SWC
Software Construction
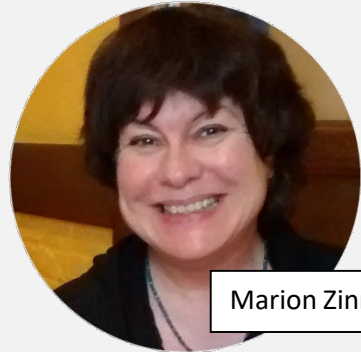
RWTH AACHEN UNIVERSITY

ANNUAL REPORT 2018

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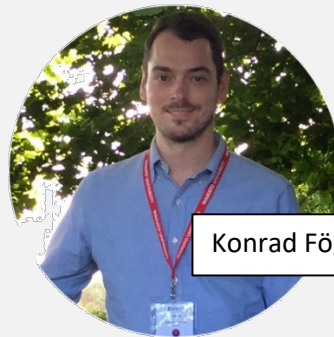52074 Aachen, Germany

SWC TEAM

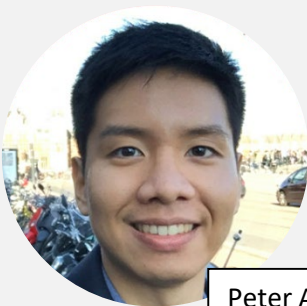Horst Lichter

Marion Zinner

Christian Plewnia

Konrad Fögen

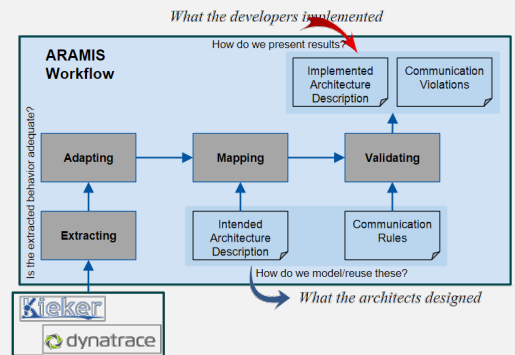Simon Hacks

Ana Nicolasecu

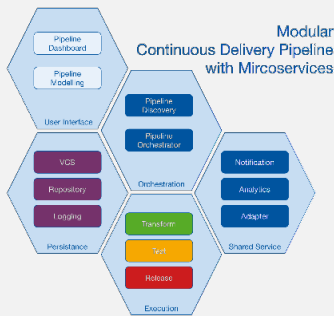Firdaus Harun

Peter Alexander

Andreas Steffens

RESEARCH PROJECTS

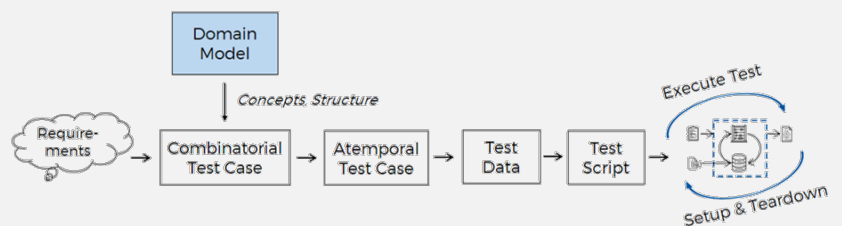## Behavior-based Architectural Conformance Checking

Ana Nicolaescu

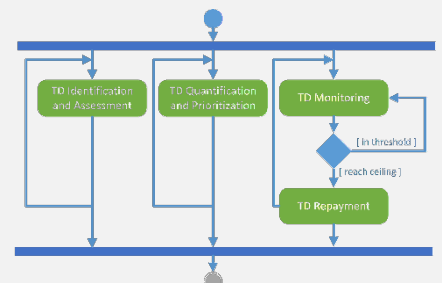## DevOps-aware Software Engineering

Andreas Steffens

Domain Model-based Test Data Generation for Application Systems

Konrad Fögen

Enterprise Architecture Roundtrip-Management

Simon Hacks

Cost Benefit based Technical Debt Management

Firdaus Harun

Highlights

February: 3rd CSE Workshop in Ulm

Co-located with the German Software Engineering Conference, we organizes the **3rd Workshop on Continuous Software Engineering** together with colleagues from TU Munich and Nurnberg University

March: Research Stay at KTH Royal Institute of Technology, Stockholm

Simon Hacks was invited to do a four-week research stay at the department of network and systems engineering of **the KTH in Stockholm**, Sweden. There he worked in the research group of Professor Pontus Johnson together with Sotirios Katsikeas on the modeling and simulation of vehicular cyber-attacks. Their work resulted in a paper, which was accepted at the ICISSP 2019.

HIGHLIGHTS

JUNE: Master Industry Award 2018

Our Master student **Jan Döring** received **the 2018 Industry Award** at the Computer Science Summer Festival for his outstanding Master Thesis entitled "**An Architecture for Self-organizing Continuous Delivery Pipelines**".

The award was handed over by a representative of DSA Aachen.

Congratulations!

JULY: Andreas Steffens and Horst Lichter visited UTM and UTP, Malaysia

In the context of our DAAD project Andreas Steffens and Horst Lichter gave a one week compact course at UTM Johor Bahru and UTP Seri Iskandar.

HIGHLIGHTS

JULY: Horst Lichter presented at the MCMC CAPE Workshop on Disruptive Technologies & Software Engineering, Kuala Lumpur, Malaysia

The workshop has been organized and funded by the DAAD project. The talk was entitled "**Software Engineering for Disruptive Technologies - Current and Future Challenges**"

JULY: Horst Lichter presented a keynote at 15th International Conference on Computer Science and Software Engineering, Bangkok,

The conference was organized by Mahidol University Bangkok, Thailand. The talk was entitled "**Reconstruction and Evaluation of Software Architectures**"

HIGHLIGHTS

SEPTEMBER: Ana Nicolaescu's Ph.D. Defense

On September 13, Ana Nicolaescu successfully passed her Ph.D. defense on "**Behavior-Based Architecture Conformance Checking**".

Thanks to Prof. Claus Lewerenz for supporting this defense!

Ana is now with Daimler Stuttgart.

Congratulations!

DECEMBER: 6th QuASoQ Workshop in Nara, Japan

Collocated with the 25th Asia-Pacific Software Engineering Conference (APSEC 2018), we organized the **6th International Workshop "Quantitative Approaches to Software Quality**" (QuASoQ) in Nara.

The keynote was given by **Hongyu Zhang**, University of Newcastle, Australia.

Konrad Fögen chaired the workshop!

PUBLICATIONS

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S. Hacks, H. Lichter (2018): **Optimierung von Unternehmensarchitekturen unter Berücksichtigung von Transitionskosten**. In HMD Praxis der Wirtschaftsinformatik, Springer Fachmedien, Wiesbaden, Vol. 55 (5), 928-941.

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