

Special Session
on
“Modern Inclinations in Software Engineering and Cloud Testing”

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Abstract

Objective: The objective of this special session is to produce suitable quality research work on modern developments in software testing in cloud. It will act as medium for software industry scientists spread across globe to showcase their research and recent advances in this field. Both theoretical studies and state of the art practical applications are invited for submission. On the other side, bio-medical knowledge-based systems are an intelligent systems and based on the concepts and theories of many sciences, e.g., artificial intelligence, data science, social science, information science, computer science, behavioral science, life sciences and health care.

About Special Session: Cloud computing has appeared as an innovative computing paradigm that effects numerous different research areas, including software testing. Cloud computing also facilitates and provides opportunities for the development of more effective and scalable software testing techniques. Software testing has been one of the best practice areas for migrating to cloud environment. Virtualization, which is an enabling technology of cloud computing, was first used for quickly creating virtual computing resources with different operating systems (OS) to test software applications on various platforms. Testing new software often requires costly server, storage and network devices only for a limited time. These computing resources are either not used or underutilized after testing, thus incurring extra cost on budget.

Especially in some application domains, software testing requires extensive resources. Test automation topic is frequently visited when software testing is considered over the cloud. There are many test automation tools in the market, which address different requirements in a testing life-cycle (e.g., automated test data generation, test case generation, test execution and test evaluation). We believe our evaluation will also motivate the migration of those tools to the cloud. One of the major drivers of cloud computing adoption is economies of scale. It provides a pay-per-use type of service, thus eliminating the upfront investment in many cases. Testing tools and services are no exception. Development teams can benefit from this paradigm for utilizing test tools when they need it and as much as they need it, thus saving license fees.

In this context, this special session aims to provide a mean for researchers and practitioners to publish their recent advances on software testing on cloud.

Specifically, it is going to welcome papers with solid results and a strong contribution to research trends on software testing, as well as empirical evidence on such approaches.

This special session focuses on bringing together the community that has been researching on software testing on cloud. The topics covered include, but are not limited to, the following:

- Tools and Techniques
- Collaborative Testing
- Cloud Testing
- Combinatorial testing and random testing
- Cloud/SaaS oriented testing
- Web Application Testing on Cloud
- Cloud Application Testing over cloud
- On Demand Test Environment Creation
- Testing Security Measure in Cloud
- Integration testing in Cloud
- Regression Testing
- Pragmatic studies
- Mobile application testing
- Combined techniques for automated testing