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Internet of Things – ICIOT 2019

4th 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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Editors

Valerie Issarny
Inria de Paris
Paris Cedex 12, France

Balaji Palanisamy
University of Pittsburgh
Pittsburgh, PA, USA

Liang-Jie Zhang 
Kingdee International
Software Group Co., Ltd.
Shenzhen, China

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Preface

With the rapid advancements of mobile Internet, cloud computing and big data, device-centric traditional Internet of Things (IoT) is now moving into a new era, which is termed the “Internet of Things Services” (IOTS). In this era, sensors and other types of sensing devices, wired and wireless networks, platforms and tools, data processing/visualization/analysis and integration engines, and other components of traditional IoT are interconnected through innovative services to realize the value of connected things, people, and virtual Internet spaces. The way of building new IoT applications is changing. We indeed need creative thinking, long-term visions, and innovative methodologies to respond to such a change. The ICIOT 2019 conference was organized to continue to promote research and application innovations around the world.

ICIOT 2019 was part of the Services Conference Federation (SCF). SCF 2019 had the following ten colocated 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.

This volume presents the accepted papers for the 2019 International Conference on Internet of Things (ICIOT 2019), held in San Diego, USA, during June 25–30, 2019. For this conference, we accepted 11 papers, including eight full papers and three short papers. Each was reviewed and selected by at least three independent members of the ICIOT 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 Samee U. Khan,

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

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**Correction to: Smart IoT In-Car Life Detector System
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