

# 13th International Symposium on Component Based Software Engineering (CBSE-2010)

## Important Dates

Submission	January 27, 2010
Notification	March 7, 2010
Camera Ready	March 26, 2010

Component-based Software Engineering is part of CompArch see <http://www.comparch-events.org/index/> for more info.

## Goals

Component-based Software Engineering (CBSE) has emerged as a technology for the rapid assembly of flexible software systems. CBSE combines elements of software architecture, modular software design, software verification, configuration and deployment. To foster exchange and collaboration with the software architecture community, CBSE is colocated with the Quality of Software Architectures Conference (QoSA) and the International Symposium on Architecting Critical Systems (ISARCS) as part of the federated CompArch event.

The CBSE symposium has a track record of bringing together researchers and practitioners from a variety of disciplines to promote a better understanding of CBSE from a diversity of perspectives, and to engage in active discussion and debate. CBSE 2010 is open to all participants interested in CBSE and related areas. The symposium addresses participants from both universities and industry.

## Scope

The theoretical foundations of component specification, composition, analysis and verification continue to pose research challenges. While the engineering models and methods for component software development are slowly maturing, new trends in global services, distributed systems architectures, and large scale software systems that cross organizational boundaries push the limits of established and tested component-based methods, tools and platforms:

- model-driven development and grid technologies with their high-performance demands in massive data storage, computational complexity and global co-scheduling of scientific models in flagship science, technology and medicine research;
- global software development with its lowering of cost of software capabilities and production, through automation, off-shoring and outsourcing of key components and subsystems;
- networked enterprise information systems and services architectures crossing enterprise, nation, legal and discipline boundaries;

- shift from (globally distributed) software products to pervasive and ubiquitous services supported by deep software-intensive infrastructures and middleware and by increasingly flexible, adaptive and autonomous client and application server software.

CBSE 2010 will include contributions that explore how the nature of component-based software engineering is being influenced by developments in the field of software and global enterprise technology. In addition to presentations of papers, the symposium will incorporate working and industry sessions.

### Topics of interest

- Design of component models
- Theories (including taxonomies) of software composition and binding
- Coordination and choreography of component software, services, workflows
- Run-time adaptation of component-based systems
- Interaction between component models, software architectures and product lines
- Component-based web services and service-oriented architecture
- Declarative, rule-based management of component-based systems
- Software quality and extra-functional properties for components and component-based systems
- Global generation, adaptation and deployment of component-based systems and services
- Components and generative approaches
- Components and model-driven development
- Specification, verification and testing of component-based systems
- Compositional reasoning techniques for component models
- Global measurement, prediction and monitoring of distributed and service components
- Patterns and frameworks for component-based systems and services
- Integrated tool chains and methods for building component-based services
- Components for networked real-time information systems and sensor networks;
- Industrial experience using component-based software development;
- Empirical studies in component-based software engineering;
- Teaching component-based software engineering

We welcome papers that address any of the topics listed above.

### Special Theme: Components beyond Reuse

CBSE 2010 is encouraging papers that address reasons for using components beyond re-use. While consider software components a technical means to increase software re-use, other reasons for investing into component technology tend to be overseen.

For example, components play an important role in framework and product-lines to enable configurability (even if no component is re-used).

Another role of components is to use them to increase the predictability of the properties of a system. For an engineering approach to software design, it is important to understand the implications of design decisions on the system's properties. Therefore, approaches to evaluate and predict properties of systems by analyzing its components and its architecture are of high interest.

To strengthen the relation between architectural descriptions of systems and components, a comprehensible mapping to component-oriented middleware platforms is important. Model-driven development, with its use of generators, can provide a suitable link between architectural views and technical component execution platforms.

### **Paper Submission**

All submitted papers will be reviewed by at least three program committee members (four for papers with an author on the program committee). Papers must not have been previously published or concurrently submitted elsewhere. Any duplicate submissions will be rejected without review. As always, the symposium seeks reports on innovative contributions to the science and technology of CBSE. Papers describing practical experience with CBSE in mission- and performance-critical systems are of particular interest. Long and short papers on leading-edge research and development in progress are also encouraged. Long papers must not exceed 16 pages and short papers must not exceed 8 pages, in the required format. The proceedings will be published in the Springer Lecture Notes in Computer Science (LNCS) series and papers should have the requisite format.

Details regarding the submission will be published on

<http://cbse2010.ipd.kit.edu>

## **Organization**

### **Program Co-Chairs**

Lars Grunske, Swinburne University of Technology, Australia  
lgrunske@swin.edu.au

Ralf Reussner, Karlsruhe Institute of Technology (KIT), Germany,  
reussner@kit.edu

### **CompArch Organization Chair**

Frantisek Plasil, Charles University, Czech Republic

### **Program Committee**

Steffen Becker	Forschungszentrum Informatik (FZI)	Germany
Judith Bishop	Microsoft Research, Redmond	USA
Barbora Buhnova	Masaryk University, Brno	Czech Republic

Michel Chaudron	Leiden University	Netherlands
Kendra Cooper	University of Texas at Dallas	USA
Ivica Crnkovic	Mälardalen University	Sweden
Xavier Franch	Universitat Politècnica de Catalunya	Spain
Morven Gentleman	Dalhousie University	Canada
Sudipto Ghosh	Colorado State University	USA
Holger Giese	Hasso Plattner Institute, Potsdam	Germany
Ian Gorton	Pacific North West National Laboratory	USA
Lars Grunske	Swinburne University of Technology	Australia
Richard Hall	Sun Microsystems	USA
Jens Happe	Forschungszentrum Informatik (FZI)	Germany
George Heineman	Worcester Polytechnic Institute	USA
Christine Hofmeister	East Stroudsburg University	USA
Dean Jin	University of Manitoba	Canada
Joe Kiniry	University College Dublin	Ireland
Magnus Larsson	ABB AB	Sweden
Kung-Kiu Lau	The University of Manchester	UK
Grace A. Lewis	Carnegie Mellon University	USA
Jenny Liu	National ICT Australia	Australia
Michael Maximilien	IBM	USA
Marija Mikic-Rakic	Google Inc.	USA
Henry Muccini	University of L'Aquila	Italy
Rob van Ommering	Philips Research	Netherlands
Frantisek Plasil	Charles University	Czech Republic
Noel Plouzeau	IRISA - University of Rennes	France
Iman Poernomo	King's College London	UK
Ralf Reussner	University of Karlsruhe	Germany
Salah Sadou	Valoria, Université de Bretagne Sud	France
Christian Salzmann	BMW Group	Germany

Bernhard Schätz	TU München	Germany
Douglas Schmidt	Vanderbilt University	USA
Jean-Guy Schneider	Swinburne University of Technology	Australia
Judith Stafford	Tufts University	USA
Asuman Sünbül	University of Potsdam	Germany
Clemens Szyperski	Microsoft	USA
Kurt Wallnau	Software Engineering Institute	USA
Dave Wile	Teknowledge Corporation	USA

### **Sponsors**

CBSE invites sponsors. We offer different level of sponsorship associated with a range of mutual benefits. If you are interested in becoming a sponsor please contact Ralf Reussner [reussner@kit.edu](mailto:reussner@kit.edu)