



AOSD 2011: Perspectives on Modularity

Special Track on Modularity Visions

Innovations in modularity have had a profound effect on Programming Languages and Software Engineering over several decades. They have shaped the way we think about software, as well as the software itself.

The software landscape is changing rapidly, and is already very different from when much of the seminal research on modularity was done. We see development of services, advanced web applications, product lines and systems of systems. Many of these are long-running, 24/7 systems that can never be brought down, and that might be self-repairing. Some run on new kinds of platforms, like the cloud. Integration of existing software is often more important than writing new software. We are moving towards ultra-large systems, in which central control is not possible. The software-development landscape is changing rapidly too. More and more projects are distributed across the world. There is increasing concern about governance, from both the legislative and business points of view.

For this track, we invite high-quality papers proposing visions of modularity for this new landscape, addressing current and future challenges. We do not expect visions to be realized and fully validated yet, but we do expect a paper to provide evidence of the viability of the vision it presents, as well as its importance. This can be by compelling argument or analysis, for example. When thinking about modularity for the future, it is important to understand exactly what modularity is, what benefits it provides to software engineering, and what the relationships are between various properties and such benefits. For example, how does strength of encapsulation interact with maintainability and adaptability? For this reason, we also invite high-quality papers on the foundations of modularity. We expect such papers to include discussion of the implications for visions of modularity.

Paper submission

To allow for feedback and revision during the submission process, this track will have a *rolling submission* period before the final submission deadline. A paper submitted during the rolling submission period will be reviewed within 6 weeks of submission by the Program Committee. The result of the review might be acceptance, rejection, or a request for revisions. When revisions are requested, the authors may make them and resubmit. As long as resubmission is within the rolling submission period, there will opportunity for further revision, if needed. Once the rolling submission period has passed, authors may still submit original or revised papers up to the final submission deadline. These will be reviewed to the same standards; there will be no penalty for not having utilized rolling submission, but there will be no opportunity for revision before the acceptance decision is made.

Topic areas of interest where innovations in modularity are called for (but not limited to)

- Modern platforms, e.g., the cloud and massively-parallel systems
- Software services
- Web applications
- Long-running, highly-available systems
- Systems involving sensitive data, such as medical records
- Ultra-large systems
- Integration of disparate systems
- Beyond artifacts, e.g., modularity based on tasks, activities and processes
- Product lines
- Various programming paradigms, such as rule-based and map-reduce systems
- Modern development practices, such as distributed development and agile development
- Modularity in support of governance
- Foundations upon which innovations in modularity can be built
- Modularity across the entire software lifecycle, including modularity for early-lifecycle artifacts and modules that span lifecycle phases
- Modularity supporting rapid change
- Modularity supporting flexible configuration and customization

Publication

Accepted papers will be published in a special Modularity Visions section of the main conference proceedings. They will therefore appear in the ACM Digital Library. Authors of accepted papers will be expected to revise their papers based on reviewers' comments, and to provide camera-ready versions of the papers by the camera-ready deadline. They will also be required to sign the standard ACM copyright form.

Contact Information

Questions about this track are most welcome. Please send them by email to the track chair, Harold Ossher, at modularity@aosd.net.

Important dates

Rolling submission opens: Jun 15th, 2010	Final submission: Nov 1st, 2010
Rolling submission closes: Aug 30th, 2010	Notification: Dec 10th, 2010
Acceptance notification: Within 6 weeks of submission	Camera-ready: Jan 10th, 2011

AOSD 2011 Keynote Speakers

Mary Shaw, Carnegie Mellon University
David Notkin, University of Washington

Modularity Visions Invited Speakers

Gilad Bracha, SAP Labs
Jim Herbsleb, Carnegie Mellon University
André van der Hoek, University of California, Irvine

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