Call for Papers

Programming for Separation of Concerns
(6th edition)

http://www.dmi.unict.it/~tramonta/PSC10/

ACM Symposium on Applied Computing
http://www.acm.org/conferences/sac/sac2010

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Motivation

Complex systems are intrinsically expensive to develop because several concerns must be addressed simultaneously. Once the development phase is over, these systems are often hard to reuse and evolve because their concerns are intertwined and making apparently small changes force programmers to modify many parts. Moreover, legacy systems are difficult to evolve due to additional problems, including: lack of a well defined architecture, use of several programming languages and paradigms, etc.

Separation of concerns (SoC) techniques such as *computational reflection, aspect-oriented programming* and *subject-oriented programming* have been successfully employed to produce systems whose concerns are well separated, thereby facilitating reuse and evolution of system components or systems as a whole. However, a criticism of techniques such as computational reflection is that they may bring about degraded performance compared with conventional software engineering techniques. Besides, it is difficult to precisely evaluate the degree of flexibility for reuse and evolution of systems provided by the adoption of these SoC techniques.

Goal

The Programming for Separation of Concerns (PSC) track at the 2010 Symposium on Applied Computing aims to bring together researchers to share experiences in using SoC techniques, and explore the practical problems of existing tools, environments, etc. The track will address questions like: Can performance degradation be limited? Are unexpected changes dealt with by reflective or aspect-oriented systems? Is there any experience of long term evolution that shows a higher degree of flexibility of systems developed with such techniques? How such techniques cope with architectural erosion? Are these techniques helpful to deal with evolution of legacy systems?

Important Due Dates

Paper Due Sept. 8, 2009
Author Notification Oct.19, 2009
Camera Ready Nov. 2, 2009

Authors are invited to submit *original papers*. Submissions are encouraged, but not limited, to the following topics:
- Software architectures; Configuration management systems
- Software reuse and evolution; Performance issues for metalevel and aspect oriented systems
- Software engineering tools; Consistency, integrity and security; Generative approaches
- Experiences in using reflection, composition filters, aspect- and subject- orientation
- Evolution of legacy systems; Reflective and aspect oriented middleware for distributed systems
- Modeling of SoC techniques to allow predictable outcomes from their use
- Formal methods for metalevel systems

Track Co-Chairs

Yvonne Coady
University of Victoria, Canada

Corrado Santoro
University of Catania, Italy

Emiliano Tramontana
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Submission Guidelines

Original papers from the above mentioned or other related areas will be considered. *Only full papers about original and unpublished research are sought.* Parallel submission to other conferences or tracks is not acceptable. Papers can be submitted in electronic format via the website http://sac.cs.iupui.edu/sac2010 within September the 8th, 2009 (all the deadlines will be strictly enforced). *Please make sure that the authors name and affiliation do not appear on the submitted paper.* Peer groups with expertise in the track focus area will blindly review submissions to the track. At least one author of the accepted paper should register and participate in the PSC track. Accepted papers will be published in the annual conference proceedings.

The camera-ready version of the accepted paper should be prepared using the ACM format (guidelines will be given on the SAC website). The maximum number of pages allowed for the final papers is five (5), with the option, at additional cost, to add three (3) more pages. A set of papers submitted to the PSC track and not accepted as full papers will be selected as poster papers and published in the ACM proceedings as 2-page papers.

A selected number of the best papers accepted at the PSC track will be invited for expansion and for a possible publication at a special issue of the Elsevier Journal Computer Languages, Systems & Structures.