

## Graduiertenkolloquium Angewandte Informatik

### Decentralized Control in Distributed Applications via Web and Semantic Web Technologies

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Currently, we are witnessing the rise of new technology-driven trends such as the Internet of Things, Web of Things, and Factories of the Future that are accompanied by an increasingly heterogeneous landscape of small, embedded, and highly modularized devices and applications, multitudes of manufactures and developers, and pervasion of network-accessible "things" within all areas of life. At the same time, we can observe increasing complexity of the task of integrating subsets of heterogeneous components into applications that fulfil certain needs by providing value-added functionality beyond the pure sum of their components. Enabling integration in these multi-stakeholder scenarios requires new architectural approaches for adapting components, while building on existing technologies and thus ensuring broader acceptance.

To this end, we discuss current integration-related challenges, present our approach for automated component adaptation, and describe our integration architecture that enables decentralized control. We continue by introducing an architecture and implementation for a distributed benchmark environment that simulates the characteristics of applications, which adhere to our integration architecture. Finally, we backup our approaches by prototypical implementations and present evaluations on functional, scalability, as well as performance level.

Termin: Mittwoch, 21. Juni 2017, 15.45 Uhr

Ort: Kaiserstr. 89, 76133 Karlsruhe  
Kollegiengebäude am Kronenplatz (Geb. 05.20), 1. OG, Raum 1C-04  
(Hinweise für Besucher: [www.aifb.kit.edu/web/Kontakt](http://www.aifb.kit.edu/web/Kontakt))

Veranstalter: Institut AIFB, Forschungsgruppe Web Science

Zu diesem Vortrag lädt das Institut für Angewandte Informatik und Formale Beschreibungsverfahren alle Interessierten herzlich ein.

A. Oberweis, H. Sack, H. Schmeck, R. Studer (Org.), Y. Sure-Vetter, J. M. Zöllner