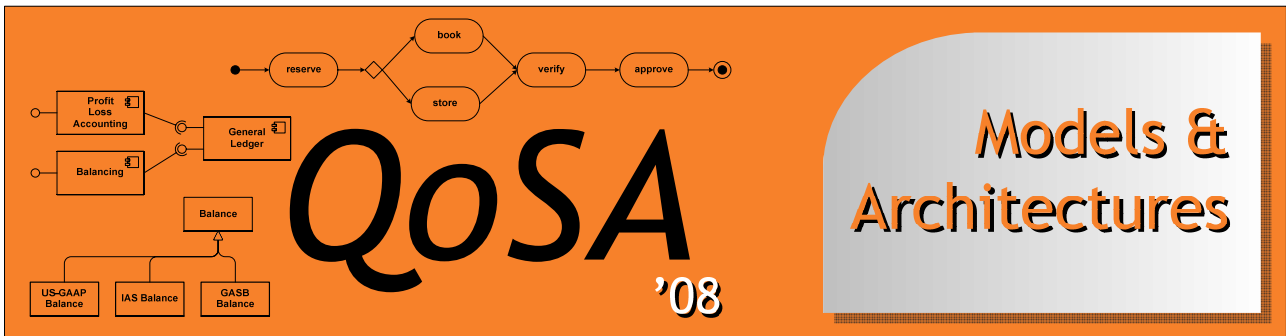


Call for Papers



Fourth International Conference on the Quality of Software-Architectures (QoSA 2008)

"Models and Architectures"

October 14-17, 2008
University of Karlsruhe (TH), Germany
<http://qosa.ipd.uka.de>
qosa@ipd.uka.de

in conjunction with CBSE 2008 and CBHPC 2008
(as Federated Events on [CompArch 2008](#))

- Accepted contributions will be published as Springer LNCS -



Motivation

Today, a system's software architecture cannot be seen simply as a means to an end, the end being the implemented system. Although the ultimate measure of the quality of the software architecture lies in the implemented system, in how well it satisfies the requirements and constraints of the project and whether it can be maintained and evolved successfully, the quality of a system's software architecture is one of the critical factors in its overall system quality - encompassing both functional and extrafunctional properties. In order to treat design as an engineering discipline rather than an art, we need the ability to address the quality of the software architecture directly, not simply as it is reflected in the implemented system.

This is a specific goal of QoSA - to deal with software architecture in general and simultaneously focus on its quality characteristics by addressing the problems of:

- designing software architectures of good quality,
- defining, measuring, evaluating architecture quality, and
- managing architecture quality, tying it upstream to requirements and downstream to implementation, and preserving architecture quality throughout the lifetime of the system.

Cross-cutting these problems is the question of the nature of software architecture. Software architecture organizes a system, partitioning it into elements and defining relationships among the elements. For this we often use multiple views, each with a different organizing principle.

But software architecture must also support properties that are emergent and cannot be ascribed to particular elements. For this we often use the language of quality attributes. Quality attributes cover both internal properties, exhibited only in the development process (e.g. maintainability, portability, testability, etc.), and external properties, exhibited in the executing system (e.g. performance, resource consumption, availability, etc.). Quality attributes cover properties that are emergent, that have a pervasive impact, that are difficult to reverse, and that interact, thereby precluding or constraining other properties. Thus, QoSA also aims to investigate quality attributes in the context of the problems of the design, evaluation, and management of software architecture.

This years QoSA's main topic is on "Models and Architectures". Modelling software architectures for documentation purposes as well as manual analysis is an established practice. Due to the continuous maturation of model-driven software development methods and tools, software architecture models also become subject to automated model transformations. Their target is either to generate high quality software implementations or to automatically derive analysis models for predicting architectural quality characteristics like performance or reliability.

Conference Topics

Topics of interest include, but are not limited to:

Architecture Design and Implementation:

- design decisions and their influence on the quality of software architecture
- organizational issues and processes that influence architecture quality
- architectural patterns and their quality impacts
- architectural standards and reference architectures
- integration of COTS components
- relationship between quality attributes and architectural design properties

Component Design and Implementation:

- how to design high-quality components that enable the construction of well-architected systems meeting functional and extrafunctional requirements
- specification and documentation of components and their quality attributes
- compositional reasoning and methods to predict architecture properties on the basis of component properties
- interface standards and standardization efforts
- component development methodology and development process
- component engineering and product-lines
- certification of components
- component markets and repositories
- services vs. components / service-oriented architecture vs. "classical" component-based architecture

Architecture Evaluation:

- lessons learned and empirical validation of theories and frameworks on architecture quality
- empirical validation of testing, prototyping, simulation for assessing architecture quality
- models and specification techniques to evaluate the quality attributes of software architectures
- model-driven architecture evaluation
- modelling languages for architectural modelling including quality characteristic evaluation
- processes for evaluating architecture quality
- evaluation of COTS components

Architecture Management:

- coordination of business architecture, business processes, and software architecture
- documentation of software architecture, including design rationale
- assessment and enforcement of architectural conformance
- traceability of software architecture to requirements and implementation
- assessment of COTS components
- integration of heterogeneous software architectures
- architecture evolution and architecture governance

Paper Submission & Proceedings

QoSA welcomes **long papers only**. Long papers are **up to 15 pages LNCS style**, and can describe both research contributions and experience reports.

As in the last years, accepted contributions will be published in a volume of the Springer Lecture Notes in Computer Science series. All Papers must be written in English and are to be prepared according to Springer's LNCS style (guidelines are available at: <http://www.springer.de/comp/lncs/authors.html>).

Paper submission is possible via CyberChair PRO at <http://cyberchairpro.borbala.net/qosapapers/submit/>.

Important Dates

Papers due: ~~February 11, 2008~~ **March 10, 2008**
Notification of acceptance: ~~March 29, 2008~~ **April 23, 2008**
Camera-ready versions due: ~~April 13, 2008~~ **May 7, 2008**
QoSA conference: October 14-17, 2008

Venue

QoSA 2008 will be located in Germany and hosted by the University of Karlsruhe (TH). It will run jointly with CBSE 2008 and CBHPC 2008 as the Federated Events on Component-Based Software Engineering and Software Architecture (CompArch 2008).

Program Committee Chairs

Frantisek Plasil, Charles University, CZ
Steffen Becker, University of Karlsruhe / FZI, GER

Steering Committee

Ivica Crnkovic, Mälardalen University, SWE
Ian Gorton, Pacific North West National Laboratory, USA
Sven Overhage, University of Augsburg, GER
Judith Stafford, Tufts University, USA
Clemens Szyperski, Microsoft, USA

Program Committee

Colin Atkinson, University of Mannheim, GER
Achim Baier, itemis AG, GER
Len Bass, Software Engineering Institute, USA
Jan Bosch, Intuit, USA
Jeremy Bradley, Imperial College London, UK
Vincenzo Grassi, Universität Rom "Tor Vergata", IT
Wilhelm Hasselbring, University of Oldenburg / OFFIS, GER
Christine Hofmeister, Lehigh University, USA
Jean-Marc Jezequel, University of Rennes / INRIA, FR
Samuel Kounev, University of Cambridge, UK
Patricia Lago, Vrije Universiteit, NL
Nicole Levy, University of Versailles, FR
Markus Lumpe, Swinburne University, AUS
Eric Madelaine, Inria, FR
Tomi Mannisto, Helsinki University of Technology, FIN
Nenad Medvidovic, University of Southern California, USA
Raffaella Mirandola, Politecnico di Milano, IT
Robert Nord, Software Engineering Institute, USA
Dorina Petriu, Carleton University, CAN
Iman Poernomo, King's College, UK
Sasikumar Punnekkat, Mälardalen University, SWE
Andreas Rausch, Clausthal University of Technology, GER
Matthias Riebisch, Technical University of Ilmenau, GER
Roshanak Roshandel, Seattle University, USA
Bernhard Rumpe, University of Technology Braunschweig, GER
Jean-Guy Schneider, Swinburne University, AUS
Michael Stal, Siemens, GER
Petr Tuma, Charles University, CZ
Axel Uhl, SAP, GER
Kurt Wallnau, Software Engineering Institute, USA
Wolfgang Weck, Independent Software Architect, CH
Murray Woodside, Carlton University, CAN
Steffen Zschaler, Technical University of Dresden, GER