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Advances in Services Computing

9th Asia-Pacific Services Computing Conference, APSCC 2015
Bangkok, Thailand, December 7–9, 2015
Proceedings

Springer

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Preface

It is our great pleasure to welcome you to the proceedings of the 2015 Asia-Pacific Services Computing Conference (APSCC 2015).

APSCC 2015 was held in Bangkok, Thailand, during December 7–9, 2015. The event was the ninth meeting of this conference series, after APSCC 2006 (GuangZhou, China), APSCC 2007 (Tsukuba Science City, Japan), APSCC 2008 (Taiwan), APSCC 2009 (Singapore), APSCC 2010 (Hangzhou, China), APSCC 2011 (Jeju, Korea), APSCC 2012 (Guilin, China), and APSCC 2014 (Fuzhou, China).

APSCC is recognized as the main regular event of the Asian-Pacific region that covers many dimensions of services computing, Web services, cloud computing, security in services, and social/peer-to-peer/mobile/ubiquitous/pervasive computing. APSCC 2015 intended to play an important role for researchers and industry practitioners to exchange information regarding advancements in the state of the art and practice of IT/telecommunication-driven business services and application services, as well as to identify emerging research topics and define the future directions of services computing.

We received a large number of submissions this year, showing by both their quantity and quality that APSCC is a premier conference on services computing. In the first stage, all papers submitted were screened for their relevance and general submission requirements. These manuscripts then underwent a rigorous peer-review process with at least three reviewers per paper. Finally, 23 papers (17 full papers and 6 short papers) were accepted for presentation at the conference and are included in the main proceedings. To encourage and promote the work presented at APSCC 2015, we are delighted that some of the papers will be accepted in special issues of several international reputable journals. All of these journals have played a prominent role in promoting the development and use of services computing.

An international conference of this scale requires the support of many people. First of all, we would like to thank the steering chairs, Hai Jin and Liangjie Zhang, for nourishing the conference and guiding its course. We appreciate the participation of the invited speakers, Tarek El-Ghazawi and Stephen S. Yau, whose speeches greatly benefited the audience. We are also indebted to the members of the Program Committee, who put in hard work and long hours to review each paper in a professional way. Thanks to them all for their valuable time and effort in reviewing the papers. Without their help, this program would not have been possible. Thanks also go to the entire local arrangements committee for their help in making the conference a wonderful success. We take this opportunity to thank all the authors, participants, and session chairs for their valuable efforts, many of whom traveled long distances to attend this conference and make their valuable contributions. Last but not least, we would like

to express our gratitude to all of the organizations that supported our efforts to bring the conference to fruition. We are grateful to Springer for publishing the proceedings.

December 2015

Lina Yao
Xia Xie
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Invited Talks (Abstracts)

When HPC, Big Data Science, and Wireless Technology Merge: The World of Endless Opportunities and Challenges

Tarek El-Ghazawi

Abstract. The rapid spread of interest and use of cloud computing as an accessible and expandable, as needed, enabling computing facility on the go, from one side, and the advances and the proliferation of intelligent mobile devices from another side, and the increasing availability of high-performance computing capabilities and parallelism from accelerators on-chips to large scale systems in the cloud are compatible exciting developments. With the ever expanding wealth of big data in the cloud, users can have very powerful enabling tools wherever they go. Together, these technologies have the potential of leaving nobody behind when it comes to computing and data applications whether small and personal or large and organizational, and regardless of geographic boundaries and economic conditions. Furthermore, many applications and services that one felt are simply fiction, will become possible. However, the technical challenges associated with the realization of this dream with the responsiveness and quality needed from the user perspective will be monumental. In this talk we examine some of those possible developments and characterize some of user needs, the associated challenges, and the potential research directions.

Challenges and Future Research Direction of Developing Trustworthy Services Computing Systems

Stephen S. Yau

The rapid advances and growth in deploying services computing systems, including cloud computing systems, in various applications have major impacts on the use of IT technologies, the economy, society, and our daily lives. Trustworthiness becomes a key issue for users to have sufficient confidence in using these systems. In this address, the major challenges and future research directions of developing trustworthy services computing systems will be discussed. The important aspects of trustworthy services computing systems, including quality of services assurance, required system platform support, and sharing resources (including data, infrastructures, and knowledge), and the impact of human factors will be addressed. Possible improvements of relevant higher education curricula to meet these challenges of rapid expansion of IT Technologies and their applications will also be discussed.

Contents

Regular Papers