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Internet of Vehicles – Technologies and Services

First International Conference, IOV 2014
Beijing, China, September 1-3, 2014
Proceedings

Springer

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Preface

This volume contains the proceedings of IOV 2014, the First International Conference on Internet of Vehicles, which was held in Beijing, China, during September 1–3, 2014.

Internet of Vehicles (IOV) is emerging as an important part of the smart or intelligent cities being proposed and developed around the world. IOV is a complex integrated network system that interconnects people within and around vehicles, intelligent systems on board vehicles, and various cyber-physical systems in urban environments. IOV goes beyond telematics, vehicle ad hoc networks, and intelligent transportation, by integrating vehicles, sensors, and mobile devices into a global network to enable various services to be delivered to vehicular and transportation systems, and to people on board and around vehicles, using contemporary computing techniques such as swarm intelligent computing, crowd sensing and crowd sourcing, social computing, and cloud computing. IOV 2014 played an important role for researchers and industry practitioners to exchange information regarding advancements in the state of art and practice of IOV architectures, protocols, services, and applications, as well as to identify emerging research topics and define the future directions of IOV.

This year, the technical program of IOV 2014 drew from a large number of submissions: 160 papers submitted from 30 countries representing four regions — Asia Pacific, Europe, North and South America. 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, coordinated by the international Program Committee. The Program Committee accepted 41 papers out of 160 submissions, resulting in an acceptance rate of 25.6%. The accepted papers provide research contributions in a wide range of research topics including telematics, wireless communication networks, services and applications, social information systems, swarm intelligence, economics for IOV, modeling and simulation, as well as cloud computing and big data. We believe that this volume not only presents novel and interesting ideas but also that it will stimulate future research in the area of IOV.

Organizing conferences with a large number of submissions requires a lot of hard work and dedication from many people. We would like to take this opportunity to thank the numerous people whose time and efforts made this conference possible and ensured its high-quality. We wish to thank the authors for submitting high-quality papers that contributed to the conference technical program. We wish to express our deepest gratitude to all Program Committee members and external reviewers for their excellent job in the paper review process. Without their help, this program would not be possible. We appreciate the participation of the keynote speakers, Prof. Chung-Ming Huang and Prof. David

Taniar; their speeches greatly benefitted the audience. Special thanks 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 presenters, session chairs, and participants for their presence at the conference, 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 the organizations that supported our efforts to bring the conference to fruition. We are grateful to Springer for publishing these proceedings.

We are proud to have the authors sharing their research with you, fellow members of the technical community, through IOV 2014 and these proceedings. We hope that you enjoy the IOV 2014 proceedings.

September 2014

Robert C.-H. Hsu
Victor Leung
Shangguang Wang
Zibin Zheng

Organization

IOV 2014 was organized by Beijing University of Posts and Telecommunications, State Key Laboratory of Networking and Switching Technology, and sponsored by the Beijing Natural Science Foundation. It was held in cooperation with *Lecture Notes in Computer Science* (LNCS) and *Communications in Computer and Information Science* (CCIS) of Springer.

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