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Keke Chen · Sangeetha Seshadri · Liang-Jie Zhang (Eds.)

# Big Data – BigData 2019

8th International Congress Held as Part of the Services Conference Federation, SCF 2019 San Diego, CA, USA, June 25–30, 2019 Proceedings



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# **Preface**

The 2019 International Congress on Big Data (BigData 2019) aimed to provide an international forum that formally explores various business insights of all kinds of value-added "services." Big data is a key enabler of exploring business insights and economics of services.

BigData 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 Oct, 2003. ICWS-Europe 2003 is 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.

This volume presents the accepted papers for BigData 2019, held in San Diego, USA, during June 25–30, 2019. The major topics of BigData 2019 included but were not limited to: big data architecture, big data modeling, big data as a service, big data for vertical industries (government, healthcare, etc.), big data analytics, big data toolkits, big data open platforms, economic analysis, big data for enterprise transformation, big data in business performance management, big data for business model innovations and analytics, big data in enterprise management models and practices, big data in government management models and practices, and big data in smart planet solutions.

We accepted nine full papers. Each was reviewed and selected by at least three independent members of the BigData 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. Seong-Jong Park, who provided continuous support for this conference. We look forward to your great

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contributions as a volunteer, author, and conference participant for the fast-growing worldwide services innovations community.

May 2019

Keke Chen Sangeetha Seshadri Liang-Jie Zhang

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