## Special Issue on Software Quality, Reliability, and Security

Software today plays an imperative role in many systems, including service-oriented, mission, and safety-critical systems. Software failures can result in catastrophic consequences directly or indirectly. Not only can they lead to property damage and financial loss, but they may cause serious injury or even loss of life. Preventing such failures is of paramount importance.

Quality, Reliability, and Security compliment each other, but cannot be replaced by one or another. With higher complexity, faster development, and less resources, it is a significant challenge for researchers and practitioners to produce high quality, reliable, and secure software at reduced cost.

The aim of this special issue is to gather the recent advances in improving software quality, reliability, and security, and explore the impact of using supporting tools on software development practices.

All submissions should be supported by appropriate arguments and validation through case studies, experiments, or systematic comparisons with other approaches already in practice.

We seek high-quality original submissions that have not been previously published and that are not under consideration for publication elsewhere, as well as extended versions of selected papers of the 19th IEEE International Conference on Software Quality, Reliability and Security (QRS 2019; http://qrs.techconf.org).

**Topics**

- Reliability, security, availability, and safety of software systems
- Software testing, verification, and validation
- Program debugging and comprehension
- Information and software quality assurance
- Fault tolerance for software reliability improvement
- Modeling, prediction, simulation, and evaluation
- Metrics, measurements, and analysis
- Secure and reliable storage
- Software penetration and protection
- Software vulnerabilities
- Formal methods
- Malware detection and analysis
- Intrusion detection and prevention
- Operating system security and reliability
- Mobile and smartphone applications
- Internet of things and cloud computing
- Information and knowledge management
- Benchmark, tools, industrial applications, and empirical studies

**Submission Information**

All submitted papers should follow the guidelines for publishing in the *Journal of Systems and Software* and be prepared according to the Guide for Authors https://www.elsevier.com/journals/of-systems-and-software/0164-1212/guide-for-authors. Please select SI: Software QRS to indicate that you are submitting to this special issue.

Papers already presented at a conference should contain at least 30% new technical contributions. Authors are requested to attach a summary explaining the improvements and extensions made in the journal version.

Submissions will be reviewed by at least three experts in the field. The guest editors in consultation with the Special Issues Editor and the Editors-in-Chief will make the final decisions.

**Important Dates**

- Submission:          September 15, 2019
- Notification:         December 15, 2019
- Revision:             February 15, 2020
- Final Decision:       April 15, 2020
- Final Manuscript:     May 15, 2020

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