

# CALL FOR PAPERS

## Special Section on “Software Reliability Engineering: Emerging Trends, AI-Driven Methods, and Industrial Practices”

In collaboration with the 37th IEEE International Symposium on Software Reliability Engineering (ISSRE 2026)

The rapid evolution of modern software, spanning cloud-to-edge environments, autonomous systems, and generative AI, has made software reliability a cornerstone of the digital age. As software systems become increasingly complex and integrated into safety-critical domains, the need for advanced techniques to assess, predict, and improve their reliability, security, and resilience is more urgent than ever. This Special Section seeks high-quality, original contributions that advance the theory and practice of software reliability engineering, bridging academic research and industrial application. Authors of the most highly-rated papers from ISSRE 2026 are especially invited to submit extended versions of their work.

### Topics of Interest

We invite submissions on topics including, but not limited to, the following:

- **Foundations of reliability and dependability:** models, metrics, and theories of resilience, robustness, and safety
- **AI-driven software reliability:** reliability engineering for AI-enabled and autonomous systems, including verification and certification of foundation and generative models
- **Reliability for emerging domains:** software assurance for cloud, edge, IoT, 5G/6G, and cyber-physical systems
- **Testing and verification:** fault prevention, removal, and forecasting, including model checking and runtime assurance
- **Security and trustworthiness:** intersections of reliability with privacy, fairness, and regulatory compliance
- **Human-centered and empirical research:** field studies, experience reports, and human factors in reliability engineering
- **Software reliability in practice:** reliability governance in DevOps pipelines, benchmarking, and industrial case studies

### Submission Guidelines

Manuscripts must be prepared according to the IEEE Transactions on Reliability Author Guidelines and submitted via the IEEE Author Portal: <https://iee.atyponrex.com/journal/tr-ieee>. When submitting, please select “Special Section on Software Reliability Engineering”.

**Special note for ISSRE 2026 authors.** Authors of selected high-quality ISSRE 2026 papers are encouraged to submit extended versions. To comply with IEEE TRel requirements for extended conference papers: (i) the journal submission must contain at least 30–40% new technical content beyond the conference version; (ii) authors must provide a cover letter explicitly detailing the new contributions and how the paper differs from the conference version; (iii) the conference paper must be cited and the journal version must clearly represent a substantive advancement (e.g., new research questions, updated results, or more comprehensive evaluations).

### Guest Editors

- **Domenico Cotroneo**  
University of North Carolina at Charlotte, USA
- **Jie M. Zhang**  
King’s College London, UK
- **Jianwen Xiang**  
Wuhan University of Technology, China
- **Nuno Laranjeiro**  
University of Coimbra, Portugal

### Important Dates

- **Manuscript Submission Deadline:**  
December 20, 2026
- **First-Round Review Completed:**  
February 10, 2027
- **Revised Manuscript Submission:**  
March 10, 2027
- **Final Decision Notification:**  
April 25, 2027 (tentative)
- **Publication of the Special Section:**  
June 2027 (tentative)

**More Information:** For further information, please contact any of the Guest Editors.