

Third International Workshop on Recent Advances in Program Analysis and Software Testing (RAPAST 2024)

Co-located at



QRS 2024

The 24th International Conference on
Software Quality, Reliability, and Security
July 1-5, 2024 • Cambridge, United Kingdom

Description

Testing consumes the largest effort among all phases of software development. More than 50% of the development effort is being spent on testing. Reliability, quality and effective reuse of software depend to a large extent on thorough testing. Software testing requires the largest manpower among all other development roles, which implies more job opportunities in software industries. Software testing is getting more complex and sophisticated every year due to larger and more complex programs and newer programming paradigms, such as object-oriented programming, aspect-oriented programming, feature-oriented programming, etc. The traditional black box and white box testing techniques cannot be directly applied to the testing of software developed in these programming languages.

Software testing has emerged as one of the breakthroughs in Software Engineering. Various software testing techniques and tools have been developed in recent days to assist software developers and testers. These testing techniques will help in achieving better reliability and quality of the software systems. Also, recently many new techniques have come up in the area of program analysis, which help in better software understanding and debugging. Hence, there is a need to promote research and development in these areas. This special session RAPAST-2024 will provide a forum for discussions on theoretical and practical aspects of advanced program analysis and testing, exchanging research ideas and challenges, and exploring possible solutions and future directions. The main aim of this special session is to bring together researchers and practitioners from both academia and industry. This special session is an attempt to bring together the researchers and practitioners who are working in the areas of program analysis, software testing, software reliability and quality, to discuss and present their work.

Topics

The list of topics includes, but is not limited to:

- Program Analysis
 - Static Analysis
 - Dynamic Analysis
 - Program Slicing and its Applications
 - Test case generation and certification
- Software Verification
 - Different verification techniques
 - Verification and Validation
 - Applications of Verification
- Software Testing
 - Black-box Testing
 - White-box Testing
 - Mutation Testing
 - Model Based Testing
 - Integration Testing
 - System Testing
 - Performance Testing
 - Regression Testing
 - Test Case Optimization
 - Test Case Prioritization
 - Test Case Management
 - Automated Testing Tools
- Special Testings
 - Testing of Agile Software
 - Testing of O-O Software
 - Testing of Web-based Software
 - Testing of Client-Server Applications
 - Testing of Mobile / Android Apps
 - Testing of IOT based Applications
 - Testing of Big Data Applications
 - Testing of Data warehousing Software
 - Any Other Special Testing
- Software Debugging
- Software Reliability
 - Reliability Prediction
 - Assurance and metrics
 - Applications of Reliability
- Software Quality
- Program Repair
- Software Fault Localization
- Applications of Machine Learning and Deep Learning Techniques in Software Testing and Reliability

Submission

Authors are invited to submit original unpublished *research papers* as well as *industrial practice papers*. Simultaneous submissions to other conferences are not permitted. Detailed instructions for electronic paper submission, panel proposals, and review process can be found at [QRS submission](#).

Each submission can have a maximum of ten pages. It should include a title, the name and affiliation of each author, a 300-word abstract, and up to 6 keywords. Shorter version papers (up to six pages) are also allowed.

All papers must conform to the QRS conference proceedings format ([PDF](#) | [Word DOCX](#) | [Latex](#)) and Submission Guideline set in advance by QRS 2024. At least one of the authors of each accepted paper is required to pay the full registration fee and present the paper at the workshop. Submissions must be in PDF format and uploaded to the conference submission site. Arrangements are being made to publish extended version of top-quality papers in selected SCI journals.

Program Chairs

Dr. Sangharatna Godbole
Asst. Professor
CSE Department
NIT Warangal

Dr. Durga Prasad Mohapatra
Professor
CSE Department
NIT Rourkela

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Previous RAPAST

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- [RAPAST 2023](#) - Prayagraj (in conjunction with ISEC 2023)

- [RAPAST 2019](#) - Kochi (in conjunction with TENCON 2019)

Important Dates

- **April 1, 2024**

Workshop papers due

- **May 6, 2024**

Author notification
(Regular & Short, Workshop, Fast Abstracts, Industry Track, Posters)

- **June 1, 2024**

Author registration due

- **June 1, 2024**

Camera-ready due

- **July 1 - 5, 2024**

Conference dates

General Inquiries

- [QRS Secretariat](#)