Joint CSE/QUDOS Workshop 2020

**5th Workshop on Continuous Software Engineering
and
6th International Workshop on Quality-Aware DevOps**

**Co-located with the
14th European Conference on Software Architecture (ECSA 2020)**

**L'Aquila, Italy - September 14-18, 2020
(exact day to be announced)**

**https://cse2020.swc-rwth.de/ - http://2020.qudos-workshop.org/
https://twitter.com/qudos_workshop**

IMPORTANT DATES

SUBMISSION DEADLINE: JUN 19, 2020 (AOE)
PAPER NOTIFICATION: JUL 13, 2020

CAMERA-READY DEADLINE: JUL 22, 2020
WORKSHOP DATE: SEP 14-18, 2020 (T.B.A.)

DON'T STOP ARCHITECTING!
PLEASE CHECK THE MESSAGE FROM THE ECSA 2020 GENERAL CHAIR ON COVID-19:
HTTPS://ECSA2020.DISIM.UNIVAQ.IT/ATTENDING/MESSAGE-FROM-GENERAL-CHAIR

Scope and Topics

DevOps extends the agile development principles to include the full stack of software services, from design to execution, enabling and promoting collaboration of operations, quality assurance, and development engineers throughout the entire service lifecycle. Ultimately, DevOps is a process that enables faster releases of a better product to the end user. DevOps encompasse a set of values, principles, methods, practices, and tools, to accelerate software delivery to the customer by means of infrastructure as code, continuous integration and deployment, automated testing and monitoring, or new architectural styles such as microservices. In the end all common software engineering activities, organizational forms and processes have to be questioned, adapted and extended to ensure continuous and unobstructed software development, this is the aim of continuous software engineering (CSE) research. Current software engineering research mainly deals with the development aspects of DevOps and CSE, focusing on development methods, practices, and tools, leaving the quality assurance aspects of DevOps behind.

Even though development practices such as testing (at all levels) are instrumental in producing quality software, they mostly deal with the functional correctness, while quality assurance deals with a more broadly defined concept of quality, of which functional correctness is just one dimension. However, DevOps needs methods and tools that enable systematic assessment, prediction, and management of software quality in other dimensions as well, including performance, reliability, safety, survivability, or cost of ownership.

The Joint CSE/QUDOS workshop provides a forum for experts from academia and industry to present and discuss novel quality-aware methods, practices and tools for DevOps. On the other hand, the goal of the CSE workshop is to present and discuss innovative solutions, ideas and experiences in the area of continuity along the entire software engineering lifecycle hence, Continuous Software Engineering.

For the second time, CSE and QUDOS join forces to foster cross-fertilization and bootstrap an even bigger, stronger community around the urgently emerging topics they are both addressing from different angles. Especially industry practitioners are invited to join this community and present challenges, solutions and lessons learned from real and complex projects.

Topics of interest include, but are not limited to:

- **Foundations:**
  DevOps Engineering & Quality Assurance Methodologies; integration with lifecycle management; automated tool chains; patterns & smells

- **Architecture:**
  Scalability and capacity planning; scale-out architectures; cloud-native application design; microservice-based architectures; model-driven architectures; architecture evolution and erosion

- **Development and Tooling:**
  Software models and requirements in early software development phases; functional and non-functional testing; languages, annotations and profiles for quality assurance; quality analysis, verification and prediction; optimization-based architecture design; Infrastructure-as-Code

- **Operation and Maintenance:**
  Application performance monitoring; model-driven performance measurement and benchmarking; feedback- based quality assurance; capacity planning and forecasting; architectural improvements; performance anti-pattern detection; traceability and versioning; trace and log analysis; software regression and testing; security and privacy; software health and self-healing; containerization and immutable infrastructure

- **Continuous X:**
  Continuous delivery and Continuous experimentation; deployment pipelines, canary releases and partial rollouts; A/B testing; performance and scalability testing via shadow launches

- **Applications and Experiences:**
  Case Studies in cloud computing, Big Data, and IoT/Edge Computing; standardization and interoperability; novel application domains, etc.

- All other topics related to quality in DevOps and agile service delivery models

Organizing Committee

CSE/QUDOS 2020 will be organized by the Program Committee Chairs and the Steering Committees of the CSE and QUDOS workshops series.

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Katja Kevic, Microsoft, UK

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Submission Guidelines

Authors are invited to submit original, unpublished papers that are not being considered in another forum. We solicit full papers (max. 12 pages), short papers (max. 5 pages), and industry abstracts (max. 2 pages). All submissions must conform to the Springer CCIS format.

Each full paper submission will be reviewed by at least three members of the program committee.

Papers should be submitted via EasyChair at:
https://easychair.org/conferences/?conf=csequdos2020

At least one author of each accepted paper is required to attend the workshop and present the paper. Presented papers will be published by Springer in the ECSA 2020 workshop proceedings.

Organization and Support

The **Joint CSE/QUDOS Workshop 2020** is organized and technically sponsored by the Research Group (RG) and the DevOps Performance Working Group of the Standard Performance Evaluation Corporation (SPEC RG, http://research.spec.org), and by the consortium of the EU project RADON (http://radon-h2020.eu/).

The workshop is also supported by:
- IFIP Working Group on Service Oriented Systems (http://ifip-wg-sos.deib.polimi.it/)
- GI Working Group Microservices and DevOps (https://ak-msdo.gi.de/)

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