

# Message from the Chair

## Component-Based Software Engineering Track

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Following the success of the first two Component-Based Software Engineering (CBSE) workshops in 2001 and 2002, the CBSE track continues this year with its focus on certain new topics within the same field. CBSE is now widely recognized as an important sub-discipline of software engineering and in recent years CBSE topics have been addressed at many conferences. Component-based development has been used successfully in applications in many engineering and business domains such as desktop environments, graphing packages and mathematical applications. The components used in these domains have by their nature obvious functionalities and clearly-defined interfaces. Extra-functional characteristics and constraints (e.g., properties related to temporal constraints, dependability or safety) are usually not of the highest priority in these types of applications and component-based development technologies have rarely been used in the development of real-time, safety-critical, mission-critical, or, more generally, dependable systems. Such systems require reasoning about extra-functional aspects of system behavior and component models and technologies in use today do not provide support for this. The development of theories, methods, tools and techniques to support the prediction of the properties of systems in relation to the properties of components requires the collaboration of researchers and practitioners in different domains; for example software architecture, safety, object-oriented techniques, system and software modeling, etc. Indeed, many problems that arise in CBSE are already the foci of research in other communities.

The aim of the track is to continue the successful work begun at Euromicro 2001 – to bring together practitioners and researchers from academia and industry to discuss and improve the theories, technologies, and processes of component-based software engineering development. We have encouraged the submission of papers of a theoretical nature and experience reports from academia and especially from industry, and indeed, a good balance between these two types of submissions and communities has been achieved.

In the Call for Papers the suggested areas of interest were grouped in the following categories:

- Component models and technologies
- Component specification
- Component evaluation
- Component compositions
- Component-based software architecture
- Component-based requirements engineering
- Component design, implementation, testing
- Software product-line approach
- Components for real-time and embedded systems
- Component development processes
- Components and Quality
- CBSE organizational issues
- Component configuration management
- COTS (Commercial off the shelf)
- Middleware solutions for CBSE
- Development environment and tools
- CBSE and aspect-oriented programming
- Case studies and experience reports
- Software component markets and businesses

We have received 28 submissions from 14 countries. Each paper was evaluated by three or four reviewers and the acceptance decision was based on their evaluations. A total of 14 papers were accepted as full papers and 4 papers as short papers. They will be presented at the following sessions:

- Component-based development process
- Component Models and Technologies
- Component Specifications and Compositions
- Component Life Cycle
- Quality Aspects in CBSE (together with SPPI track).
- Short papers session

From the nature of the papers selected, we can conclude that component life cycle issues have been of special interest. Particular component technologies, their implementation and analysis are the subjects of several papers. Relations between component models and software architectures have been addressed in several papers and in several, component specification and

component composition topics have been presented. On the other hand, component tests, evaluation, and requirement management are not discussed in the accepted papers nor have the software product-line approach, component configuration management, COTS and CBSE and aspect-oriented programming been given particular consideration. The number of submissions from industry has been slightly lower than in previous years.

The CBSE track has been so synchronized with the Software Process and Product Improvement (SPPI) track that conference participants will be able to join most of the sessions of both tracks.

This year the track offers two keynote speakers:

- Jeffrey Voas, Cigital, Washington, US
- Asuman Suenbuel, Kestrel Institute, Palo Alto, US

I would like to thank the Technical Committee and Program Committee members for their help in reviewing the papers.

I hope you will find the CBSE track interesting and stimulating and will continue to contribute to its success in the coming years

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