Guest Editorial on Advances in Tools and Techniques for Enabling Cyber–Physical–Social Systems—Part II

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 versification 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.

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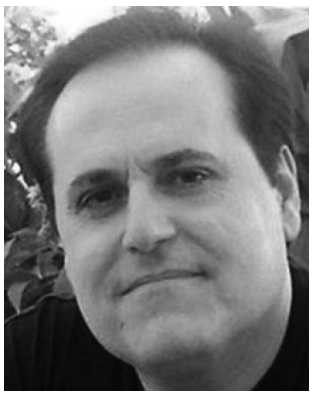

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