RESEARCH PROJECTS

Scalable distributed Data Processing
Christian Plewnia

DevOps-aware Software Engineering
Andreas Steffens

Combinatorial Robustness Testing
Konrad Fögen

Test Automation for Application Landscape Frameworks
Nils Wild

Enterprise Architecture Debt Management
Peter Alexander
JANUARY : Industry Lecture @ OOSC

In the context of the OOSC lecture, Mirko Hartmann, a Senior Software Engineer from IVU Traffic Technologies AG, gave a guest lecture on Migrating to a broker-based communication infrastructure using RabbitMQ.

Thanks to IVU for offering this opportunity!

MARCH : Lockdown …

To fight against the COVID-19 pandemic, a country-wide lockdown was needed. We did our very best, to adopt our way to work in order to teach students and to move on in our research projects.
This summer term, Amadeus and IVU Technologies supported our **Bachelor Software Labs**. The following topics were elaborated by the students:

- **Many ways to travel** (together with Amadeus)
- **Daten, die uns bewegen** (together with IVU Technologies)

The final presentations were given virtually.

Thanks to both cooperation partners for offering this opportunity.

Thanks to Christian and Nils for managing the labs!
HIGHLIGHTS

SEPTEMBER: 5th CSE Workshop in L’Aquila (virtual)

Co-located with the 14th European Conference on Software Architecture (ECSA) we organized the 5th Workshop on Continuous Software Engineering. For the second time, CSE and QUDOS joined forces to foster cross-fertilization and bootstrap an even bigger, stronger community around the urgently emerging topics they are both.

Thanks to Andreas for co-organizing this event.

OCTOBER: SWC Research Retreat in Hürtgenwald

This year, we organized our yearly research retreat in Hürtgenwald under the COVID-19 restrictions.
Collocated with the 27th Asia-Pacific Software Engineering Conference (APSEC 2020), we organized the 8th International Workshop “Quantitative Approaches to Software Quality” (QuASoQ).

This time, the workshop was conducted virtually. Ten papers were presented and 20 researchers attended the workshop.
As almost everywhere, we had to change our teaching format in Summer in Winter Term to react to the COVID-19 pandemic.

Hence, we taught the SPM lecture, all Bachelor Software Project Labs and the 2020 Bridge Course in Computer Science virtually!

But not only the teaching format changed but also our way to work together and to collaborate with our industry cooperation partners changed dramatically!
Christopher Gerdes received an Industry Bachelor Award at the virtual TDI 2020 for his Bachelor Thesis entitled “Usage-based discovery of a fragmentation for a distributed tourism search database“.

The thesis was done in cooperation with Amadeus and was supervised by Christian.

Talk in the UTM Distinguished Lecture Series
In May, we started a new research project with ITERGO Düsseldorf. The topic of this project is to develop new approaches for Enterprise Architecture Debt Management as an integral part of Enterprise Architecture Management.

Peter is in charge of this project.

In February, we started a new research project with apoBank Düsseldorf. There, the focus is to develop new approaches for DevOps in regulated Software Development Environments.

Alex, who joined us in January, is in charge of this project.

In July, we started a new research project with KISTERS Aachen. In this project appropriate Software technologies for BidData Applications should be researched and evaluated.

Selin, who joined us in July, is in charge of this project.

In July, we successfully finished a research project with GDIS Informatik Services on Test Data Generation.

Thanks to Konrad for heading this project!


