or innovative implementations that are highly relevant from the perspective of e-Health services and technologies, particularly those targeting the fast-rising elderly population. To that end, the papers in this volume are grouped into two categories: those that address User Interface and Service Designs for Elderly Users, and those that describe the implementations of Telehealth Systems.

In addition to the regular paper presentations, three high-quality keynotes were also presented during HWTS 2011. The keynotes included: a presentation of the state-of-the-art research, development and innovation activities carried out by the TRIL centre (Technology Research Center for Independent Living, Ireland) by Senior Researcher Joseph Wherton; ambient-assisted living perspectives by Anssi Ylimaula, Vice CEO of Mawell Group, Oulu, Finland; and an overview of a commercial remote specialist diagnosis service that was presented by Timo Hakkarainen, the Managing Director of Remote Analysis (RemoteA) Ltd., Helsinki, Finland. HWTS 2011 ended with a summarizing panel discussion that brought vividly to front many hot topics encountered in the presentations and also generated interesting brainstorming for future directions of the field.

Our workshop would not have been possible without the support of the TPC members who dedicated time and effort to their reviews. The GPC conference organizers provided great support in ensuring the smooth running of the event! Further, the Academy of Finland MOTIVE program coordinators Anssi Mälkki and Mikko Ylikangas showed important dedication to our workshop, which also turned out to be an important platform for the interaction of researchers from closely related MOTIVE projects. We also thank the authors for their diligent efforts in writing, presenting and revising their papers, as well as Springer for publishing the proceedings.

May 2011

Timo O. Korhonen
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Doctoral Colloquium

Preface

The Doctoral Colloquium held in conjunction with the Grid and Pervasive Computing Conference had the same scope as the main conference. We invited PhD students and candidates to present, discuss and defend their work-in-progress or preliminary results with an international and renowned audience of researchers and developers. The Doctoral Colloquium aims at offering PhD students high-quality feedback from external reviewers and allowing them to directly interact with peers, to exchange ideas, discuss concepts, and establish informal cooperation between researchers and research groups.

PhD students and candidates at all stages in the process were invited to submit a thesis position paper, but preference was given to students early on in their PhD work. The call for thesis position papers was made public on the GPC 2011 website and by other channels. A review and selection was performed as a peer-review process that obeys the GPC 2011 conflict of interest policy. The Doctoral Colloquium Chairs and Panellists formed the Program Committee which reviewed and selected the papers. The authors were given feedback and an opportunity to revise the papers before the Doctoral Colloquium. The papers in these proceedings are the revised versions. The Doctoral Colloquium took place on May 10, 2011. Participants gave short, informal presentations of their work during the colloquium, which was followed by a discussion.

Seven PhD candidates submitted papers before the deadline and after the review all were accepted. As can be expected in a pervasive and grid computing conference, the topics of the papers had a wide scope and they represented different viewpoints and sub-disciplines within the ICT field. The topics included context-aware micro-architectures for smart spaces, frameworks for creating and evaluating persuasive games and applications; middleware for dynamic processing of sensor data; a concept for equipping smart spaces with metacognitive functionality; models for an inherently privacy-preserving ubiquitous application framework; new methods for creating mash-ups for mobile and fixed devices; and a light-weight architecture facilitating cooperation between applications. The wide spectrum of topics and approaches made the discussion in the Doctoral Colloquium most interesting and lively. It is our hope that the feedback and discussion helped the candidates with their work.

We would like to express our gratitude to the Program Committee members and panellists Jonna Häkkinen, Natasa Milic-Frayling, and Jukka Riekkio who gave their time and expertise and thus made the Doctoral Colloquium possible. Also, we thank the organizers of the GPC conference, both local and international. Finally, we thank and congratulate the PhD candidates for presenting – and defending – their most interesting work. Good luck in your pursuit!

Heikki Ailisto
Aaron Quigley

Doctoral Colloquium Organization

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