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Joao Eduardo Ferreira · Aibek Musaev · Liang-Jie Zhang (Eds.)

# Services Computing – SCC 2019

16th International Conference Held as Part of the Services Conference Federation, SCF 2019 San Diego, CA, USA, June 25–30, 2019 Proceedings



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#### Preface

Services account for a major part of the IT industry today. Companies increasingly like to focus on their core expertise area and use IT services to address all their peripheral needs. Services computing is a new science that aims to study and better understand the foundations of this highly popular industry. It covers the science and technology of leveraging computing and information technology to model, create, operate, and manage business services. The 2019 International Conference on Services Computing (SCC 2019) contributed to building the pillars of this important science and shaping the future of services computing.

SCC 2019 was part of the Services Conference Federation (SCF). SCF 2019 had the following ten collocated service-oriented sister conferences: 2019 International conference on Web Services (ICWS 2019), 2019 International Conference on Cloud Computing (CLOUD 2019), 2019 International Conference on Services Computing (SCC 2019), 2019 International Congress on Big Data (BigData 2019), 2019 International Conference on AI & Mobile Services (AIMS 2019), 2019 World Congress on Services (SERVICES 2019), 2019 International Congress on Internet of Things (ICIOT 2019), 2019 International Conference on Cognitive Computing (ICCC 2019), 2019 International Conference on Edge Computing (EDGE 2019), and 2019 International Conference on Blockchain (ICBC 2019). As the founding member of SCF, the First International Conference on Web Services (ICWS) was held in June 2003 in Las Vegas, USA. The First International Conference on Web Services-Europe 2003 (ICWS-Europe 2003) was held in Germany in October 2003. ICWS-Europe 2003 was an extended event of the 2003 International Conference on Web Services (ICWS 2003) in Europe. In 2004, ICWS-Europe was changed to the European Conference on Web Services (ECOWS), which was held in Erfurt, Germany. To celebrate its 16th birthday, SCF 2018 was held successfully in Seattle, USA.

SCC has been a prime international forum for researchers and industry practitioners alike to exchange the latest fundamental advances in the state of the art and practice of business modeling, business consulting, solution creation, service delivery, and software architecture design, development, and deployment.

This volume presents the accepted papers for SCC 2019, held in San Diego, USA, during June 25–30, 2019. For SCC 2019, we accepted nine full papers, including five research track papers and four application and industry track papers. Each was reviewed and selected by at least three independent members of the SCC 2019 international Program Committee. We are pleased to thank the authors, whose submissions and participation made this conference possible. We also want to express our thanks to the Organizing Committee and Program Committee members, for their

dedication in helping to organize the conference and in reviewing the submissions. We would like to thank Prof. Dimitrios Georgakopoulos, who provided continuous support for this conference. We look forward to your great contributions as a volunteer, author, and conference participant for the fast-growing worldwide services innovations community.

May 2019

Joao Eduardo Ferreira Aibek Musaev Liang-Jie Zhang

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