Editorial

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This issue contains selected papers from the proceedings of the second in the SETTA (the Symposium on Dependable Software Engineering: Theories, Tools and Applications) series of conferences—held during November 9–13, 2016, in Beijing, China. The symposium series was inaugurated in 2015 to build a forum for computer scientists and software engineers from Chinese and international communities to exchange and inform each other of research ideas and activities, building new collaborations and strengthening existing collaborations among formal methods researchers inside and outside China.

SETTA 2016 received 45 full-paper submissions out of which 17 full papers and 3 short paper were included in the program along with 3 invited talks. The conference proceedings is included in the Springer LNCS series as volume 9984. SETTA 2016 had a young SETTA Researchers Workshop. Another inaugural event—the first National Conference on Formal Methods and Applications in China—was also collocated with SETTA.

This special issue includes submissions invited by the PC chairs based on the reviews of the conference submissions and invited talks. The authors were required to include additional material beyond the contents of the papers included in the conference proceedings. The submissions went through multiple rounds of refereeing following the strict guidelines of this journal, which led to acceptance of the three papers included in this issue.

Toward Automatic Verification of Quantum Programs by Prof. Mingsheng Ying is an excellent summary and overview of theory and methods for Floyd-Hoare style verification of quantum programs, developed by his group over the past decade. The paper gives axiomatic semantics of the basic statements in a quantum programming language and proof rules for generating verification conditions.

GPU Accelerated Steady State Computation of Large Probabilistic Boolean Networks by Andzej Mizera, Dr. Jun Pang and Qixia Yuan proposes a trajectory-level parallelization using GPUs to accelerate the computation of steady state probabilities in large probabilistic Boolean networks reporting substantial speed-ups.

Extensional Petri Nets by Drs. Xiaoju Dong, Yuxi Fu and Daniele Varacca, discusses bisimulation semantics and observational properties of extensional Petri nets. Extensional Petri nets are proposed and shown to be more suitable for the compositionality property than open Petri nets in the literature.

The conference received financial support from the Institute of Software, the Chinese Academy of Sciences (ISCAS), the Chinese Computer Federation (CCF) and the Natural Science Foundation of China (NSFC). We thank the Editors-in-Chief James Woodcock and Cliff Jones and Associate Editor John Cooke for their support for the conference as well as encouraging us to prepare this contribution for Formal Aspects of Computing.

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