

Message from the QUDOS@ICPE '17 Chairs

It is our great pleasure to welcome you to the third edition of the *International Workshop on Quality-aware DevOps (QUDOS 2017)*, held on April 27, 2017 in L'Aquila, Italy, co-located with the 8th ACM/SPEC International Conference on Performance Engineering (ICPE 2017).

DevOps has emerged in recent years as a set of principles and practices for smoothing out the gap between development and operations, thus enabling faster release cycles for complex IT services. Common tools and methods used in DevOps include infrastructure as code, continuous deployment, automated testing, continuous integration, and new architectural styles such as microservices.

As of today, software engineering research has mainly explored these problems from a functional perspective, trying to increase the benefits and generality of these methods for the end users. However, this has left behind the definition of methods and tools for DevOps to assess, predict, and verify quality dimensions.

The QUDOS workshop focuses on the problem of how to best define and integrate quality assurance methods and tools in DevOps. Quality covers a broadly-defined set of dimensions including functional correctness, performance, reliability, safety, survivability, and cost of ownership, among others. To answer this question, the QUDOS workshop wants to bring together experts from academia and industry working in areas such as quality assurance, testing, performance engineering, agile software engineering, and model-based development. The goal is to identify and disseminate novel quality-aware approaches to DevOps.

QUDOS 2017 is a one-day workshop. The workshop has received ten submissions for full papers and four tool paper submissions. The quality of submissions was extraordinarily high, leading us to accept seven technical full papers proposing novel approaches for quality-aware DevOps and three short papers presenting tools in the scope of the workshop. These papers, listed below, have been selected by the program chairs based on the reviews provided by the QUDOS 2017 program committee members. Each submitted paper received three to four reviews. In addition to the talks presenting the accepted papers, QUDOS 2017 features two invited keynotes and ample space will be devoted to discussions on quality-aware DevOps.

Keynotes:

- Antiniscia Di Marco (L'Università degli Studi dell'Aquila). *DevOps and WSN App: a Bio-Inspired Paradigm*
- Francesco Chicchirico (TIRASA). *DevOps Practices and Tools of a Small Company in Love with Open Source*

Regular papers:

- V. Ferme and C. Pautasso. *Towards Holistic Continuous Performance Improvement*
- M. Guerriero, D. A. Tamburri, Y. Ridene, F. Marconi, M. M. Bersani, and M. Artac. *Towards DevOps for Privacy-by-Design in Data-Intensive Applications: A Research Roadmap*
- J. Kunz, R. Heinrich, and C. Heger. *A Generic Platform for Transforming Monitoring Data into Performance Models*
- M. Migliarina and D. A. Tamburri. *Towards Omnia: A Monitoring Factory for Quality-Aware DevOps*
- D. Perez-Palacin, Y. Ridene, and J. Merseguer. *Quality Assessment in DevOps: Automated Analysis of a Tax Fraud Detection System*

- G. Vergori, D. A. Tamburri, D. Perez-Palacin, and R. Mirandola. *DevOps Performance Engineering: A Quasi-Ethnographical Study*
- J. Walter, C. Stier, H. Koziolok, and S. Kounev. *An Expandable Extraction Framework for Architectural Performance Models*

Tool papers

- M. Ciavotta, E. Gianniti, and D. Ardagna. *Capacity Allocation for Big Data Applications in the Cloud*
- T. F. Düllmann and A. van Hoorn. *Model-driven Generation of Microservice Architectures for Benchmarking Performance and Resilience Engineering Approaches*
- M. Gil, C. Joubert, and I. Torres. *Model-driven engineering IDE for quality assessment of data-intensive applications*

Members of the QUDOS '17 program committee are: Varsha Apte (IIT Bombay, India), Alberto Avritzer (Sonatype Inc., USA), Cor-Paul Bezemer (Queen's University, Canada), Andreas Brunnert (RETIT, Germany), Lubomir Bulej (Charles Univ. Prague, CZ), David Carrera (Univ. Politecnica de Catalunya, Spain), Juergen Cito (Univ. of Zurich, Switzerland), Pooyan Jamshidi (CMU, USA), Christophe Joubert (Prodevelop, Spain), Cristian Klein (Umea Univ., Sweden), Klaus-Dieter Lange (Hewlett Packard Enterprise, USA), Marin Litoiu (York Univ., Canada), Zhen Ming (Jack) Jiang (York Univ., Canada), Manoj Nambiar (Tata Consultancy Services, India), Cesare Pautasso (Univ. of Lugano, Switzerland), Diego Perez-Palacin (Univ. de Zaragoza, Spain), Dana Petcu (IEAT, Romania), Dorina Petriu (Carleton Univ., Canada), Meikel Poess (Oracle Corporation, USA), Craig Sheridan (Flexiant, UK), Arnor Solberg (SINTEF, Norway), Josef Spillner (ZHAW Winterthur, Switzerland), Damian A. Tamburri (Politecnico di Milano, Italy), Asser Tantawi (IBM Research, USA), Catia Trubiani (Gran Sasso Science Institute, Italy), Ingo Weber (NICTA, Australia), Erik Wilde (CA API Academy, USA)

We thank the program committee members, who helped with timely and constructive reviews, as well as each author and presenter for their contributions to the QUDOS 2017 workshop.

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We hope that you will enjoy QUDOS 2017.

**Danilo Ardagna, Giuliano Casale,
Andre van Hoorn, Felix Willnecker**
QUDOS Steering Committee

**Elisabetta Di Nitto,
Philipp Leitner**
QUDOS '17 Program Chairs

