

3rd Workshop on Continuous Software Engineering

Horst Lichter¹, Stephan Krusche², Dirk Riehle³, Andreas Steffens⁴

In order to develop and deliver high-quality products to their customers, software companies have to adopt state-of-the-art software development processes. To face this challenge, companies are applying innovative methods, approaches and techniques like agile methods, DevOps, continuous delivery, test automation, infrastructure as code or container-based virtualization.

These new approaches have a significant impact on the specification, design, development, maintenance, operation and the evolution of software systems. Therefore, common software engineering activities, organizational forms and processes have to be questioned, adapted and extended to ensure continuous and unobstructed software development: continuous software engineering (CSE). So far, there is a lack of systematic approaches to face these challenges.

The goal of this workshop is to present and discuss innovative solutions, ideas and experiences in the area of CSE. The workshop aims to cover the following topics:

Processes and workflows

- Change management and handling user feedback
- Software development lifecycle for CSE
- Continuous delivery for requirements engineering/early prototyping
- Lean agile processes and practices

Technologies and tools

- Infrastructure as code
- Provisioning of software and infrastructure

¹ RWTH Aachen University, Research Group Software Construction
horst.lichter@swc.rwth-aachen.de

² Technische Universität München, Chair for Applied Software Engineering
krusche@in.tum.de

³ Friedrich-Alexander-University Erlangen-Nürnberg, Open Source Research Group
dirk.riehle@fau.de

⁴ RWTH Aachen University, Research Group Software Construction, steffens@swc.rwth-aachen.de

- Engineering of deployment pipelines

Architecture

- Design for scalability
- Software architecture for CSE
- Model driven architecture for CSE

Quality and testing

- Test automation and optimization
- Monitoring and performance
- Security for DevOps
- Metrics for DevOps

Microservices and DevOps

- Pattern and best practices
- Domain specific languages for microservices
- Distributed persistence
- Containerization

Culture and business

- Teaching CSE approaches
- Organizational issues for CSE
- Digital transformation and innovation

We intended to have contributions from industry and academia presented and discussed in the workshop. Therefore, we asked for original and evaluated research as well as for papers describing novel ideas, identified challenges, and especially experience reports related to the workshop's theme.

The presented papers cover different topics of CSE like dedicated process models and their application in CSE, new architectural styles like microservices and their integration with existing methodologies, and approaches to improve DevOps in organizations.

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