

Joint Workshop CSE/QUDOS 2019

4<sup>th</sup> Workshop on Continuous Software Engineering and 5<sup>th</sup> International Workshop on Quality-Aware DevOps

# CALL FOR PAPERS CSE/QUDOS 2019

**5th International Workshop on Quality-Aware DevOps (QUDOS 2019)**

**Joint with the 4th Workshop on Continuous Software Engineering**

**March 26, 2019 in Hamburg, Germany**

## IMPORTANT DATES

FULL PAPER SUBMISSION DEADLINE: JAN 17, 2019

PAPER NOTIFICATION: FEB 07, 2019

CAMERA-READY DEADLINE: FEB 21, 2019

WORKSHOP DATE: MAR 26, 2019

## 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 encompasses 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 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 first 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.

For more information please visit: <http://2019.qudos-workshop.org>  
<https://cse2019.swc-rwth.de>

## 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

### PROGRAM COMMITTEE CHAIRS:

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Stephan Krusche, TU Munich, Germany  
Andreas Steffens, RWTH Aachen University, Germany  
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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 7 pages), short papers (max 4 pages), and industry abstracts (max 2 pages). All submissions must conform to the IEEE conference 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/cfp/cse-qudos-2019>

At least one author of each accepted paper is required to attend the workshop and present the paper. Presented papers will be published by IEEE and included in the IEEE Digital Library.

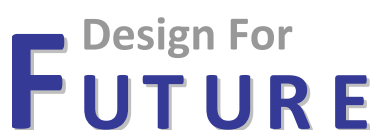
## Organization and Support

The Joint **CSE/QUDOS Workshop 2019** 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.

The workshop is also supported by:

- IFIP Working Group on Service Oriented Systems (<http://ifip-wg-sos.deib.polimi.it/>)
- DFG Priority Programme 1593 (SPP 1593) “Design For Future - Managed Software Evolution” (<http://www.dfg-spp1593.de/>), funded by the German Research Foundation (DFG)
- GI Working Group Microservices and DevOps (<https://ak-msdo.gi.de/>)

## SPONSORS



**DFG Priority Programme 1593**  
Design For Future - Managed Software Evolution

