CfP: Advances in Dependability and Maintenance for Software Systems

As technological advancements like cloud computing and AI evolve, they bring new challenges in maintaining and ensuring the reliability, security, and availability of these systems. This issue aims to highlight innovative research, practical challenges, and advanced methodologies that enhance software dependability and maintenance. It will serve as a critical resource for both academic society and industrial world, fostering a synergy between theoretical research and practical application, thereby contributing to more robust and resilient software systems.

Topics of Interest

The special issue aims to gather contributions that advance the field of dependability and maintenance analysis for software systems. The topics of interest include, but are not limited to:

- System reliability and reliability modeling
- Software testing, verification, and validation
- Human reliability, Bayesian reliability, and Fuzzy reliability
- Techniques and approaches for safety-critical systems
- Dependability measurement, modeling, evaluation, and tools
- Dependability techniques and methodologies for complex systems
- Dependable systems design
- Self-healing, self-protecting, and self-adaptive systems
- Fault-tolerant techniques
- Studies on non-deterministic bugs, aging-related bugs, etc.
- Big data and computing
- Accelerated degradation testing
- Quality assurance in server systems, cyber-physical systems, learning-based systems, etc.
- Internet of things (IoT) architectures, protocols, security and privacy
- Network reliability and optimization
- Estimation and statistical testing
- Survival analysis and warranty analysis
- Modeling and simulation of complex systems
- Analysis of software faults/bugs, errors, and failures
- Fault localization for complex bugs
- Maintenance optimization, maintainability and availability
- Repairing and re-engineering for complex systems
- Analytical, empirical, and experimental studies of any of the above topics

Important Dates

The important dates for the special issue are:

- Paper submission due: **October 31, 2024**
- Reviewing due: **December 31, 2024**
- Author revision due: **January 31, 2025**
- Final notification due: **February 28, 2025**

Guest Editors

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