CALL FOR PAPERS

NET.OBJECTDAYS 2001

Messekongresszentrum Erfurt/Germany September 10 - 13, 2001

Third International Conference on Generative and Component-Based Software Engineering

Component-based software development bears the promise of considerable productivity increases to software development comparable to the introduction of the assembly line in manufacturing. Unfortunately, current component technologies suffer from several problems. During evolution and customization for reuse, components are affected by changes arising from new functional and non-functional requirements, new variation points, new software architectures and component deployment strategies, new versions of a computing environment that affect component communication, etc. Due to those changes, components may erode quickly, resulting in complexity explosion, performance degradation and redundant implementations of similar features, thereby reducing the reusability of the components. Research activities are required to address the aforementioned and other problems.

Generative programming present a promising approach to alleviating the above problems, as changes affecting components can now be more effectively managed during the generation process rather than at the component level. Using generative programming, we can produce custom components from elements that can be considerably simpler than executable components themselves, keeping the complexity of an evolving component system under control. Both generative and component-based approaches require changes in analysis and design methods, particularly, to move their focus from single systems to product lines. The goal of this conference is to bring together researchers and practitioners from different areas related to generative development and component-based engineering and to stimulate integrative work. The conference will include a technical papers session and pre-conference tutorials.

Topics

The relevant topics include, but are not limited to:

- Integration of Generative and Component-Based-Approaches
- Generative Programming
  - Generative Reuse
  - Metaprogramming Systems
  - Template Metaprogramming
  - Transformation Systems
  - Active Libraries
  - Generation Techniques for Evolution of Components
  - Techniques for Application Generators
  - Generation of Non-Code Artifacts
  - Formal Methods for Generative Techniques
- Component-Based Software Engineering
  - Component Reuse
  - Distributed Component Platforms
  - Distributed Component Systems
  - Evolution of Component-Based Systems
  - Technology of Components
  - Analysis and Design Patterns
  - Methods for Development and Use of Components
  - Formal Methods for Component Systems
- Domain Engineering and Product Lines
  - Domain-Specific Languages
  - Domain Analysis
  - Design of Generic Architectures for Product Lines
- Separation of Concerns
  - Aspect-Oriented Programming
  - Intentional Programming
  - Multi-Dimensional Separation of Concerns
- Reflection
- Industrial Applications of Components and Generative Approaches

Papers combining concepts from more than one topic area are encouraged

Submission Guidelines

In order to foster a lively exchange of perspectives on the conference topics, the program committee encourages contributions from both researchers and practitioners. Papers in two categories will be considered:

- Research Paper (10 pages)
- Experience Report (3-6 pages)

Please submit papers in English via email to **gcse2001@cs.rug.nl** either as PDF format or postscript format, with compression using zip or gzip for larger files. Submission guidelines and further updates will be published at **http://gcse2001.cs.rug.nl**

Accepted papers will be published in the conference proceedings. The conference proceedings are published by Springer Verlag in the Lecture Notes in Computer Science (LNCS) series.

Associated Events

The conference will also feature a Young Researchers Workshop to be organized by Kai Boellert (kaib@acm.org), Detlef Streitferdt (detlef.streitferdt@theoinf.tu-ilmenau.de) and Dirk Heuzeroth (heuzer@ipd.info.uni-karlsruhe.de).

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(to be continued)

Important Dates:

May 14, 2001:
Paper submissions
June 4, 2001:
Notification of Acceptance
June 25, 2001:
Final papers due

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