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 in 2003 and 2004, the track continues this year with its focus on certain new topics within the same field. Component-based development has been used successfully in applications in many engineering and business domains such as desktop environments, graphing packages and mathematical applications. 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. 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. In recent years we can see a trend of creation of component models in new domains, such as in real-time, safety-critical, mission-critical, or, more generally, dependable systems. The communities from these domains show increasing interest in addressing their research and practical problems by applying component-based approach. Also new aspects of CBSE are treated more than before. While on previous events the emphasis was on technologies and architectural issues, this year we can find contributions in software process improvements for development of component-based systems, and combination of CBSE with other emerging approaches such as model-based engineering.

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. The CBSE track, fifth in a row, has a goal to point out the overall challenges and problems of the component-based approach, but also show the new ideas, solutions and practices. In the Call for Papers the suggested areas of interest were grouped in the following categories:

- Component models and technologies
- Component compositions
- Component specifications
- Components and Quality Attributes
- Dependability of component-based systems
- Components for real-time and embedded systems
- Component-based software architecture
- COTS components
- Component-based requirements engineering
- Components and Open Source
- Evaluation of components
- Middleware solutions for CBSE
- Component design, implementation, testing
- Development environment and tools
- Component development processes
- Component markets and businesses
- Evolution of Component-based applications
- CBSE organizational issues
- Software product-line approach
- Case studies and experience reports
- CBSE and emerging disciplines (services, model-driven development, aspect-oriented programming, etc.)

This year we have received, fourth time in a row, the largest number of submissions: 45 papers have been submitted. Each paper was evaluated by three or four reviewers and the acceptance decision was based on their evaluations. A total of 20 papers were accepted. In the period of five years the quality of the papers has been clearly improved. The papers will be presented at the following sessions:

- Session I - Component models and technologies
- Session II - Modelling and analysis of CB systems
- Session III - CB software architecture
- Session IV - Component classifications and ontologies
- Session V - Dependable CB Systems
- Session VI - Emerging Technologies
- Session VII - Component Development Process

From the nature of the papers selected, we can conclude that in difference from previous years, the interest have been grouped technologies and architectural analysis and design and process improvements. Different domains, such as embedded and real-time systems have been
presented to a lesser degree, although present. Component tests, evaluation, and requirement management are not discussed in the accepted papers nor have the software product-line approach and organizational issues.

We would like to thank the Program Committee members for their help in reviewing the papers.

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

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