

# Project Group



Future software development will be different from how we build software today. Instead of coding software systems from scratch, future software will be a composition, integration, and orchestration of reusable software components, such as services or apps. The underlying key-driver is the need for fast reaction to changing customer requirements and increasing competitive markets. To address this new situation, highly flexible software systems are build that automatically adapt themselves to rapidly changing business environments.

The vision of highly flexible service compositions is already omnipresent in current trends such as service-oriented architectures (SOA), Cloud Computing, and Mash-ups in Web 2.0. In SOAs, IT processes orchestrate underlying services into service compositions that support business processes in enterprises. The used services are obtained from different sources including external services, which are provided by 3<sup>rd</sup>-party suppliers, e.g. through the cloud (Business-as-a-Service). Evidence for the success of business models that enable the reuse and composition of services in external applications and Mash-ups is shown by famous web applications such as Facebook or Twitter.

## Project group's tasks

Develop a methodology to identify adaptive service orchestrations ...

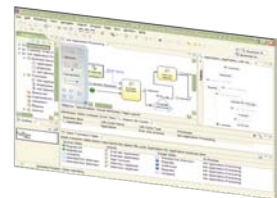
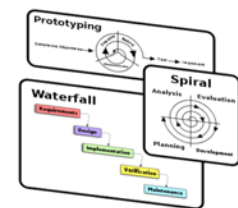
- State-of-the-art specification approaches
- Definition of services
- Systematic identification of uncertainty factors

... that are modeled and analyzed by ...

- Formalized modeling languages
- Quality and analysis attributes
- Execution and analysis of service orchestrations

...an implemented workbench.

- Evaluation of existing tools
- Tool support for usage in industrial projects



During our work, we will closely cooperate with two industrial partners being Capgemini and syskoplan. Capgemini is a worldwide leading software development company located in Munich. The syskoplan



group, headquartered in Gütersloh, is a leader in software integration focusing on innovative SAP solutions. Both companies provide case studies, realistic scenarios and data which are used in the project group. Further, employees of both companies will accompany and consult the student participants throughout the project and give talks on special related topics. The project group's results will be presented to and – if applicable – applied by the companies. We take care of an appropriate and comfortable location :-)



The project group is held in English and the number of participants is limited.

## Registration

The registration in the lecture management tool PAUL opens on 21<sup>st</sup> of February. Please register informally via email to [bnagel@s-lab.upb.de](mailto:bnagel@s-lab.upb.de) as soon as possible.

## PAUL

Please register at PAUL for the project group: <http://paul.upb.de>

Use your IMT username and password (the one you use for your email).

Navigate to

1. *Vorlesungsverzeichnis*
2. *Sommer 2011*
3. *Fakultät für Elektrotechnik, Informatik und Mathematik*
4. *Informatik*
5. *II. Informatik für den Master-Studiengang Informatik*
6. *C. Projektgruppen*
7. *L.079.07006 Projektgruppe: Modeling and Execution of Process-driven Adaptive Service Orchestrations (ME PASO) (Part 1) (in English)*

Since the lecture management tool PAUL is only available in German, we are happy to help you in case of any problems.

## Contact

For further information please contact us!

- Benjamin Nagel – [bnagel@s-lab.upb.de](mailto:bnagel@s-lab.upb.de)
- <http://is.upb.de/?id=mepaso>



Benjamin Nagel  
[bnagel@s-lab.upb.de](mailto:bnagel@s-lab.upb.de)

Markus Luckey  
[luckey@upb.de](mailto:luckey@upb.de)

Christian Gerth  
[gerth@upb.de](mailto:gerth@upb.de)