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# Internet and Distributed Computing Systems

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

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# 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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# Contents

## Cloud Computing and Internet of Things

Cloud Shield: Effective Solution for DDoS in Cloud . . . . .	3
<i>Rajat Saxena and Somnath Dey</i>	
Towards Modelling-Based Self-adaptive Resource Allocation in Multi-tiers Cloud Systems . . . . .	11
<i>Mehdi Sliem, Nabila Salmi, and Malika Ioualalen</i>	
Web2Compile-CoT: A Web IDE for the Cloud of Things . . . . .	19
<i>Claudio M. de Farias, Paulo G.S.M. Júnior, Marina V. Pereira, Italo C. Brito, Igor L. dos Santos, Luci Pirmez, Flávia C. Delicato, and Luiz F.R.C. Carmo</i>	
Fuzzy Logic Based Energy Aware VM Consolidation . . . . .	31
<i>Mohammad Alaul Haque Monil and Rashedur M. Rahman</i>	
Autonomic and Cognitive Architectures for the Internet of Things. . . . .	39
<i>Claudio Savaglio and Giancarlo Fortino</i>	

## Sensor Networks

Sensor Web Enablement Applied to an Earthquake Early Warning System. . .	51
<i>Ana María Zambrano, Israel Pérez, Carlos E. Palau, and Manuel Esteve</i>	
Towards Motion Characterization and Assessment Within a Wireless Body Area Network. . . . .	63
<i>Martin Seiffert, Norman Dziengel, Marco Ziegert, Robert Kerz, and Jochen Schiller</i>	
Data Driven Transmission Power Control for Wireless Sensor Networks . . . .	75
<i>Roshan Kotian, Georgios Exarchakos, and Antonio Liotta</i>	
Mining Regularities in Body Sensor Network Data . . . . .	88
<i>Syed Khairuzzaman Tanbeer, Mohammad Mehedi Hassan, Majed Alrubaian, and Byeong-Soo Jeong</i>	

## Smart Cities and Smart Buildings

Task Execution in Distributed Smart Systems . . . . .	103
<i>Uwe Jänen, Carsten Grenz, Sarah Edenhofer, Anthony Stein, Jürgen Brehm, and Jörg Hähner</i>	

Inferring Appliance Load Profiles from Measurements . . . . .	118
<i>Geir Horn, Salvatore Venticini, and Alba Amato</i>	
Intra Smart Grid Management Frameworks for Control and Energy Saving in Buildings . . . . .	131
<i>Antonio Guerrieri, Jordi Serra, David Pubill, Christos Verikoukis, and Giancarlo Fortino</i>	
Urban Crowd Steering: An Overview . . . . .	143
<i>Claudio Borean, Roberta Giannantonio, Marco Mamei, Dario Mana, Andrea Sassi, and Franco Zambonelli</i>	
<b>Distributed Computing</b>	
Towards a Self-Adaptive Middleware for Building Reliable Publish/Subscribe Systems . . . . .	157
<i>Sisi Duan, Jingtao Sun, and Sean Peisert</i>	
Review of Replication Techniques for Distributed Systems. . . . .	169
<i>Ahmad Shukri Mohd Noor, Nur Farhah Mat Zian, Mustafa Mat Deris, and Tutut Herawan</i>	
Connectivity Recovery in Epidemic Membership Protocols . . . . .	177
<i>Pasu Poonpakdee and Giuseppe Di Fatta</i>	
<b>Parallel Computing</b>	
Optimisation Techniques for Parallel K-Means on MapReduce . . . . .	193
<i>Sami Al Ghamdi, Giuseppe Di Fatta, and Frederic Stahl</i>	
Epidemic Fault Tolerance for Extreme-Scale Parallel Computing. . . . .	201
<i>Amogh Katti and Giuseppe Di Fatta</i>	
A GPU-Based Statistical Framework for Moving Object Segmentation: Implementation, Analysis and Applications. . . . .	209
<i>Alfredo Cuzzocrea, Enzo Mumolo, Alessandro Moro, and Kazunori Umeda</i>	
<b>Advanced Networking</b>	
Hardware-Assisted IEEE 802.15.4 Transmissions and Why to Avoid Them . . . . .	223
<i>Andreas Weigel and Volker Turau</i>	
Containment of Fast Scanning Computer Network Worms . . . . .	235
<i>Muhammad Aminu Ahmad and Steve Woodhead</i>	

Fragmented-Iterated Bloom Filters for Routing in Distributed Event-Based Sensor Networks . . . . .	248
<i>Cristina Muñoz and Pierre Leone</i>	

## **Big Data and Social Networks**

Fast Adaptive Real-Time Classification for Data Streams with Concept Drift . . . . .	265
<i>Mark Tennant, Frederic Stahl, and João Bártoło Gomes</i>	

Omentum – A Peer-to-Peer Approach for Internet-Scale Virtual Microscopy . . . . .	273
<i>Andreas Barbian, Dennis Malenica, Timm J. Filler, and Michael Schoettner</i>	

Using Social Networks Data for Behavior and Sentiment Analysis . . . . .	285
<i>Barbara Calabrese, Mario Cannataro, and Nicola Ielpo</i>	

Sentimental Preference Extraction from Online Reviews for Recommendation . . . . .	294
<i>Nieqing Cao, Jingjing Cao, Panpan Liu, and Wenfeng Li</i>	

<b>Author Index . . . . .</b>	<b>305</b>
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