Lecture Notes in Computer Science **9258**

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

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Internet and Distributed Computing Systems

8th International Conference, IDCS 2015
Windsor, UK, September 2–4, 2015
Proceedings

Springer

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ISSN 0302-9743 ISSN 1611-3349 (electronic)
Lecture Notes in Computer Science
ISBN 978-3-319-23236-2 ISBN 978-3-319-23237-9 (eBook)
DOI 10.1007/978-3-319-23237-9

Library of Congress Control Number: 2015946745

LNCS Sublibrary: SL3 – Information Systems and Applications, incl. Internet/Web, and HCI

Springer Cham Heidelberg New York Dordrecht London

Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media (www.springer.com)

Preface

IDCS 2015 was 8th annual event of the conference series dedicated to the Internet and distributed computing systems and was held in Windsor, Berkshire, UK. The previous seven successful editions include IDCS 2008 in Khulna, Bangladesh, IDCS 2009 in Jeju Island, Korea, IDCS 2010 and IDCS 2011 in Melbourne, Australia, IDCS 2012 in Wu Yi Shan, China, IDCS 2013 in Hangzhou, China, and IDCS 2014 in Calabria, Italy.

The Internet as ubiquitous infrastructure and the widespread use of mobile and wireless devices have laid the foundation for the emergence of innovative network applications. In addition, the advances of sensor technologies are facilitating cyber-physical systems, i.e., the integration of the digital world with the physical environment, and the advent of the Internet of Things. Large-scale networked systems, real-time data streams from sensors and widespread use of mobile devices are contributing to the big data phenomenon. Intelligent and efficient approaches are required to turn the wealth of data available from the network into useful and actionable knowledge.

IDCS 2015 received innovative papers on emerging models, paradigms, applications, and technologies related to Internet-based distributed systems, including Internet of Things, cyber-physical systems, wireless sensor networks, next-generation collaborative systems, and extreme-scale networked systems. The audience included researchers, PhD students, and practitioners who have a general interest in the different aspects of the Internet and distributed computing systems with a more specific focus on practical and theoretical aspects of the cyber-physical systems built with the integration of computer networks, distributed systems, wireless sensor technology, and network applications for complex real-life problems.

IDCS 2015 received a large number of submissions from 20 different countries: 19 regular papers and seven short student papers were accepted after a careful review and selection process. The selected contributions covered cutting-edge aspects of cloud computing and Internet of Things, sensor networks, parallel and distributed computing, advanced networking, smart cities and smart buildings, big data, and social networks.

The conference also featured two keynote presentations: the first presentation on "Coordination Mechanism in Multi-Layer Clouds: Architecture and Applications," was given by Prof. Omer F. Rana, School of Computer Science and Informatics, Cardiff University, UK; the second presentation on "Cloud Computing in Healthcare and Biomedicine" was given by Prof. Mario Cannataro, Bioinformatics Laboratory, Department of Medical and Surgical Sciences, University Magna Graecia of Catanzaro, Italy.

The conference was held at the Cumberland Lodge, which is a 17th century house that combines charming English hospitality with 21st century facilities. The conference venue is immersed in the Royal landscape of the Windsor Great Park, at walking distance from Windsor Castle and within its parkland. The conference activities

included an excursion to Bletchley Park and the National Museum of Computing. Bletchley Park is the historic site of secret British codebreaking activities during WW II, workplace of Alan Turing, and birthplace of the modern computer. The National Museum of Computing is dedicated to the history of computing and includes Colossus, the world's first programmable, electronic, digital computer.

IDCS 2015 included a workshop for PhD students to give them the opportunity to present their project work: their contributions are included in the proceedings as short student papers.

We would like to thank the University of Reading and, in particular, Prof. Ben Cosh, Dean of the Faculty of Science, for providing four student grants to support the participation of PhD students from overseas countries.

The successful organization of IDCS 2015 was possible thanks to the dedication and hard work of a number of individuals. In particular, we would like to thank Antonio Guerrieri (publications chair) for his commendable work for the conference publicity and proceedings. We also express our gratitude to the PhD students of the University of Reading, Alexander Luke Spedding, Mosab Ayiad, and Anas Al-Dabbagh, who offered their voluntary support during the conference.

September 2015

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