

OOPSLA'04

Conference Companion



VANCOUVER

19th Annual ACM Conference
on Object-Oriented
Programming, Systems,
Languages, and
Applications
<http://oopsla.org>

October 24-28, 2004
Vancouver Convention
& Exhibition Centre
Vancouver
British Columbia
Canada



OOPSLA is sponsored by ACM SIGPLAN
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Welcome

It's a pleasure to welcome you to OOPSLA 2004, the 19th Annual Conference on Object-Oriented Programming, Systems, Languages, and Applications. OOPSLA is the premier forum for practitioners, researchers, and students in diverse disciplines whose common thread is object technology. From its inception, OOPSLA has served as an incubator for advanced technologies and practices. Dynamic compilation and optimization, patterns, refactoring, aspect-oriented programming, and agile methods (to name a few) all have OOPSLA roots.

OOPSLA 2004 continues that tradition. Researchers and practitioners from around the world have come to showcase their latest work. Presentations from invited speakers dovetail with technical papers, practitioner reports, expert panels, demonstrations, formal and informal educational symposia, workshops, and diverse tutorials from world-class lecturers. The popular Onward! track presents out-of-the-box thinking at the forefront of computing. You can discuss late-breaking results with the researchers themselves at poster sessions, which culminate in the Third Annual SIGPLAN Student Research Competition. DesignFest[®] provides hands-on design experience in an expert-mentored environment.

And again this year, we're privileged to host the ACM Turing Lecture. Alan Kay, Turing laureate for 2003, received the prestigious award "for pioneering many of the ideas at the root of contemporary object-oriented programming languages, leading the team that developed Smalltalk, and for fundamental contributions to personal computing." It's especially fitting that Dr. Kay deliver the Turing Lecture at OOPSLA.

A conference of this magnitude doesn't just happen. Hundreds of talented and enthusiastic people work for months on end to bring it about. Authors and presenters, the conference and program committees, and all the other volunteers make OOPSLA an extraordinary conference. My heartfelt thanks go out to every one of them. I'm grateful also to the OOPSLA Steering Committee for their guidance, to our corporate supporters, and to SIGPLAN, SIGSOFT, and ACM for sponsoring the conference.

Thank you for your interest in OOPSLA. This written record needs an audience to have lasting benefit. So whether you're reading it at the conference or long afterward, the entire team and I wish you greater success in your work because of what you learn through OOPSLA.



John Vlissides
OOPSLA 2004 Conference Chair
IBM Research

Welcome from the Program Chair

In today's competitive, fast-paced computing industry, software developers face a number of vexing challenges. Chief among these challenges include ensuring the software is

- Extensible — to support successions of quick updates and additions to address new requirements and take advantage of emerging markets
- Flexible — to support a growing range of data types, traffic flows, and end-to-end quality of service requirements
- Portable — to reduce the effort required to support applications on heterogeneous OS platforms and compilers
- Reliable — to ensure that applications are robust and tolerant to faults
- Scalable — to enable applications to handle larger numbers of clients simultaneously and
- Affordable — to ensure that the total ownership costs of software acquisition and evolution are not prohibitively high.

The technical papers in the OOPSLA proceedings showcase the latest research contributions and empirical results in object-oriented languages, systems, and applications that help to address the challenges outlined above. The 27 technical papers presented in nine sessions this year cover a range of interesting and important topics, including novel software design techniques, advanced programming language features, analysis tools, run-time systems, and new approaches to verifying, validating, and optimizing object-oriented programs.

These papers were selected after a rigorous peer review of 173 submissions by an international program committee comprising 27 experts from all areas of object technology. Each paper was assigned at least four reviewers; papers co-authored by members of the program committee were held to even higher standards, with as many as eight reviewers assigned under strict anonymity. The program committee met in person for two days to discuss each paper in detail, assessing their respective novelty and contribution to object technology.

The rigorous OOPSLA peer review process yielded a collection of papers that advance the state-of-the-art in object technology and its related fields. I would like to thank the authors for submitting their papers — your efforts are essential to moving the field forward. Likewise, I would like to thank the program committee members for devoting considerable time reviewing these papers — your efforts were essential to producing a strong technical program.

When you attend the technical presentations, remember that OOPSLA should be an interactive experience, so please ask questions of the speakers and provide your feedback on their work. By participating actively in OOPSLA, it will continue to provide the best environment for creating, discussing, and sharing object technology!



Douglas C. Schmidt
OOPSLA 2004 Program Chair
Vanderbilt University

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