Guest Editorial: Special Issue on Service-Oriented Architectures and Programming

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This special issue includes revised versions of selected papers that were presented at the Special Track on Service-Oriented Architectures and Programming (SOAP) of the 29th Annual ACM Symposium on Applied Computing (SAC 2014)[1].

SOAP 2014 was held in Gyeongju, Korea, in March 24-28, 2014. Its proceedings were published in a volume edited by Yookun Cho, Sung Y. Shin, Sang-Wook Kim, Chih-Cheng Hung and Jiman Hong and published by ACM in 2014.

This special issue was motivated by the quality of the works presented at the conference and by the increasing proliferation of service-oriented systems in our society such as e-governance, e-health and e-commerce systems. We believe that the contributions in this volume provide a valuable example of current research in this area. We also believe that the published works will contribute to the main aims of the SOAP track, that is to transform Service-Oriented Programming (SOP) into a mature discipline with both solid scientific foundations and mature software engineering development methodologies supported by dedicated tools.

All papers presented in the SOAP track of the conference were invited to contribute to the special issue. In order to guarantee the fairness and quality of the selection process, each submission received at least three reviews. As a result, only 3 of the papers were selected to appear in this issue. These papers are significant extensions and improvements of their respective original conference contributions.

Finally, we would like to thank Dr. Ilsun You, the Editor-in-Chief of JISIS, for allowing us to organize this issue; the external anonymous referees for their detailed reports; and the authors of submitted papers for their great effort in preparing their manuscripts and contributing to the success of this issue.

[1]http://www.itu.dk/acmsac2014-soap/

Author Biography

Mario Bravetti is an Associate Professor (with Full Professor habilitation from January 2014) at the Computer Science and Engineering Department of University of Bologna, Italy. He is also a permanent member of the FOCUS (FOundations of Component-based Ubiquitous Systems) team which is part of the INRIA Sophia Antipolis - Méditerranée research center, France. He is PhD in Computer Science and winner of the award for the two best italian PhD theses in theoretical computer science in the year 2002, assigned by the Italian Chapter of the European Association for Theoretical Computer Science. His research activity spans from formal description and analysis of concurrent/distributed systems based on mathematical and probabilistic methodos to more applicative topics such as service oriented and cloud computing. He has published more than 70 papers in fully refereed international conferences, journals and books. He he is co-founder and member of the steering committee of the international workshop on Web Services and Formal Methods (WS-FM), currently at its 12th edition.

Alberto Lluch Lafuente is an associate professor at the Department of Computer Science and Applied Mathematics of the Technical University of Denmark. He teaches courses on formal verification and programming. He is an active researcher in the area of formal methods for the specification, analysis, development and optimization of distributed and concurrent systems. He has served in international scientific venues as organiser and chair, and has edited several scientific volumes. He has participated to international research projects.

Manuel Mazzara is associate professor of Computer Science at Innopolis University (Russia) and deputy-head of the Software Engineering lab. He is a software engineer interested in the application of formal techniques to build reliable software. Manuel has an academic background in concurrency theory, formal methods, software verification and software engineering with an extensive experience in research, industrial and humanitarian projects. Before joining Innopolis he has been affiliated with (among the others) Politecnico di Milano (Italy), United Nations University (Macao) and Newcastle University(UK).

Fabrizio Montesi is an Assistant Professor at the University of Southern Denmark and a founder director of italianaSoftware s.r.l., a technology provider for microservice programming. He is also an external collaborator of the FOCUS Research Team (INRIA / University of Bologna). His research focuses on the development of programming languages for concurrent systems, with an emphasis on microservices and message passing, along with their theoretical underpinnings and application. In particular, he co-created and currently maintains the Jolie programming language. Currently, he is the Principal Investigator of the CRC Project (Choreographies for Reliable and efficient Communication software), granted by the Danish Council for Independent Research (DFF), where he is validating the use of choreographic programming for the correct development of communication-centred software.