Welcome to OOPSLA 2006, the premier gathering of professionals from industry and academia, including practitioners, researchers, students, and educators—all sharing their experiences with object technology and its offshoots for the 20th year. OOPSLA offers an extraordinary array of venues and activities: presentations from invited speakers, technical papers, essays, 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 frontiers of computing. Posters discuss late-breaking results, culminating in the Fifth Annual SIGPLAN Student Research Competition. Lightning Talks allow anyone to speak to the community about anything on their minds. And of course there are plenty of social opportunities for mingling and professional networking. That’s just a sampling of what makes OOPSLA the conference of choice for software engineers—all sharing their experiences with object technology and its users.

Peri Tarr, Conference Chair

OOPSLA's Invited Speakers create some of the most memorable OOPSLA moments, providing perspectives and insights that can change how we make decisions, define our interests, and pursue our passions.

OOPSLA Tutorials offer you the chance to learn classic and cutting edge topics, from accomplished presenters with world-class expertise.

OOPSLA's Onward! Track offers technical and philosophical papers and films describing new paradigms or metaphors in computing, new thinking about objects, new framings of conceptual problems or systems, and new technologies.

OOPSLA's Educators' Symposium offers a venue for academics and consultants to share experiences and to explore new ideas that can help us understand and teach better.

OOPSLA Practitioner Reports present experience from practical software development projects. They feature description of projects in context, and include discussion of both technical issues and issues relating to people and processes.

OOPSLA Workshops are fun!, highly interactive events, where groups of object technologists meet to surface, discuss, and attempt to solve challenging problems.

OOPSLA Lightning Talks are 5-minute presentations on any topic of interest to the OOPSLA community. Lightning Talks will be presented back to back with strict enforcement of the 5-minute time limit.

Meeting of the Minds: OOPSLA 2006 is co-located with several other events of interest to the OO community.

GPCE (Generative Programming and Component Engineering) is a conference promoting the application and innovation of foundational techniques for supporting automatic program generation.

PloP (Pattern Languages of Programming) is an opportunity for pattern authors to have their pattern languages critically reviewed by fellow authors, with criticism offered in the form of Writer's Workshops.

Dynamic Languages Symposium is a forum for discussion of dynamic languages (such as Python, Ruby, PHP, JavaScript and others), their implementation and application, as well as ideas for future research and development.
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Invited Speakers

Invited speakers at OOPSLA create some of the most memorable OOPSLA moments, providing perspectives and insights that can change how we make decisions, define our interests, and pursue our passions.

**Dr. Guy Steele**

Sun Fellow Guy Steele is a researcher for Sun Microsystems Laboratories, working on the Programming Language Research project. His research interests include Algorithms, Compilation, Distributed Systems, High Performance Computing, Java, Lisp Scheme, Object Oriented Programming, Operating Systems, Programming Languages, Software, and Supercomputer design.

**Dr. Brenda Laurel**

Brenda Laurel is a designer, researcher and writer. Her work focuses on interactive narrative, human-computer interaction, and cultural aspects of technology. She holds an M.F.A. and Ph.D. in theatre from the Ohio State University. Her doctoral dissertation was the first to propose a comprehensive architecture for computer-based interactive fantasy and fiction.

Dr. Laurel serves as Chair and graduate faculty member of the graduate Media Design Program at the Art Center College of Design in Pasadena, California, and works as a Senior Director and Distinguished Engineer at Sun Microsystems Labs in Menlo Park, California. She has published extensively on topics including interactive fiction, computer games, autonomous agents, virtual reality, and political and artistic issues in interactive media.

**Dr. Philip Wadler**

Philip Wadler is Professor of Theoretical Computer Science at the University of Edinburgh. He holds a Royal Society-Wolfson Research Merit Fellowship and is a Fellow of the Royal Society of Edinburgh. Previously, he worked or studied at Avaya Labs, Bell Labs, Glasgow, Chalmers, Oxford, CMU, Xerox Parc, and Stanford, and has visited as a guest professor in Paris, Sydney, and Copenhagen.

Dr. Wadler appears at position 70 on Citeseer’s list of most-cited authors in computer science; is a winner of the POPL Most Influential Paper Award; and sits on the ACM Sigplan Executive Committee. He contributed to the designs of Haskell, Java, and XQuery, and is a co-author of XQuery from the Experts (Addison Wesley, 2004) and Generics and Collections in Java (O’Reilly, forthcoming). He has delivered invited talks in locations ranging from Aizu to Zurich.

Other invited speakers will be announced on the OOPSLA web site (www.oopsla.org) as they are confirmed.

www.oopsla.org
Take advantage of OOPSLA tutorials! If you think you’re too inexperienced (or too experienced!) to benefit from OOPSLA tutorials, please think again.

OOPSLA gathers the world’s finest educators covering the full breadth of classic and cutting-edge topics. Our presenters not only have world-class expertise, they’re also successful presenters who know how to share their hard-won knowledge with you.

OOPSLA will provide 57 tutorials to choose from. It’s a pity that the maximum that you can take is seven! The web site has more details on the tutorials. Take time to find the best tutorials for you. That time will certainly be repaid.

Coherence and Community: Exploring coherence via group problem solving
George Platts, artist and creativity consultant
Experiments and successes in coherence and team-building
George Platts, artist and creativity consultant
Totally Awesome Computing: Python as a General-Purpose Programming Language
Chuck Allison, Utah Valley State College
Find Your Voice
Gail E. Harris, Instantiated Software Inc.
Write Your Own User Guide
Lauren Wiener, Freelance Technical Writer
Understanding Security with Patterns,
Peter Sommerlad, HSR Hochschule für Technik Rapperswil, Switzerland
Markus Schumacher, Virtual Forge GmbH
Making the Most of Eclipse
Doug Tidwell, Eric Long, Akmal Chaudhri, IBM
SOA from an Architectural Viewpoint
Michael Stal, Siemens Corporate Technology
Software Architecture - Principles, Strategies, Qualities
Michael Stal, Siemens Corporate Technology
Organizational Patterns: Beyond Agility to Effectiveness
Neil Harrison, Utah Valley State College
Storytelling with FIT
Steve Freeman, M3p
Mike Hill, Mandu
Making RUP Agile
Michael Hirsch, Zuehike Engineering AG
Component Systems using OSGi
Peter Kriens, Aqute
Building Service-Oriented Architectures with Web Services
Olaf Zimmermann, IBM Zurich
Pattern Writing Bootcamp
Robert Hamner, Lucent Technologies
Linda Rising, Independent Consultant
The CLOS Metaobject Protocol: Generic Functions and Metaobject Protocol
Pascal Costanza, Vrije Universiteit Brussel
Pair Storytelling: An Introduction to Paired Creativity and Productivity
Joseph Bergin, Fred Grossman, Pace University
Patterns in Communications Software
Greg Utas, Pentennea LLC
An Introduction to C++ Library Functionality in TR1 and at Boost
Scott Meyers, Independent Consultant
Developing a Domain-Specific Modeler with the Eclipse Graphical Modeling Framework (GMF)
Richard Gronback, Artem Tikhomirov, Borland
Concurrent Object-Oriented Programming for Modern Architectures
Vijay Saraswat, Vivek Sarkar, IBM TJ Watson Research Center
Seamless Use of Object-Oriented Models from Requirements to Software Design
Hermann Kaindl, Vienna University of Technology
Pattern-Oriented Software Architecture: Patterns for Concurrent and Networked Objects
Douglas Schmidt, Vanderbilt University
Model-Driven Development of Distributed Systems
Markus Voelter, Independent Consultant
Douglas C. Schmidt, Vanderbilt University
Rapidly Designing & Testing Great User Interfaces
Jeff Patton, Thoughtworks
Programmers are from Mars, Customers are from Venus: A practical guide to working with customers on XP projects
Angela Martin, ThoughtWorks
Richard Biddle, Carleton University
Introduction to the Eclipse Modeling Framework
Nick Boldt, IBM Rational Software
Marcoello Paternostro, IBM Rational Software
Domain-Driven Design: Putting the Model to Work
Eric Evans, Domain Language, Inc.
Programming mobile devices: An introduction
Tommi Mikkonen, Tampere University of Technology
A Tour of Responsibility-Driven Design,
Rebecca Wirfs-Brock, Wirfs-Brock Associates
Agile Software Development in the Large
Jutta Eckstein, IT Communication
The Art of Telling Your Design Story,
Rebecca Wirfs-Brock, Wirfs-Brock Associates
Information Systems Architecture: Stakeholders, Viewpoints and Perspectives
Eric Woods, UBS Investment Bank
SOA - From Concepts to Reality,
Nicolai Josuttis, Independent Consultant
Demystifying GCC: Under the Hood of the GNU Compiler Collection
Ron Cytron, Morgan Deters, Washington University, St. Louis
Kenneth Zadeck, NaturalBridge, Inc.
Introduction to UML 2: A Fair and Balanced Overview
Bran Selic, IBM Canada
Use-Case Model Refactoring and Improvement
Gunnar Overgaard, Seb It Ab, Sweden
Karim Palmkvist, Generic Integration AB, Sweden
Dynamic Programming at the Model-level,
Andy Evans, Tony Clark, Xactium Limited
Dynamic languages for statically typed minds
Nicas Nilsson, Activa

Security Patterns and Secure Software Architecture
Munawar Hafiz, University of Illinois, Urbana-Champaign
Agility, for Managers, Programmers, and All
Alistair Cockburn, Humans and Technology
Techniques and Principles for Rolling Your Own Methodology
Alistair Cockburn, Humans and Technology
Squeezing the Last Drop of Value out of your Project Management Strategies
Alistair Cockburn, Humans and Technology
Writing Effective Use Cases for Projects Agile and Otherwise
Alistair Cockburn, Humans and Technology
Making your Methodology Crystal Clear and More
Alistair Cockburn, Humans and Technology
Revolutionizing Software Quality through Static Analysis Tools
Jonathan Alidrich, Carnegie Mellon University
Building Solid Distributed Enterprise Software Architectures: Architecture Principles and UML Views,
Jeff Garland, CrystalClear Software
Richard Anthony, General Dynamics C4 Systems
Generate the repetitive, boring code - how to write code generators
Nicas Nilsson, Activa
Jon-Erling Dahl, Consat Engineering AB
Test-Driven Development - hands-on!
Nicas Nilsson, Activa
Jimmy Nilsson, Jnsk AB
Ruby on Rails - a kickstart
Nicas Nilsson, Activa
Incremental Releases Users & Stakeholders Will Love: How to deliver functionally complete valuable incremental releases
Jeff Patton, Thoughtworks
Effective Concurrent Programming in Java
Brian Goetz, Quotiquo Corp
David Holmes, Sun Microsystems, Australia
Refactoring Databases: Evolutionary Database Design
Pramod Sadalage, Thoughtworks
Scott Ambler, Ronin International
Ajax: Introduction and Architecture
Stuart Halloway, Relevance, LLC
Building Distributed Applications with the Sun SPOT
Bernard Horan, Sun Microsystems, UK
Randall Smith, Sun Microsystems, US
John Daniels, Dave Cleal, Syntropy Ltd
Model AOP Using Design Rules and XPIs
Kevin Sullivan, University of Virginia

Portland’s Green
You might expect some rain in Portland, and rain it does, though less than in Atlanta, Birmingham, Houston, Indianapolis or Seattle. You’ll likely want an umbrella and a jacket, with typical October highs around 64°F/18°C and lows around 45°F/7°C.
Workshops

OOPSLA workshops are fun! These workshops are highly interactive events, where groups of object technologists meet to surface, discuss, and attempt to solve challenging problems. You learn a lot when you share your ideas and experiences with others in the field, and build relationships that are an essential part of the OOPSLA experience.

The workshop topics are diverse. If you'd like to attend one of them, and haven't already done so, please contact the relevant organizers as they are responsible for managing attendance. In most cases you will be asked to submit a short position paper in advance to ensure that the workshop is appropriate for you. We hope to see you in a workshop at this year's OOPSLA!

Library-Centric Software Design
Jaakko Järvi, Texas A&M
Josh Bloch, Google
David Musser, Rensselaer Polytechnic Institute
Sibylle Schupp, Chalmers Univ. of Technology
Jeremy Siek, Rice University

Ultra Large Scale Systems
Dick Gabriel, Sun Microsystems, Inc.
Linda Northrop, The Software Engineering Institute
Doug Schmidt, Vanderbilt University
Kevin Sullivan, The University of Virginia

Eclipse Technology eXchange (ETX)
Michael G. Burke, IBM T.J. Watson Research Center
Martin Robillard, McGill University

"Killer Examples" for Design Patterns Workshop
Carl G. Alphonce, University at Buffalo
Michael E. Caspersen, University at Buffalo
Adrienne Decker, University at Buffalo
Bruce Trask, PrismTech

The Sixth OOPSLA Workshop on Domain-Specific Modeling
Juha-Pekka Tolvanen, University of California, Berkeley
Jonathan Sprinkle, University of California, Berkeley
Jeff Gray, University of Alabama at Birmingham

Building Software for Sensor Networks
Steffen Schaefer, IBM
Jens Jahnke, University of Victoria
Tzilla Elrad, Illinois Institute of Technology

NetBeans Plug-In/RCP Application Development
Tim Boudreau, Sun Microsystems
Jaroslav Tulach, Sun Microsystems
Rich Unger, Nuance

Escaped from the Lab: Software Practices in Large Organizations
Dennis Mancl, Lucent Technologies - Bell Labs
Steven D. Fraser, QUALCOMM
Greg Utas, Pententnea LLC
Bill Opdyke, North Central College
Ricardo Lopez, QUALCOMM

From Embedded to Enterprise. How to Get Application Portability
Peter Kriens, Aquate
Rob van den Berg, Siemens
Richard Hall, University Grenoble
BJ Hargrave, IBM
Marcel Offermans, Luminis

Creating an Informative Workspace
Rachel Davies
David Hussman

Fourth International Workshop on SOA and Web Services Best Practices
Anders Aas Bjerkreim, BEKK Consulting
Ali Arsanjani, IBM Corporation
Lars Arne Skaar, TietoEnator Banking Solutions
Kerrie Holley, IBM Corporation
Amir Zeid, British University in Egypt

Resource Management in Object Systems
Ciarán Bryce, INRIA
Grzegorz Czajkowski, Google
Walter Binder, researcher

First Workshop on Model-Based Testing and Object-Oriented Systems (M-TOOS)
Wolfgang Grieskamp, Microsoft Research
Debra Richardson, University of California at Irvine
Clay Williams, IBM T. J. Watson Research Center

Event-Driven Architecture
Mamdouh Ibrahim, IBM
Opheer Etzion, IBM

Onward!

The Onward! track provides a forum for visions of the future of our field. Onward! is the place to reveal the revolutionary, air the provocative, and expose the subversive. We especially appreciate submissions from a range disciplines with important contributions for thinking about software, including Human Computer Interaction, Industrial Design, Information Systems, Psychology, Philosophy, and Cultural Studies of all kinds.

The Geography of Programming
Elisa Baniassad, Sebastian Fleissner, The Chinese University of Hong Kong

Model-Based DSL Frameworks
Jean Bezivin, Frederic Jouault, Ivan Kurtev, Patrick Valduriez, INRIA and LINA, University of Nantes

Keeping Track of Crosscutting Requirements in UML Models via Context-Based Constraints
Felix Buebl, Epigenomics AG

Conscientious Software
Richard Gabriel, Ron Goldman, Sun Microsystems

A Commensalistic Software System
Sebastian Fleissner, Elisa Baniassad, The Chinese University of Hong Kong

Pegasus: First Steps Towards a Naturalistic Programming Language
Roman Knöll, Mira Mezini, Darmstadt University of Technology

JDA: A Step Towards Large-Scale Reuse on the Web
Seung Chan Lim, Peter Lucas, MAYA Design Inc.

Collaborative Diffusion: Programming Antiobjects
Alexander Repenning, University of Colorado

Intentional Software
Charles Simonyi, Magnus Christer, Shane Clifford, Intentional Software

Applying a UML-based Agent Modeling Language to the Autonomic Computing Domain
Ivan Trecansky, Radovan Cervenka, Whitesteen Technologies Slovakia
Dominic Greenwood, Whitesteen Technologies Switzerland

The Onward! track will also include films. Watch the web site (www.oopsla.org) for information on these films.

DesignFest®

DesignFest® is a training method, not in the coursework sense, but in the sportlike sense. It is an exercise in design with your peers. Test and enhance your design qualities? DesignFest® is for just that. As part of the OOPSLA 2006 registration process, you can register for DesignFest® at no additional cost.

www.oopsla.org

Essays

The Essays track aims to enhance OOPSLA by using the special characteristics of the essay form. An essay demonstrates or describes the way an interesting mind grapples with an idea. The mind and the process of grappling are as important as the idea. Our ideal essay displays an unfamiliar way of thinking being applied to a topic that deserves the attention of the OOPSLA community.

Essays
On System Design
Jim Waldo, Sun Microsystems, Inc.

Portland Moves You

Portland has several forms of public transportation, including the MAX light rail system. You can take the MAX from the PDX airport directly to the Oregon Conference Center or to the DoubleTree hotel. See www.trimet.org.

You can also always call a cab:

- Green Cab: 503.252.4422
- Portland Taxi: 503.256.5400
- Company: 503.227.1212
- Radio Cab: 503.227.1234
- Yellow Cab: 503.227.1234
Research papers

Research papers form the heart of the OOPSLA experience. Research papers describe substantiated new research or novel technical results, advance the state of the art, or report on significant experience or experimentation.

Compilation
Method-Specific Dynamic Compilation using Logistic Regression
John Cavazos, Michael O’Boyle, University of Edinburgh
Replay Compilation: Improving Debuggability of a Just-in-Time Compiler
Kazunori Ogata, Tamiya Onodera, Kiyokuni Kawachiya, Hideaki Komatsu, Toshio Nakatani, IBM Research, Tokyo Research Laboratory
Declarative, Formal, and Extensible Syntax Definition for AspectJ: A Case for Scannerless Generalized-LR Parsing
Martin Bravenboer, Utrecht University
Eric Tanter, University of Chile
Elco Visser, Utrecht University

Generics
Concepts: First-Class Language Support for Generic Programming in C++
Douglas Gregor, Indiana University
Jaakko Jarvi, Texas A&M University
Jeremy Siek, Rice University
Bjarne Stroustrup, Gabriel Dos Reis, Texas A&M University
Andrew Lumsdaine, Indiana University
A Flow-Based Approach for Variant Parametric Types
Wei-Ngan Chin, Florin Craciun, Siau-Cheng Khoo, Corneliu Popeea, National University of Singapore

Generic Ownership for Generic Java
Alex Potarin, James Noble, Victoria University of Wellington
Dave Clarke, Centrum voor Wiskunde en Informatica
Robert Biddle, Carleton University

Language Design
Statically Scoped Object Adaptation with Expanders
Alessandro Warth, Milan Stanojevic, Todd Millstein, University of California, Los Angeles
Eliminating Distinctions of Class: Using Prototypes to Model Virtual Classes
DeLesley Hutchins, University of Edinburgh
J&: Nested Intersection for Scalable Software Composition
Nathaniel Nystrom, Xin Qi, Andrew C. Myers, Cornell University

Virtual Machines
Uniform Proxies for Java
Patrick Eugster, Purdue University
Adapting VM Techniques for Seamless Aspect Support
Christoph Bockisch, Darmstadt University of Technology
Matthew Arnold, IBM T. J. Watson Research Center
Tom Dinkelaker, Mira Mezini, Darmstadt University of Technology
Efficient Control Flow Quantification
Christoph Bockisch, Sebastian Kanthak, Michael Haupt, Darmstadt University of Technology
Matthew Arnold, IBM T. J. Watson Research Center
Mira Mezini, Darmstadt University of Technology

Types
A Formal Framework for Component Deployment
Yu David Liu, Scott F. Smith, The Johns Hopkins University
Efficient Software Model Checking of Data Structure Properties
Paul Darga, University of Michigan
Chandrasekhar Boyapati, University of Michigan
An Operational Semantics and Type Safety Proof for Multiple Inheritance in C++
Daniel Wasserrab, Universität Passau
Tobias Nipkow, Technische Universität München
Gregor Snelting, Universität Passau
Frank Tip, IBM T. J. Watson Research Center

Performance
Virgil: Objects on the Head of a Pin
Ben L. Titzer, UCLA
JAVANA: A System for Building Customized Java Program Analysis Tools
Jonas Maabe, Dries Buytaert, Lieven Eeckhout, Koen De Bosschere, Ghent University
The DaCapo Benchmarks: Java Benchmarking Development and Analysis
Stephen M Blackburn, Intel
Robin Garner, Australian National University
Chris Hoffmann, Asjad M Khan, University of Massachusetts at Amherst
Kathryn S. McKinley, University of Texas at Austin
Rotem Bentzur, University of New Mexico
Amer Diwan, University of Colorado
Daniel Feinberg, University of New Mexico
Samuel Z. Guyer, Tufts University
Anthony Hosking, Purdue University
Maria Jump, University of Texas at Austin
J. Eliot B. Moss, University of Massachusetts
Darko Stefanovic, University of New Mexico
Thomas VanDrunen, Purdue
Daniel von Dincklage, University of Colorado
Benjamin Wiedermann, University of Texas at Austin

Frameworks and Tools
Design Fragments Make Using Frameworks Easier
George Fairbanks, David Garlan, William Scherlis, Carnegie Mellon University
JTL - The Java Tools Language
Tal Cohen, Joseph (Yossi) Gil, Itay Maman, Technion - Israel Institute of Technology
A Framework for Implementing Pluggable Type Systems
Chris Andreae, James Noble, Victoria University of Wellington
Shane Markstrum, Todd Millstein, University of California, Los Angeles

Concurrency
Eliminating Synchronization-Related Atomic Operations with Biased Locking and Bulk Rebiasing
Kenneth Russell, David Detlefs, Sun Microsystems, Inc.
A Flexible Framework for Implementing Software Transactional Memory
Maurice Herlihy, Brown University
Victor Luchangco, Mark Moir, Sun Microsystems Laboratories

Software Engineering
Isolating and Relating Concerns in Requirements using Latent Semantic Analysis
Kwun Kit Lo, Man Kwun Chan, Elisa Baniasadi, The Chinese University of Hong Kong
XSsnippet: Mining For Sample Code
Naiyana Tansalark, Kajal Claypool, UMass - Lowell
Understanding the Shape of Java Software
Gareth Baxter, Marcus Frean, Victoria University of Wellington
Hayden Melton, University of Auckland
James Noble, Mark Rickerby, Hayden Smith, Victoria University of Wellington
Ewan Tempeo, University of Auckland
Matt Visser, Victoria University of Wellington

Portland’s Downtown
Pioneer Courthouse Square
Located at SW Broadway and Yamhill in downtown Portland, Pioneer Courthouse Square is a favorite place of Portlanders. Formerly a hotel site, then a parking lot, the square was purchased by the city and redesigned as an urban open space for all to enjoy. Nicknamed “Portland’s living room,” it’s a perfect spot to stop with a cup of coffee (abundantly available on nearly every block downtown).

You can take the MAX to Pioneer Courthouse Square - www.trimet.org

www.oopsla.org
OOPSLA Practitioner Reports present experience from practical software development projects. They feature descriptions of projects in context, and include discussion of both technical issues and issues relating to people and processes. Practitioner report presentations are an ideal place to hear and discuss experiences in applying new technology or processes in practical situations.

Incremental Software Engineering Techniques
Towards Agile Security in Web Applications
Vidar Kongsli, Bekk Consulting AS
The Composition Refactoring Triangle (CRT) Practical Toolkit: From Spaghetti to Lasagna
Ethan Hadar, Mercury Interactive Systems
Irit Hadar, Department of Management Information Systems, Haifa University
Incremental Return on Incremental Investment: Engenio’s Transition to Software Product Line Practice
William Hetrick, LSI Logic
Charles Krueger, BigLever Software
Joseph Moore, LSI Logic

Enterprise Architecture Modeling
Architectural improvement by use of strategic level Domain-Driven Design
Einar Landre, Statoil ASA
Harald Wesenberg, Statoil ASA
Using Domain-Driven Design to evaluate Commercial Off-The-Shelf software
Einar Landre, Statoil ASA
Harald Wesenberg, Statoil ASA
Software Architecture at a Large Financial Firm
George Fairbanks, Carnegie Mellon University
Kevin Bierhoff, Carnegie Mellon University
Desmond D’Souza, Kinetinc Inc.

Applications Crossing SW/HW Boundary
Techniques Applied to a Real-time, Embedded, Spaceborne Application
Alexander Murray, Jet Propulsion Laboratory, California Institute of Technology
Mohammad Shahabuddin, Jet Propulsion Laboratory, California Institute of Technology
Secure Trade Lane: A Sensor Network Solution for more reliable and more secure Container Shipments
Stefen Schaefer, IBM
Using Model-Driven Engineering to Complement Software Product Line Engineering in Developing Software Defined Radio Components and Applications
Bruce Trask, MDE Systems
Angel Roman, MDE Systems

Changing the Language of Programming
The Dynamics of Changing Dynamic Memory Allocation
Neil Harrison, University of Virginia State College
John Meiners, Avaya Inc.
Designing APIs that Stand the Test of Time
Timothy Boudreau, Sun Microsystems
Jaroslav Tulach, Sun Microsystems
Evolving an Embedded Domain-Specific Language in Java
Steve Freeman, M3p
Nat Pryce, B13 Services

Panels
OOPSLA panels offer a unique forum to spotlight emerging issues. They also give the OOPSLA community a way to tackle controversial and divisive topics head-on in a fun, interactive way that can shed welcome light on the issues we all must deal with. We hope that you find these panels informative, memorable, and entertaining.

Design Patterns: Beginnings and Futures
Dedicated to the Memory of John Vlissides
Steven Fraser (Moderator), QUALCOMM
Erich Gamma, IBM
Richard Helm, Boston Consulting Group
Ralph Johnson, University of Illinois
Objects and Databases: State of the Union in 2006
William R. Cook (Moderator), University of Texas at Austin
Robert Greene, Versant
Patrick Linskey, BEA
Erik Meijer, Microsoft
Ken Rugg, Progress Software
Craig Russell, Sun Microsystems
Bob Walker, GemStone Systems
Christof Wittig, DBIObjects
Young Guns/OO: The Next Generation
Jeff Overbye, University of Illinois
Brian Foote, The Refactory

The Ultra Challenge: Software Systems Beyond Big
Steven Fraser (Moderator), QUALCOMM
Richard Gabriel, Sun Microsystems
Gregor Kiczales, University of British Columbia
Peter Neumann, SRI International
Linda Northrop, SEI
Douglas Schmidt, Vanderbilt University
A Fishbowl with Piranhas: Coalescence, Convergence or Divergence?
The Future of Agile Software Development Methods
Linda Rising (Co-Facilitator), Independent Consultant
Steven Fraser (Co-Facilitator), QUALCOMM
Alistair Cockburn, Humans and Technology
Jutta Eckstein, Objets in Action
Ron Jeffries, Ron E. Jeffries Associates
Randy Miller, Microsoft
Dave Thomas, Bedarra

Educators’ Symposium
Join us at OOPSLA’s forum for educators in object-oriented and related technologies. This one-day symposium offers a venue for academics and consultants to share experiences and to explore new ideas that can help us understand and teach better. This year we are pleased to have as our keynote speaker Willy Farrell.
Willy is a Senior Software Engineer at IBM with over 25 years of programming experience. Willy is a technical consultant to faculty around the world, working with IBM’s Academic Initiative as part of the IBM Developer Skills team. For the past 6 years he has kept busy visiting universities to train faculty in the latest technologies.

Keynote Address
Objects in a Service Oriented World
Willy Farrell, IBM

Papers
Java Interfaces in CS 1 Textbooks
Thomas VanDrunen, Wheaton College
A Novice’s Process of Object-Oriented Programming
Michael E. Caspersen, University of Aarhus, Denmark
Michael Kölling, University of Kent, Canterbury, United Kingdom
Helping Students Appreciate Test-Driven Development (TDD)
Jaime Spacco, William Pugh, University of Maryland
Hello, M.U.P.P.E.T.S.: Using a 3D Collaborative Virtual Environment to Motivate Fundamental Object-Oriented Learning
Christopher Egert, Kevin Bierre, Andrew Phelps, Rochester Institute of Technology
Phil Ventura, St. Thomas University
Expertiza: Students Helping to Write an OOD Text
Dale J. Skrien, Colby College
oops -- Discovering LL(1) through Objects
Axel T. Schreiner, James Helriotis, Rochester Institute of Technology
How natural is natural language? Improving user participation in requirements gathering by writing better use cases
Dorota Jagielska, Paul Wernick, Mick Wood, Steve Bennett Systems & Software Group, School of Computer Science
University of Hertfordshire, United Kingdom

John Vlissides
The OOPSLA community deeply mourns the passing of John Vlissides and will celebrate his life as a part of OOPSLA 2006.
**Doctoral Symposium**

The goal of the Doctoral Symposium is to provide useful guidance for the completion of the dissertation research and the initiation of a research career. The Symposium will provide an interactive forum for doctoral students in one of two phases in their doctoral progress.

- **Apprentices**: Students who are just beginning their research, are not ready to actually make a research proposal, but are interested in learning about structuring research and getting some research ideas.
- **Proposers**: Students who have progressed far enough in their research to have a structured proposal, but will not be defending their dissertation in the next 12 months.

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**Posters**

OOPSLA Posters provide an excellent forum for authors to present their work in an informal and interactive setting. Posters are ideal to showcase speculative, late-breaking results or to introduce interesting, innovative work. They allow authors and interested participants to connect to each other and to engage in discussions about the work presented. Posters provide authors with a unique opportunity to draw attention to their work during the conference. Poster abstracts are published in the OOPSLA Companion and in the ACM Digital Library.

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**Portland Hotels**

- **Doubletree Lloyd Center**
  1000 NE Multnomah
  Portland, OR 97202
  Phone: 503.281.6111

- **Courtyard Portland Downtown/ Lloyd Center**
  435 NE Wasco
  Portland, OR 97232
  Phone: 503.234.3200
  Book reservations online at [www.Marriott.com/pdxcl](http://www.Marriott.com/pdxcl)
  For One King Bed enter code: ACMACMA
  For Two Queen Beds enter code: ACMACMB

- **Red Lion Hotel Portland - Convention Center**
  1021 NE Grand Ave
  Portland, OR 97232
  Phone: 503.235.2100
  Call the hotel and mention rate code ACM/OOPSLA

These hotels are nearby the home of OOPSLA 2006, the Oregon Conference Center, located at 777 N.E. Martin Luther King Jr. Blvd. Portland, Oregon 97212

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**Lightning Talks**

A Lightning Talk is a 5-minute presentation on any topic of interest to the OOPSLA community. Lightning Talks will be presented back to back with strict enforcement of the 5-minute time limit. Lightning Talks are a popular and exciting format in the open-source community, and you can find lots of advice about them with a good search engine. Lightning Talk submissions consist solely of an abstract (of up to 250 words) which will be published on the OOPSLA website.

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**Dynamic Languages Symposium**

The Dynamic Languages Symposium (DLS) at OOPSLA 2006 is a forum for discussion of dynamic languages, their implementation and applications.

While mature dynamic languages including Smalltalk, Lisp, Scheme, and Prolog continue to grow and inspire new converts, a new generation of dynamic scripting languages such as Python, Ruby, PHP, Perl and JavaScript are successful in a wide range of applications. DLS provides a world-class forum for researchers and practitioners to come together to share their knowledge and experience, and to discuss and further groundbreaking ideas and new research directions.

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**Demonstrations**

OOPSLA demonstrations provide an opportunity for companies and universities to show their latest work to an experienced audience. This can be work in progress, commercial applications, proof of concepts, results of academic research, tools, systems or any topic that has interesting object-oriented aspects. Demonstrations are not focused on selling a product but to highlight, explain and present the technical aspects of it. Demonstrators may actively solicit feedback from the usually very technically savvy audience. In the past, this has made for some very interesting demonstration sessions.

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**Student Volunteers**

The Student Volunteer program is an opportunity for students from around the world to associate with the top people in object and related technologies, research, and software development. In return for a few hours of their time, student volunteers receive complimentary registration, free admission to tutorials (space permitting), and other benefits. A limited number of volunteers may receive some financial support in return for additional volunteer hours. In past years, job assignments included assisting with symposia and panels, checking badges at doors, working at the information booth, and helping with conference registration.

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**Portland Brews**

Portland is famous for its microbreweries. Here are a few of the many choices:

- **Bridgeport Brewpub + Bakery**
  1313 NW Marshall Street
  Phone: 503.241.3612
  [www.bridgeportbrew.com](http://www.bridgeportbrew.com)

- **Hair of the Dog Brewing Co.**
  4509 SE 23rd
  Phone: 503.232.6585
  [www.hairofthedog.com](http://www.hairofthedog.com)

- **Laurelwood Public House & Brewery**
  1728 NE 40th
  Phone: 503.282.0622
  [www.laurelwoodbrewpub.com](http://www.laurelwoodbrewpub.com)

- **MacTarnahan’s Taproom at Portland Brewing**
  2730 NW 31st
  Phone: 503.228.5269
  [www.macsbeer.com](http://www.macsbeer.com)

- **Widmer Brothers Gasthaus Pub**
  955 N Russell
  Phone: 503.281.3333
  [www.widmer.com](http://www.widmer.com)

You can check out even more local breweries/brewpubs at [www.onbeer.org/brewmemb.html](http://www.onbeer.org/brewmemb.html)
21st Annual ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications

October 22-26, 2006
Oregon Convention Center
Portland, Oregon

www.oopsla.org