Preface

The purpose of the 17th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2016) held during May 30–June 1, 2016 in Shanghai, China, is aimed at bringing together researchers and scientists, businessmen and entrepreneurs, teachers and students to discuss the numerous fields of computer science, and to share ideas and information in a meaningful way. This publication captures 14 of the conference’s most promising papers, and we impatiently await the important contributions that we know these authors will bring to the field.

In Chap. “Dealing with Missing Values in Software Project Datasets: A Systematic Mapping Study”, Ali Idri, Ibtissam Abnane, and Alain Abran carried out a systematic mapping study to summarize the existing techniques dealing with MV in SE datasets and to classify the selected studies according to six classification criteria. The study shows an increasing interest in machine learning (ML) techniques.

In Chap. “Testing and Code Review Based Effort-Aware Bug Prediction Model”, K. Muthukumaran, N.L. Bhanu Murthy, G. Karthik Reddy, and Prateek propose an effort-aware bug prediction model that will consider the effort required to perform the specific quality assurance activity and empirically prove the supremacy of these models over the existing effort-aware models.

In Chap. “Improving the Efficiency of Schedulability Tests for Fixed Priority Preemptive Systems”, Guangliang Yu, Mengfei Yang, Hejie Sun, and Hong Jiang discuss the way of how to find better initial values for sufficient schedulability tests. Extensive evaluations show that the schedulability tests found by our method need less runtime than state-of-the-art approaches.

In Chap. “Justifying the Transition from Trustworthiness to Resiliency via Generation of Safety Cases”, Chung-Ling Lin, Wuwei Shen, and Steven Drager propose a novel approach to show how an argument structure can be automatically built via safety case patterns and metamodels underlying a development process.

In Chap. “Select and Test (ST) Algorithm for Medical Diagnostic Reasoning”, D.A. Irosh P. Fernando and Frans A. Henskens present an enhanced version of the ST Algorithm. The focus of this paper is on the algorithm, which is intended to give a theoretical proof that medical expert systems are achievable.

In Chap. “Opportunities Ahead the Future Mobile Learning”, Regin Joy Conejar, Haeng-Kon Kim, and Roger Y. Lee discuss the opportunities ahead the future mobile learning. The paper reflects on the innovation and the complexities that are currently emerging in education as a result of these technological advancements.

In Chap. “A Design of Context-Aware Framework for Conditional Preferences of Group of Users”, Reza Khoshkangini, Maria Silvia Pini, and Francesca Rossi propose a context-aware framework that provides service(s) according to the current context of entities and the current users’ preferences, which are naturally conditional.

In Chap. “Design of Decentralized Inter-Cell Interference Coordination Scheme in LTE Downlink System”, Yen-Wen Chen and KangHao Lo propose a decentralized ICIC algorithms, named relative throughput based resource block coordination (RTRBC) and RTRBC with residual RB (RTRBC_r), to deal with the coordination among eNBs within the existing LTE framework.

In Chap. “Toward Flow-Based Ontology”, Sabah Al-Fedaghi introduces an exploratory study of ontology multi-relationships with the aim of adding a more systematic foundation that visualizes structure and incorporates procedures in the form of input-process-output.

In Chap. “Mobile Component Integration Agent (MCIA) for Social Business Application”, Yvette E. Gelogo, Haeng-Kon Kim, and Roger Y. Lee propose a mobile component integration agent (MCIA) for social business application as a software development methodology to simply integrate the different technology building blocks into one web-based solution.

In Chap. “Covariance Estimation for Vertically Partitioned Data in a Distributed Environment”, Aruna Govada and S.K. Sahay propose a communication-efficient algorithm to estimate the covariance matrix in a distributed manner. The results show that it is exactly same as centralized method with good speed-up in terms of computation.

In Chap. “MIMO Antenna Design for Future 5G Wireless Communication Systems”, M. Aziz ul Haq, M. Arif Khan, and Md. Rafiqul Islam presents a novel multiple input multiple output (MIMO) antenna design for future 5G wireless communication systems. An ultra-wideband antenna array is designed on a printed circuit board which is suitable for radio frequency circuits.

It is our sincere hope that this volume provides stimulation and inspiration, and that it will be used as a foundation for works to come.

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