CALL FOR PAPERS

Special Session
on
Recent Advances in Program Analysis and Software Testing
(RAPAST-2019)

Overview:

The conference on Program Analysis and Software Testing is a special session which will be held in conjunction with TENCON-2019, Kochi, Kerala, India. It is in line with the scope of TENCON-19 which will be specially focus on the theme of the event. The theme is based on the research work specific to the areas mentioned in the scope of this conference. RAPAST-2019 is expected to be a good avenue where the researchers from Academia and Industries will participate by presenting their most recent research findings and experimental results in the domain of the scope.

Aim and Scope:

Testing consumes largest effort among all phases of software development. More than 50% of 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 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 for 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 the 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-2019 will provide a forum for discussions on theoretical and

practical aspects of advanced program analysis and testing, exchanging research ideas and challenges, 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.

RAPAST-19 includes majorly the following domains, but not restricted to:

1. Program Analysis
   - Static Analysis
   - Dynamic Analysis
   - Program Slicing and its Applications
   - Test case generation and certification
2. Software Verification
   - Different verification techniques
   - Verification and Validation
   - Applications of Verification
3. 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
4. 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

5. Software Debugging
6. Software Reliability
   - Reliability Prediction
   - Assurance and metrics
   - Applications of Reliability
7. Software Quality
8. Program Repair
9. Software Fault Localization
10. Applications of Machine Learning and Deep Learning Techniques in Software Testing and Reliability

Submission:

We invite good submission of research papers describing original and unpublished results of the topics mentioned in the scope. There will be two tracks in RAPAST-19. First track will be the FULL PAPER and second will be SHORT PAPER. Each paper submitted to the both tracks will be evaluated based on their originality, soundness, completeness, high level of English language, verifiability, and presentation.

How to Submit:

The papers should be according to the IEEE format and specifications. All submissions must be in English only. Authors are invited to submit FULL paper (Maximum 6 pages, double-column US letter size) and SHORT paper (Maximum 2 pages, double-column US letter size) as PDF using the IEEE templates. The IEEE paper template can be downloaded from the link given below:

http://www.ieee.org/conferences_events/conferences/publishing/templates.html.

The submission of papers has to be done through the TENCON website www.tencon2019.org.

Papers will be screened for plagiarism and when identified the paper will be rejected. All papers that conform to submission guidelines will be peer reviewed and evaluated based on originality, technical and/or research content/depth, correctness, relevance to conference, contributions, and readability. Acceptance of papers will be communicated to authors by email.

The authors of the accepted papers will be allowed to make corrections in accordance with the suggestions of the reviewers and submit the final camera-ready papers within the stipulated deadline.

Important Dates:

- Submission Deadline : **June 30, 2019**
- Paper Notification Date : **August 15, 2019**
- Camera-Ready : **August 30, 2019**

Presentation:

Once paper gets accepted, then at least one of the authors must register and present their accepted paper(s) as per below instructions:

1) FULL paper (Talk of 15 min and Q&A 5 min)
2) SHORT paper (Display of POSTER during the session)

Committees:

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Mr. K. Vinod Kumar, NIT Rourkela
Mr. Pushkar Kisore, NIT Rourkela

Registration:

Each accepted paper must be registered to get included in conference proceedings. Please see the registration structure here: http://www.tencon2019.org/reg.html

Publication:

All accepted, registered, and presented papers will be included in the special session proceedings. Some selected papers will be published in a reputed international journal.

TENCON 2019
17-20 October 2019
Hotel Grand Hyatt, Kochi, Kerala
Technology, Knowledge, and Society

Sponsorships:

All agencies and organisations are open to contact for sponsorships.

Contact Us:

Dr. Durga Prasad Mohapatra
Professor
Department of Computer Science and Engineering
National Institute of Technology Rourkela
Rourkela - 769008, Odisha, India
Email: durga@nitrkl.ac.in
Phone: +91-661-2462356 (O), +91-9437648628 (Mob)
Website: https://www.nitrkl.ac.in/CS/~durga/

Dr. Sangharatna Godboley
Postdoctoral Research Fellow
Department of Computer Science,
School of Computing,
National University of Singapore
Computing 1, 13 Computing Drive
Singapore 117417
Email: sanghara@comp.nus.edu.sg
Phone: +6581660839 (Mob)
Website: https://www.comp.nus.edu.sg/cs/bio/sanghara/