



## CALL FOR PAPERS QUDOS 2018

4th International Workshop on Quality-Aware DevOps  
April 10, 2018 in Berlin, Germany

### IMPORTANT DATES

PAPER SUBMISSION DEADLINE: DEC 20, 2017

PAPER NOTIFICATION: FEB 09, 2018

CAMERA-READY DEADLINE: FEB 18, 2018

WORKSHOP DATE: APRIL 10, 2018

### Scope and Topics

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.

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.

Software engineering research mainly deals with the development aspects of DevOps, 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 aims to provide a venue for advances in the state of the art in DevOps quality assurance methods, practices, and tools. To this end, the workshop brings together experts from both academia and industry, working in diverse areas such as quality assurance, testing, performance engineering, agile software engineering, and model-based development, with the goal to identify, define, and disseminate novel quality-aware approaches to DevOps.

For more information please visit: <http://2018.qudos-workshop.org/>

### Topics of interest include, but are not limited to:

- **Foundations of quality assurance in DevOps:**  
Methodologies; integration with lifecycle management; automated tool chains; architecture patterns; etc.
- **Architectural issues in DevOps:**  
Scalability and capacity planning; scale-out architectures; cloud-native application design; microservice-based architectures
- **Quality assurance in the development phase:**  
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; etc.
- **Quality assurance during operation:**  
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; performance monitoring and analytics; etc.
- **Continuous deployment and live experimentation:**  
CI and CD in DevOps; canary releases and partial rollouts; A/B testing; performance and scalability testing via shadow launches
- **Applications of DevOps:**  
Case Studies in cloud computing, Big Data, and IoT; standardization and interoperability; novel application domains, etc.
- All other topics related to quality in DevOps and agile service delivery models

## Organizing Committee

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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 6 pages) and short tool papers (max 2 pages). All submissions must conform to the ACM 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/conferences/?conf=qudos2018>

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

## Organization and support

QUDOS 2018 is technically sponsored by the Research Group (RG) and the RG DevOps Performance Working Group of the Standard Performance Evaluation Corporation (SPEC RG), and by the consortium of the EU project DICE. The workshop is supported by the IFIP Working Group on Service Oriented Systems, and by the DFG Priority Programme 1593 (SPP1593) "Design For Future - Managed Software Evolution", funded by the German Research Foundation (DFG).

## SPONSORS



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