Proceedings

2017 IEEE First International Conference on Smart City Innovations (SCI 2017)

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2017 IEEE First International Conference on Smart City Innovations

SCI 2017

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Message from IEEE SCI 2017 General Chairs

The growth of cities is one of the most striking features of modern times. For the first time in human history, more than half of the world's population lives in cities. Contemporary cities are perhaps the greatest crucibles of creativity and prosperity the world has ever seen. They are also the sites of some of our deepest challenges. To address these challenges, attention has focused on developing "Smart Cities". The belief is that the application of Information and Communication Technologies will lead to the more efficient planning and operation of city services. The IEEE International Conference on Smart City Innovation seeks to explore and understand the innovations necessary to build and evolve smarter cities. It explores innovation across the myriad of services cities provide, including transportation, utilities, public health, public safety and social services.

On behalf of 2017 IEEE International Conference on Smart City Innovation Chairs and Committees, we are very pleased to welcome you to the 1st IEEE International Conference on Smart City Innovation. We thank the IEEE Computational Intelligence Society (CIS) for full sponsorship and the CIS Technical Committee on Smart World led by Professor Jianhua Ma, Hosei University Japan for strong support and advices. We also thank the IEEE Computer Society (CS) for technical co-sponsorship. The Steering Committee and Advisory Board members have provided excellent guidance to our Organizing Committee and PC Committee. The Executive Chairs, Didier El Baz and Jerry Gao, provided enormous guidance and support in the gestation of the conference. The PC Chairs, Haiping Xu, Sotoudeh Hamedi-Hagh, and Paolo Nesi, and the PC committee members have attracted, reviewed, and selected 16 quality papers from 57 paper submissions. The successful conference program preparation and quality proceeding publication the IEEE International Conference on Smart City Innovations have been due to the incredible efforts of the PC committee members, conference organization chairs, including the the Web Publication Chairs Zihao Jiang, Sazzad Hussain and Younghee Park, Registration Chairs, Xuan Guan and Xiaojun Yin, and the Publicity Chairs, Changi Tao, Stefano Rinaldi, Lei Chen, Arpan Kumar Kar and Toshiyuki Amagasa. In addition, the Local Arrangement Chair, Sam Zhang, SJSU student conference support team (Tianyu Cao and Swathi Nuggehalli Sudarshan), and other co-workers have made all the arrangements for ensuring quality logistics. We are also very grateful to the workshop chairs, Yong Qin and Maria Gemou, and the Poster and Demo Chairs, Kaikai Liu and Pengcheng Zhang. Without their dedicated effort, it is impossible to have these workshop programs and workshop paper publications.

In addition, we would like to express our thanks to Kenita Hidalgo at IEEE Conference Planning Department, Lisa O'Conner at IEEE CPS, Momoko Vanna and Stacy Negron-Sheckells at IEEE Finance Service Department for their great support. We hope that this conference will be intellectually helpful

for your current and future research and professional activities. We wish you a productive and truly enjoyable environment for developing novel ideas and visions in this area.

General Conference Chairs:

Professor, Mark S. Fox, Ph.D.
University of Toronto, Canada

Professor, Robert Morelos-Zaragoza, Ph.D.
San Jose State University, USA

General Executive Chairs:

Professor, Jerry Gao, Ph.D.
San Jose State University, USA

Dr. Didier El Baz
LAAS-CNRS, Franc

Message from IEEE SCI 2017 Program Chairs

On behalf of the Technical Program Committee, it is our pleasure to welcome you to the 2017 IEEE International Conference on Smart City Innovations (IEEE SCI 2017), held in San Francisco, USA. This conference provides a unique platform for multi-disciplinary researchers and teams, industry solution vendors, and government agencies to exchange innovative ideas, challenges, research results and solutions, as well as project experience reports and stories. The conference is organized jointly with six other IEEE international conferences including the IEEE Smart World Congress (SmartWorld 2017), the 14th IEEE International Conference on Advanced and Trusted Computing (ATC 2017), and the 14th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2017). This allows IEEE SCI 2017 attendees to interact with a broader community that hopefully will generate new ideas and foster new collaboration.

This year we received 57 paper submissions from 25 countries. Through a rigorous review process where a majority (75 percent) of the submitted papers received three or four reviews, and the rest with five reviews, we were able to select 16 full papers for the general conference (28 percent), and 11 short papers and work-in-progress papers (19 percent). In addition, we received 12 paper submissions to the International Workshop on Big Data Applications for Smart Cities (BDASC 2017) and the 2nd IEEE International Workshop on Big Data Quality Assurance (BDQA 2017), out of which 6 papers were selected as workshop papers for conference presentation. These papers together with the posters are distributed over 12 sessions including 2 workshop sessions and 1 poster session. The sessions cover cutting-edge research, spanning from smart utilities and smart services to smart city big data and open data, from smart city transportation and networking to smart public health and smart public safety. We really hope that these sessions will provide good opportunities for the IEEE SCI 2017 attendees to interact with one another in informative and informal settings, with adequate time allocated for sessions in order to promote in-depth technical interactions, exchange of opinions, and networking.

We believe that the accepted conference and workshop papers and the posters will provide an interesting and diverse view of the state-of-the-art in research activities in the areas of smart cities and communities and their innovative technologies. We hope that the IEEE SCI 2017 proceedings will be a valuable reference for the future.

We would like to express our gratitude to all authors who submitted their work to our conference. We thank the referees and members of the technical program committee who offered their time and expertise to provide high-quality reviews, within a tight schedule. In total, 90 TPC members and a few external reviewers generated 237 reviews (3+ reviews per paper) for 69 papers in total submitted to the IEEE SCI 2017 and its associated workshops. In addition, we would like to take this opportunity to

thank all the members of the IEEE SCI 2017 Organizing Committee, who worked very hard to produce an excellent conference program. In particular, we would like to thank the Steering Committee (Jianhua Ma, Laurence T. Yang, and Jerry Gao), the General Chairs (Mark S. Fox and Robert Morelos-Zaragoza), the General Executive Chairs (Didier El Baz and Jerry Gao), the Publicity Chairs (Chanqi Tao, Stefano Rinaldi, Lei Chen, Arpan Kumar Kar, and Toshiyuki Amagasa), the Workshop Chairs (Magdalini Eirinaki, Xiaohui Yuan, and Chanqi Tao), the Poster and Demo Chairs (Kaikai Liu and Pengcheng Zhang), the Registration Chairs (Tianyu Cao and Shengqiang Lu), the Web Publication Chairs (Zihao Jiang, Sazzad Hussain, and Younghee Park), and the Local Arrangement Chair (Sam Zhang).

Last but certainly not the least, we must acknowledge the important contributions that the IEEE staff members have made. Their timely and dependable support and assistance throughout the entire process have been truly remarkable. It has been a great pleasure to work with all of them.

Finally, we welcome you all to IEEE SCI 2017 and really hope that you will fully enjoy the technical program we were able to put together for this promising edition of the conference, as well as your stay in San Francisco, the City by the Bay!

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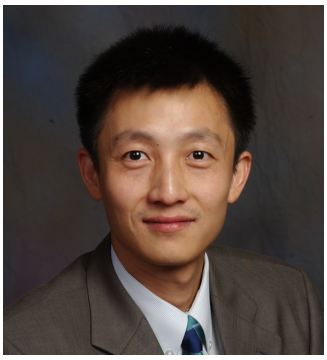

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