PART II of the IEEE Transactions on Computational Social Systems Special Issue on Cyber–Physical–Social Systems (CPSS) includes six papers that are on emerging techniques for radio access networks, data deduplication, big data computing, smart community, cloud computing, and Internet of Things.

The paper “QoE-Guaranteed and Power-Efficient Network Operation for Cloud Radio Access Network with Power over Fiber” by Suto et al. envisioned a cloud radio access network based on passive optical network exploiting power over fiber, which achieves low installation and operation costs, as it is capable of providing communication services without external power supply for large amount of remote radio heads.

The paper “Secure Data Deduplication With Reliable Key Management for Dynamic Updates in CPSS” by Wen et al. proposed a session key-based convergent key management scheme to secure the dynamic update in data deduplication and a convergent key-sharing scheme to enable group combination and remove the aid of gateway.

The paper “Cyberthreat Analysis and Detection for Energy Theft in Social Networking of Smart Homes” by Liu and Hu aimed to explore the social behaviors among networked smart home customers for the study on smart community cybersecurity and focused on the energy theft cyberattack.

The paper “SCLPV: Secure Certificateless Public Verification for Cloud Storage in Cyber–Physical–Social System” by Zhang et al. proposed a secure certificateless public integrity verification scheme which simultaneously supports certificateless public verification and resistance against malicious auditors to verify the integrity of outsourced data in CPSS.

The paper “Energy Efficient Location and Activity-Aware On-Demand Mobile Distributed Sensing Platform for Sensing as a Service in IoT Clouds” by Perera et al. proposed a context-aware, specifically, location and activity-aware, mobile sensing platform for the IoT domain, which is evaluated by using three real-world scenarios that highlight the importance of selective sensing.

The paper “Distributed Algorithms for the Operator Placement Problem” by Nikos et al. proposed a fully distributed approach for the operator placement problem in wireless sensor networks, which takes into account the WSN node capacity constraints.

In conclusion, the papers presented in this Special Issue demonstrate the breadth and diversity of research in the field of CPSS.

The guest editors would like to thank both the authors and the reviewers for their hard work in helping us organize this Special Issue. They would also like to express their sincere gratitude to the Editors-in-Chief, Prof. G. Cybenko and Prof. E. E. Santos, for providing this opportunity and lots of guidance throughout the process, and the Editorial Staff L. A. Cullen for their continuous support and professionalism.

MIANXIONG DONG, Guest Editor
Muroran Institute of Technology
Hokkaido 050-0071, Japan

RAJIV RANJAN, Guest Editor
School of Computing Science
Newcastle University
Newcastle upon Tyne, NE1 7RU, U.K.

ALBERT Y. ZOMAYA, Guest Editor
Centre for Distributed and High Performance Computing
School of Information Technologies
The University of Sydney
Sydney, N.S.W. 2006, Australia

MAN LIN, Guest Editor
Department of Computer Science
St. Francis Xavier University
Antigonish, NS B0H 1X0, Canada
Mianxiong Dong received the B.S., M.S., and Ph.D. degrees in computer science and engineering from the University of Aizu, Aizu-wakamatsu, Japan, in 2006, 2008, and 2013, respectively. He is currently an Assistant Professor with the Department of Information and Electronic Engineering, Muroran Institute of Technology (Muroran-IT), Hokkaido, Japan. Prior to joining Muroran-IT, he was a Researcher at the National Institute of Information and Communications Technology (NICT), Tokyo, Japan. He was a JSPS Research Fellow with the School of Computer Science and Engineering, University of Aizu, and was a Visiting Scholar at BBCR Group, University of Waterloo, Waterloo, ON, Canada, supported by JSPS Excellent Young Researcher Overseas Visit Program from April 2010 to August 2011. He was selected as a Foreigner Research Fellow (a total of three recipients all over Japan) by NEC C&C Foundation in 2011. He has authored or coauthored 120 research papers published in international journals, conferences, and books. His research interests include wireless networks, cloud computing, and cyber–physical systems.

Dr. Dong serves as an Associate Editor for the IEEE COMMUNICATIONS SURVEYS AND TUTORIALS, the IEEE NETWORK, the IEEE ACCESS, and Cyber–Physical Systems (Taylor & Francis). He has been serving as the Program Chair of IEEE SmartCity 2015 and Symposium Chair of IEEE GLOBECOM 2016. He is currently a Research Scientist with A3 Foresight Program (2011–2016) funded by Japan Society for the Promotion of Sciences (JSPS), NSFC of China, and NRF of Korea. He was the recipient of the Best Paper Awards from the IEEE HPCC 2008, the IEEE ICESS 2008, ICA3PP 2014, GPC 2015, and the IEEE DASC 2015.

Rajiv Ranjan received the B.Eng degree from North Gujarat University, Gujarat, India, in 2002 and the Ph.D. degree in school of computer and software engineering from University of Melbourne, Melbourne, Australia, in 2009.

He has been a Reader (Associate Professor) of Computing Science with Newcastle University, Newcastle upon Tyne, U.K., since September 1, 2015. He is an Internationally Renowned Researcher in the areas of cloud computing, Internet of Things (IoT), and big data. By applying ground-breaking combination of well-founded formal models from four domains (operations research, computational statistics, peer-to-peer networking, and performance engineering) of computer science, he has developed novel algorithmic techniques and distributed system architectures that facilitate service level agreement (SLA) driven provisioning of multimedia (e.g., content delivery networks), eScience (e.g., scientific workflows), and IoT applications (e.g., remote sensing) applications over multiple cloud datacenters. He has authored or coauthored more than 150 peer-reviewed scientific publications, including publications in the IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS (ERA A*), the IEEE TRANSACTIONS ON COMPUTERS (ERA A*), Journal of Computer and System Sciences (ERA A*), and the IEEE/ACM World Wide Web conference (CORE A+). His research is widely recognized through citations (more than 5000 Google Scholar citations—https://goo.gl/7FONZN and more than 800 Web of Science citations—http://goo.gl/St567J).

Albert Y. Zomaya (S’82–M’90–SM’97–F’04) received the B.Eng degree from Kuwait University, Kuwait City, Kuwait, in 1987 and the Ph.D. degree from Sheffield University, Sheffield, U.K., in 1990.

He is the Chair Professor of High-Performance Computing and Networking with the School of Information Technologies, University of Sydney, Sydney, N.S.W., Australia, and he also serves as the Director of the Centre for Distributed and High-Performance Computing. He has authored or coauthored more than 500 scientific papers and articles and is author, coauthor, or editor of more than 20 books. His research interests include the areas of parallel and distributed computing and complex systems.

Prof. Zomaya is a Chartered Engineer, a Fellow of AAAS and IET. He is the Founding Editor-in-Chief of the IEEE TRANSACTIONS ON SUSTAINABLE COMPUTING and serves as an Associate Editor for 22 leading journals. He served as an Editor-in-Chief for the IEEE TRANSACTIONS ON COMPUTERS (2011–2014). He was the recipient of the IEEE Technical Committee on Parallel Processing Outstanding Service Award (2011), the IEEE Technical Committee on Scalable Computing Medal for Excellence in Scalable Computing (2011), and the IEEE Computer Society Technical Achievement Award (2014).
Man Lin received the B.E. degree in computer science and technology from Tsinghua University, Beijing, China, in 1994, and the Lic. and Ph.D. degrees in computer science and information from Linkoping University, Linkoping, Sweden, in 1997 and 2000, respectively.

She is currently a Professor of Computer Science with St. Francis Xavier University, Antigonish, NS, Canada. Her research interests include system design and analysis, power aware scheduling, and optimization algorithms. Her research is supported by the National Sciences and Engineering Research Council, Canada (NSERC) and the Canada Foundation for Innovation (CFI).