

CALL FOR PAPERS

Second AOSD Workshop on Aspects, Components, and Patterns for Infrastructure Software (ACP4IS)

March 17, 2003

Boston, Massachusetts

<http://www.cs.ubc.ca/~ycoady/acp4is03/>

A one-day workshop to be held in conjunction with the
Second International Conference on
Aspect-Oriented Software Development (AOSD 2003),
March 17–21, 2003, Boston, Massachusetts, USA
<http://aosd.net/conference>

The importance of “systems infrastructure” software — including application servers, virtual machines, middleware, compilers, and operating systems — is increasing as application programmers demand better and higher-level support for software development. Vendors that provide superior support for application development have a competitive advantage. The software industry as a whole benefits as the base level of abstraction increases, thus decreasing the need for application programmers to continually “reinvent the wheel.”

These trends, however, mean that the demands on infrastructure software are increasing. More and more features and requirements are being “pushed down” into the infrastructure, and the developers of systems software need better tools and techniques for handling these increased demands. The design and implementation of systems-level software presents unique opportunities and challenges for AOSD techniques. These challenges include the need to address the inherent complexity of infrastructure software; the need for strong assurances of correct and predictable behavior; the need for maximum run-time performance; and the necessity of dealing with the large body of existing systems software components.

This workshop aims to provide a highly interactive forum for researchers and developers to discuss the application of and relationships between aspects, components, and patterns within modern infrastructure software. The goal is to put aspects, components, and patterns into a common reference frame and to build connections between the software engineering and systems communities. Suggested topics for position papers include, but are not restricted to:

- Approaches that combine or relate component-, pattern-, and aspect-based techniques
- Dimensions of infrastructure software quality including comprehensibility, configurability (by implementors), customizability (by users), reliability, evolvability, scalability, and run-time characteristics such as performance and code size
- Merits and downsides of container-, ORB-, and system-based separation of concerns
- Architectural techniques for particular system concerns, e.g., security, static and dynamic optimization, and real-time
- Design patterns for systems software
- Component, pattern, and aspect “mining” within systems code
- Application- or domain-specific optimization of systems
- Reasoning and optimization across architecture layers
- Quantitative and qualitative evaluations

Agenda

The workshop will be structured to encourage fruitful discussions and build connections between workshop participants. To this end, approximately half of the workshop time will be devoted to short presentations of accepted papers, with the remaining half devoted to semi-structured discussion groups. Participants will be expected to have read the accepted papers prior to the workshop, to help ensure focused discussions. Participants will work with the workshop organizers prior to the workshop to establish topics for discussion groups.

Submission Guidelines

Invitation to the workshop will be based on accepted position papers, 3–6 pages in length. All papers must be submitted electronically in PDF, Postscript, or MS Word format. Papers should be submitted via the workshop's Web site. Submissions will be reviewed by the workshop program committee and designated reviewers. Papers will be evaluated based on technical quality, originality, relevance, and presentation.

All accepted papers will be posted at the workshop Web site prior to the workshop date, to give all participants the opportunity to read them before the workshop. In addition, the accepted papers will be published in a Workshop Proceedings as a technical report.

Important Dates

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| Submission Deadline: | January 27, 2003 |
| Notification of Acceptance: | February 10, 2003 |
| Workshop: | March 17, 2003 |

Workshop Program Committee

Elisa Baniassad, Trinity College
Don Batory, University of Texas at Austin
Yvonne Coady, University of British Columbia
Pascal Costanza, University of Bonn
Krzysztof Czarnecki, University of Waterloo
Eric Eide, University of Utah
Dawson Engler, Stanford University
Andy Gokhale, Vanderbilt University
Stephan Herrmann, Berlin Technical University
Wilson Hsieh, University of Utah
David Lorenz, Northeastern University
Renaud Pawlak, University of Lille
Mario Südholt, École des Mines de Nantes
Jan Vitek, Purdue University
Jonathan Walpole, OGI

Workshop Organizing Committee

Yvonne Coady, University of British Columbia
Eric Eide, University of Utah
David Lorenz, Northeastern University