Conference Program

20-26 May 2007
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Welcome to ICSE 2007

On behalf of the entire organizing committee, I welcome you to the 29th International Conference on Software Engineering. The theme of ICSE 2007 is “Developing Dependable Software”, with which we acknowledge the increasingly crucial role that the engineering of software plays in business, healthcare, government and society at-large.

For ICSE 2007, we have created a comprehensive and varied program, including a wide variety of workshops, tutorials and collocated events, in addition to the main ICSE conference. Co-located events include the International Conference on Software Process, a symposium dedicated to recognizing the contributions of Professor Barry Boehm, a symposium for presentation of the work of doctoral students, and a day-long seminar for new faculty to introduce them to the details of the academic profession.

Each day of the main conference begins with a keynote presentation by a leading expert in an area of software engineering. The keynote on Wednesday, by Steve Fisher from salesforce.com, provides details about the engineering of a major Web application. The Thursday keynote, by Professor Deborah Johnson of the University of Virginia, discusses the ethical challenges that we face in the software engineering field. Professor Bev Littlewood of City University in London presents the keynote on Friday, and he reviews the issues involved in assessing the dependability properties of software. Following the keynotes each day, the conference includes parallel tracks on research, education, research demonstrations, and experience reports.

With ICSE 2007 we introduce a new type of program element: “Portraits in Practice”. The goal of these sessions is to promote a focused dialog between practitioners and researchers so that each can learn from the other. This dialog will allow researchers to gain insights about the challenges that practitioners face, and it will allow practitioners to acquire a more comprehensive view of current research. We hope that these sessions will kindle a continuing interaction between researchers and practitioners.

Software engineering faces many challenges and these are discussed in the conference track on the “Future of Software Engineering”. This track features 25 presentations by leading experts, and it provides a comprehensive picture of what can be expected in the software engineering field in the near future.

The software engineering community can take great pride in the contributions that research has made to the practice of software engineering. The NSF-funded “Software Engineering Impact Project” is underway to determine the impact that research has had, and three panel presentations in the program provide an update on the state of this determination.

Research in software engineering is supported for the most part by funding agencies such as the National Science Foundation in the United States. Two conference sessions provide the community with an opportunity to learn about the plans and expectations of funding agencies from a number of countries.

Minneapolis is a major high technology area and the home of a large software industry. Minneapolis offers many opportunities for recreation including nearby lakes, the Mississippi river, many parks, and other natural areas. The city also offers many fine restaurants, shopping centers, museums, theaters and the nearby Mall of America. I encourage you to take advantage of all the opportunities that the city and the region have to offer.

Once again, on behalf of the entire organizing committee, I wish you an enjoyable and fruitful experience at ICSE 2007.

John Knight
General Chair, ICSE 2007
Organizing Committee

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In addition, we thank the many other people, too numerous to name, who assisted with the review process for ICSE-2007.
Keynote Speakers

Steve Fisher
Senior Vice President of AppExchange, Salesforce.com
The Architecture of the Apex Platform, salesforce.com’s Platform for Building On-Demand Applications

On-demand computing has transformed enterprise software, lowering risk and cost while increasing user adoption and customer success. To be successful, an application must be designed for on-demand from the ground-up, including core architectural elements such as multi-tenancy, availability, performance, security, metadata-driven customization, integration via web services, etc. As with any new paradigm, initial applications must design and implement all these core attributes, but ultimately platforms emerge that encapsulate core computing services, allowing application developers to focus on innovation and value, and not on reinventing the wheel. With the Apex platform, salesforce.com has delivered the first on-demand platform, allowing developers to easily develop and deliver the next generation of on-demand applications. In this talk, Steve Fisher discusses the technical architecture of the Apex platform.

Biography
Steve Fisher is senior vice president of AppExchange at salesforce.com. In this role Fisher leads the team responsible for building the business for AppExchange, salesforce.com’s Web-based platform for business applications. Fisher is also chairman of salesforce.com’s Technology Architecture Committee, which defines and ensures the integrity of the architecture for the salesforce.com service. With more than 16 years in the technology industry, Fisher has held positions with Apple Computer and AT&T Labs, where he served on the team responsible for architecting AT&T’s VoIP and utility computing strategies. Fisher also founded NotifyMe Networks, an interactive voice-alerting platform application service provider and served as the company’s first CEO. He has been named an inventor on 14 patents. Fisher graduated with a BS degree in Mathematical and Computational Science and an MS in Computer Science from Stanford University.

Deborah G. Johnson
Olsson Professor of Applied Ethics & Chair, Department of Science, Technology and Society, University of Virginia
Computer Professional Ethics in Theory and in Practice

The starting place for professional ethics is with the idea that certain occupational groups have special expertise that leads to special responsibilities. The organization of the group into a profession with an organization that controls admission and promulgates a code of ethics is a mechanism for ensuring that the special expertise of members is deployed in ways that benefit the public (consumers, users, non-experts) or, at least, does not harm the public. Professional ethics involves both issues and responsibilities that fall to the profession as a collective unit, and issues and responsibilities that are a matter of individual behavior. Codes of conduct straddle this distinction for they are a collective expression of standards for individual behavior. Codes of conduct are not, however, the be all and end all of professional ethics. Professions create a culture of responsible conduct, a culture that embraces values such as safety, reliability, elegance, etc. Professions create the culture of the profession through a variety of activities, including codes of conduct, accreditation standards for programs, ethics committees, hotlines, etc. In the case of computing the arguments for a strongly differentiated, organized profession that takes responsibility for creating a culture that addresses the quality of computing products and services available to the public is compelling. Computing is a critical component of our society (and other information societies) and citizens and consumers do not, and cannot be expected to, understand the computing on which they depend for vital life functions. They have no choice but to trust computer professionals. The major question that computer scientists must ask, then, is whether the field is organized so as to be worthy of the trust of the public. As an occupational group, computing has difficulty fitting itself into the paradigm of professions for several reasons. The field is diverse; loosely organized; and, there is a fuzzy relationship between academics and practitioners. Like many of the fields of engineering, computer science manages a tension between seeing itself as a profession and seeing itself as a group of individual agents working in the marketplace. The tension expresses itself in many forms. Computer scientists are evaluated by the criteria of computer science – by standards of quality, elegance, creativity –as well as by the criteria of the marketplace – what can reach the marketplace quickly and do the job adequately for the time being. The tension cannot be resolved; it must be acknowledged and managed. While strategies used by other professions can be adopted, computing poses special challenges that call for more than standard approaches.

Biography
Deborah G. Johnson is the Anne Shirley Carter Olsson Professor of Applied Ethics and Chair of the Department of Science, Technology, and Society in the School of Engineering and Applied Sciences of the University of Virginia. Professor Johnson received the John Barwise prize from the American Philosophical Association in 2004, the Sterling Olmsted Award from the Liberal Education Division of the American Society for Engineering Education in 2001; and the ACM SIGCAS Making a Difference Award in 2000. Professor Johnson is the author/editor of four books: Computer Ethics (Prentice Hall, 1st edition 1984; second edition 1994; third edition, 2001); Computers, Ethics, and Social Values (co-edited with Helen Nissenbaum, Prentice Hall, 1995); Ethical Issues in Engineering (Prentice Hall, 1991); and Ethical Issues in the Use of Computers (co-edited with John Snapper, Wadsworth Publishing Co., 1985). Two new books are now in press. She has published over 50 papers in a variety of journals and edited volumes. She co-edits the journal, Ethics and Information Technology and co-edits a book series on Women, Gender, and Technology for University of Illinois Press. Active in professional organizations, Professor Johnson has served as President of the Society for Philosophy and Technology, President of the International Society for Ethics and Information Technology (INSEIT), Treasurer of the ACM Special Interest Group on Computers and Society, and Chair of the American Philosophical Association Committee on Computers and Philosophy. Currently she serves on the Executive Board of the Association for Practical and Professional Ethics.
More than twenty years ago, as computers were introduced into safety-critical roles in civil aircraft, there was much debate about what claims could be made for their dependability. Much of the debate focused, naturally enough, on what could be claimed for the reliability of software. A famous example was the apparent need to claim a probability of failure of less than $10^{-9}$ per hour for some flight-critical avionics. Several authors (I was one) demonstrated that such claims were several orders of magnitude beyond what could be supported with scientific rigour. In this talk I shall revisit this debate, showing some advances that have been made in 'dependability cases', particularly involving formal notions of 'confidence' in dependability claims. However, I shall also show that the bottom line has not changed significantly: although some systems have been shown to have extremely high dependability — after the fact — (i.e. in extensive operational use), it still remains impossible to show — before using it — that a system will be extremely dependable in operation. The reason is an unforgiving law about the extensiveness of evidence needed to make very strong dependability claims. These limits to assurance should be of interest beyond the technical community: for example, they pose difficult questions for society in estimating the risks associated with the deployment of certain novel systems.

**Biography**

Bev Littlewood has degrees in mathematics and statistics, and a PhD in statistics and computer science. He founded the Centre for Software Reliability at City University, London, in 1983 and was its Director from then until 2003. He is currently Professor of Software Engineering at City University.

Bev has worked for many years on problems associated with the modelling and evaluation of dependability of software-based systems, and has published many papers in international journals and conference proceedings and has edited several books. He is a member of IFIP Working Group 10.4 on Reliable Computing and Fault Tolerance, of the BCS Safety-Critical Systems Task Force, of the UK Computing Research Committee; from 1990 to 2005 he was a member of the UK Nuclear Safety Advisory Committee. He is currently serving his second term as Associate Editor of the IEEE Transactions on Software Engineering, and is on the editorial boards of several other international journals. He is a Fellow of the Royal Statistical Society.

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**Awards**

On behalf of the entire ICSE community, we congratulate the following award recipients. Note: All awards ceremonies are plenary sessions in Salon D.

### Most Influential Paper Award - ICSE 1997
**Thursday May 24th, 4:00PM**
*Designing Distributed Applications with Mobile Code Paradigms*
Antonio Carzaniga, Gian Pietro Picco, Giovanni Vigna

### ACM SIGSOFT Distinguished Paper Awards – ICSE 2007
**Thursday May 24, 4:00PM (Awards presentation only. Papers will be presented in the research paper track)**

- **Tracking Code Clones in Evolving Software**
  Ekwa Duala-Ekoko, Martin P. Robillard

- **Predicting Faults from Cached History**
  Sunghum Kim, Thomas Zimmermann, E. James Whitehead Jr., Andreas Zeller

- **Matching and Merging of Statecharts Specifications**
  Shiva Nejati, Mehrdad Sabetzadeh, Marsha Chechik, Steve Easterbrook, Pamela Zave

- **Refactoring for Parameterizing Java Classes**
  Adam Kiezun, Michael D. Ernst, Frank Tip, Robert M. Fuhrer

### ACM SIGSOFT Outstanding Research Award
**Wednesday May 23, 8:30AM**
Elaine J. Weyuker, AT&T Labs - Research

### ACM SIGSOFT Distinguished Service Award
**Thursday May 24, 9:00AM**
David Notkin, University of Washington

### ACM SIGBED/SIGSOFT Frank Anger Memorial Award
**Thursday May 24, 9:00AM**
Recipient To Be Announced

### ACM Fellows
**Thursday May 24, 9:00AM**
Alexander L. Wolf, Imperial College
Matthias Felleisen, Northeastern University

### IEEE Computer Society Harlan D. Mills Award
**Friday May 25, 9:00AM**
Bev Littlewood, City University, London

### IEEE-CS Fellows
**Friday May 25, 9:00AM**
Recipients To Be Announced
WEDNESDAY MAY 23

8:30 AM – 9:00 AM
Opening Ceremony
Room: Salon D

9:00 AM – 10:30 AM
Keynote Address: Steve Fisher
*The Architecture of the Apex Platform, salesforce.com's Platform for Building On-Demand Applications*
Room: Salon D

10:30 AM – 11:00 AM
Break

11:00 AM – 12:30 PM
Research Papers: Program Analysis I
Room: Salon F
Session Chair: Atanas Rountev
*Parallel Randomized State-space Search*
Matthew B. Dwyer, Sebastian Elbaum, Suzette Person, Rahul Purandare
*Sequential Circuits for Relational Analysis*
Fadi Zaraket, Adnan Aziz, Sarfraz Khurshid
*A Sound Assertion Semantics for the Dependable Systems Evolution Verifying Compiler*
Patrice Chalin

Research Papers: Models
Room: Salon E
Session Chair: Tetsuo Tamai
*Behaviour Model Synthesis from Properties and Scenarios*
Sebastian Uchitel, Greg Brunet, Marsha Chechik
*Feature Oriented Model Driven Development: A Case Study for Portlets*
Salvador Trujillo, Don Batory, Oscar Diaz
*Matching and Merging of Statecharts Specifications (SIGSOFT Distinguished Paper)*
Shiva Nejati, Mehrdad Sabetzadeh, Marsha Chechik, Steve Easterbrook, Pamela Zave

Future of Software Engineering I
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
*A Future for Software Engineering?*
Leon J. Osterweil
*Improving Software Practice through Education: Challenges and Future Trends*
Timothy C. Lethbridge, Jorge Diaz-Herrera, Richard J. LeBlanc Jr., J. Barrie Thompson
*Research Collaborations between Industry and Academia*
Dieter Rombach, Reinhold Achatz

Experience Reports: Agile Methods and Software Design
Room: Hennepin/Carver
Session Chairs: Frank Maurer, Michael Hirsch
*An Empirical Study of the Evolution of an Agile-Developed Software System*
Andrea Capiluppi, Juan Fernandez-Ramil, Julian Higman, Helen C Sharp, Neil Smith

Agility and Experimentation: Practical Techniques for Resolving Architectural Tradeoffs
T.C. Nicholas Graham, Rick Kazman, Chris Walmsley
Usability Implications of Requiring Parameters in Objects' Constructors
Jeffrey Stylos, Steven Clarke

Portraits in Practice: Enterprise
Architecture for Legal-Research Publishing at Thomson West
Room: Duluth
Session Chair: Martin Feather
Speakers: Mick Atton, Dave Hendricksen, Bob Sturm

12:30 PM – 2:30 PM
Lunch
Room: Salons A B and C

Food for Thought: Retrospectives on Peopleware
Room: Salon D
Panel Chair: Steven Fraser
Panelists: Barry Boehm, Fred Brooks Jr., Tom DeMarco, Tim Lister, Linda Rising, Ed Yourdon

2:30 PM – 4:00 PM
Research Papers: Testing I
Room: Salon F
Session Chair: Giovanni Denaro
*Regression Test Selection for AspectJ Software*
Guoqing Xu, Atanas Rountev
*Feedback-directed Random Test Generation*
Carlos Pacheco, Shuvendu K. Lahiri, Michael Ernst, Thomas Ball
*Compatibility and Regression Testing of COTS Component-based Software*
Leonardo Mariani, Sofia Papagiannakis, Mauro Pezzè

Research Papers: Clone Detection and Removal
Room: Salon E
Session Chair: Harald Gall
*DECKARD: Scalable and Accurate Tree-based Detection of Code Clones*
Lingxiao Jiang, Ghassan Misherghi, Zhendong Su, Stéphane Glondu
*Very-Large Scale Code Clone Analysis and Visualization of Open Source Programs Using Distributed CCFinder: D-CCFinder*
Simone Livieri, Yoshiaki Higo, Makoto Matushita, Katsuro Inoue
*Using Server Pages to Unify Clones in Web Applications: A Trade-off Analysis*
Damith C. Rajapakse, Stan Jarzabek

Future of Software Engineering II
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
*Model-driven Development of Complex Systems: A Research Roadmap*
Robert France, Bernhard Rumpe
Software Engineering for Automotive Systems: A Roadmap
Alexander Pretschner, Manfred Broy, Ingolf H. Krüger, Thomas Stauner

The Challenges of Building Advanced Mechatronic Systems
Wilhelm Schäfer, Heike Wehrheim

Education Papers: Pedagogy
Room: Marquette/Lasalle
Session Chair: Andreas Zeller
A Constructivist Approach to Teaching Software Processes
Jayakanth Srinivasan, Kristina Lundqvist
Using Experiments in Software Engineering as an Auxiliary Tool for Teaching – A Qualitative Evaluation from the Perspective of Students’ Learning Process
Miroslaw Staron
On the Impact of a Collaborative Pedagogy on African American Millennial Students in Software Engineering
Laurie Williams, Lucas Layman, Kelli M. Slaten, Sarah B. Berenson, Carolyn Seaman

Experience Reports: Performance and Metrics
Room: Hennepin/Carver
Session Chairs: Jürgen Münch, John Grundy
Performance Evaluation and Prediction for Legacy Information Systems
Yan Jin, Antony Tang, Jun Han, Yan Liu
Software Development Environments for Scientific and Engineering Software: A Series of Case Studies
Jeffrey C. Carver, Richard P. Kendall, Susan E. Squires, Douglass E. Post
Company-Wide Implementation of Metrics for Early Software Fault Detection
Lars-Ola Damm, Lars Lundberg

The Impact of Software Engineering Research on Industrial Practice
Room: Duluth
Session Chair: Leon J. Osterweil
Panelists: Alexander Wolf, Carlo Ghezzi, Jeff Kramer

Software Engineering Challenges – Software Services Industry Perspective
Room: Rochester
Speaker: Santonu Sarkar, Infosys

4:00 PM – 4:30 PM
Break

4:30 PM – 6:00 PM
Research Papers: Aspect-Oriented SE
Room: Salon F
Session Chair: Harold Ossher
Automated Inference of Pointcuts in Aspect-Oriented Refactoring
Prasanth Anbalagan, Tao Xie
A Formal Framework for Automated Round-trip Software Engineering in Static Aspect Weaving and Transformations
Mikhail Chalabine, Christoph Kessler
Identifying Feature Interactions in Multi-Language Aspect-Oriented Frameworks
Sergei Kojarski, David H. Lorenz

Research Papers: Maintenance
Room: Salon E
Session Chair: Walter Tichy
Tracking Code Clones in Evolving Software (SIGSOFT Distinguished Paper)
Ekwa Duala-Ekoko, Martin P. Robillard
Do Maintainers Utilize Deployed Design Patterns Effectively?
T. H. Ng, S. C. Cheung, W. K. Chan, Y. T. Yu
OPIUM: Optimal Package Install/Uninstall Manager
Chris Tucker, David Shuffelton, Ranjit Jhala, Sorin Lerner

Future of Software Engineering III
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
Software Testing Research: Achievements, Challenges, Dreams
Antonia Bertolino
Source Code Analysis: A Road Map
David Binkley
Formal Software Analysis: Emerging Trends in Software Model Checking
Matthew B. Dwyer, John Hatcliff, Robby, Corina S. Pasareanu, Willem Visser

Education Papers: Curricula & Course Design I
Room: Marquette/Lasalle
Session Chair: Claudia Werner
Bug Hunt: Making Early Software Testing Lessons Engaging and Affordable
Sebastian Elbaum, Suzette Person, Jon Dokulil, Matt Jorde
Good practices for Educational Software Engineering Projects
Louwarnoud van der Duim, Jesper Andersson, Marco Sinnema
Top SE: Educating Superarchitects Who Can Apply Software Engineering Tools to Practical Development in Japan
Shinichi Honiden, Yasuyuki Tahara, Nobukazu Yoshioka, Kenji Taguchi, Hironori Washizaki

Experience Reports: Modeling
Room: Hennepin/Carver
Session Chairs: Mikio Aoyama, Michael Hirsch
Applying Template Meta-programming Techniques for a Domain Specific Visual Language - An Industrial Experience Report
Mika Karaila, Tarja Systä
Model-Based Security Engineering of Distributed Information Systems Using UMLsec
Bastian Best, Jan Jürjens, Bashar Nuseibeh
Reconceptualizing a Family of Heterogeneous Embedded Systems via Explicit Architectural Support
Sam Malek, Chiyoun Seo, Sharmila Ravula, Brad Petrus, Nenad Medvidovic

NSF US SE Investigators Session
Room: Duluth
Session Chair: Sol J. Greenspan
THURSDAY MAY 24

9:00 AM – 10:30 AM
Keynote Address: Deborah Johnson
Computer Professional Ethics in Theory and in Practice
Room: Salon D

10:30 AM – 11:00 AM
Break

11:00 AM – 12:30 PM
Research Papers: Software Architecture
Room: Salon F
Session Chair: S.C. Cheung
Modeling Product Line Architectures through Change Sets and Relationships
Scott A. Hendrickson, André van der Hoek
On Accurate Automatic Verification of Publish-Subscribe Architectures
Luciano Baresi, Carlo Ghezzi, Luca Mottola
Supporting Heterogeneous Architecture Descriptions in an Extensible Toolset
Matthieu Leclercq, Ali Erdem Özcan, Vivien Quéma, Jean-Bernard Stefani

Research Papers: Program Analysis II
Room: Salon E
Session Chair: Jo Atlee
Adaptive Online Program Analysis
Matthew B. Dwyer, Alex Kinneer, Sebastian Elbaum
Exception Chain Analysis: Revealing Exception Handling Architecture in Java Server Applications
Chen Fu, Barbara G. Ryder
Path-Sensitive Inference of Function Precedence Protocols
Murali Krishna Ramanathan, Ananth Grama, Suresh Jagannathan

Future of Software Engineering IV
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
Safety and Software Intensive Systems: Challenges Old and New
Mats Heimdahl
Software Reliability Engineering: A Roadmap
Michael R. Lyu
The Future of Software Performance Engineering
Murray Woodside, Greg Franks, Dorina C. Petriu

Research Demos: Software Evolution
Room: Marquette/Lasalle
Session Chair: Martin Robillard
Spotlight: A Prototype Tool for Software Plans
David Coppit, Robert R. Painter, Meghan Revelle
SoQuET: Query-Based Documentation of Crosscutting Concerns
Marius Marin, Leon Moonen, Arie van Deursen
SoftGUESS: Visualization and Exploration of Code Clones in Context
Eytan Adar, Miryung Kim

Experience Reports: Testing
Room: Hennepin/Carver
Session Chairs: Hakan Erdogmus, Jürgen Münch
David Martin, John Rooksby, Mark Rouncefield, Ian Sommerville
Enhancing Software Testing by Judicious Use of Code Coverage Information
Stefan Berner, Roland Weber, Rudolf K. Keller
Randomized Differential Testing as a Prelude to Formal Verification
Alex Groce, Gerard Holzmann, Rajeev Joshi

Portraits in Practice: SE Practice and Research at Siemens Corporation
Room: Duluth
Session Chair: Jane Hayes
Speakers: Brian Berenbach, Juergen Kazmeier, Daniel Paulish, Marlon Vieira

12:30 PM – 2:00 PM
Lunch
Room: Salon D

Food for Thought: Agile Contracts
Room: Salons A,B
Speaker: Mary Poppendieck

Student Reception
Room: Salon C

2:00 PM – 3:30 PM
Research Papers: Debugging and Fault Correction
Room: Salon F
Session Chair: Margaret Burnett
GoalDebug: A Spreadsheet Debugger for End Users
Robin Abraham, Martin Erwig
A Technique for Enabling and Supporting Debugging of Field Failures
James Clause, Alessandro Orso
POLUS: A POwerful Live Updating System
Haibo Chen, Jie Yu, Rong Chen, Binyu Zang, Pen-Chung Yew

Research Papers: Design I
Room: Salon E
Session Chair: Anthony Finkelstein
Supporting Generic Sketching Based Input of Diagrams in a Domain-specific Visual Language Meta-tool
John Grundy, John Hosking
Fixing Inconsistencies in UML Design Models
Alexander Egyed
The Factory Pattern in API Design: A Usability Evaluation
Brian Ellis, Jeffrey Stylos, Brad Myers

Future of Software Engineering V
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
Global Software Engineering: The Future of Socio-technical Coordination
James D. Herbsleb
Wednesday at a Glance

8.30-10.30 Research Papers: Program Analysis I
Salon D
"The Architecture of the Apex Platform, salesforce.com's Platform for Building On-Demand Applications"
Keynote Talk: Steve Fisher
Salon D

10.30-11.00 Break

11.00-12.30 Research Papers: Models
Salon E
Future of Software Engineering I
Salon G
Experience Reports: Agile Methods and Design
Hennepin/Carver
Portraits in Practice: Enterprise Architecture for Legal Research Publishing at Thomson West
Duluth

12.30-14.30 Lunch
Salons A, B and C
Food for Thought Panel: Retrospectives on Peopleware
Salon D

14.30-16.00 Research Papers: Testing I
Salon F
Future of Software Engineering II
Salon G
Education Papers: Pedagogy
Marquette/Lasalle
Experience Reports: Performance and Metrics
Hennepin/Carver
Panel: Impact of SE Research on Industrial Practice
Duluth
SE Challenges: Software Services Perspective
Rochester

16.00-16.30 Break

16.30-18.00 Research Papers: Aspect-oriented SE
Salon F
Future of Software Engineering III
Salon G
Education Papers: Curriculum & Course Design
Marquette/Lasalle
Experience Reports: Modeling
Hennepin/Carver
NSF US SE Investigators Session
Duluth

18.00-19.30 Informal Demos / Posters Reception
Symphony Ballroom

19.30-21.00 SIGSoft Town Hall Meeting
Marquette/Lasalle

Thursday at a Glance

9.00-10.30 Research Papers: Software Architecture
Salon D
"Computer Professional Ethics in Theory and in Practice"
Keynote Talk: Deborah Johnson
Salon D

10.30-11.00 Break

11.00-12.30 Research Papers: Program Analysis II
Salon E
Future of Software Engineering IV
Salon G
Demo Papers: Software Evolution
Marquette/Lasalle
Experience Reports: Testing
Hennepin/Carver
Portraits in Practice: SE Practice and Research at Siemens Corporation
Duluth

12.30-14.00 Lunch
Salon D
Student Reception
Salon C
Food for Thought Panel: Agile Contracts
Salons A, B

14.00-15.30 Research Papers: Debugging and fault Correction
Salon F
Future of Software Engineering V
Salon G
Demo Papers: Testing and Analysis
Marquette/Lasalle
Experience Reports: Software Development Processes
Hennepin/Carver
Panel: The Impact of Assertion Research on Industrial Software Development
Duluth

15.30-16.00 Break

16.00-17.30 Most Influential Paper Award and Presentation
and Distinguished Paper Awards
Salon D

17.30-18.00 Break

18.00- Conference Banquet at Nicollet Island

Friday at a Glance

9.00-10.30 Research Papers: Human Aspects in Software Development
Salon E
"Limits To Dependability Assurance - A Controversy Revisited"
Keynote Talk: Bev Littlewood
Salon D

10.30-11.00 Break

11.00-12.30 Research Papers: Future of SE VI
Salon G
Demo Papers: Development, Integration, and Maintenance
Hennepin/Carver
Portraits in Practice: Open-Source Software at IBM Rochester
Duluth

12.30-14.00 Lunch
Salon C
Food for Thought Talk: Modeling for Maintainability
Salons A, B

14.00-15.30 Research Papers: Refactoring and Resuse
Salon E
Future of Software Engineering VIII
Salon G
Education Papers: Evaluation
Marquette/Lasalle
Demo Papers: Modeling
Hennepin/Carver
Panel: The Impact of Middleware Technology
Duluth

15.30-16.00 Break

16.00-17.30 Research Papers: Security
Salon F
Future of Software Engineering IX
Salon G
Education Papers: Curriculum & Course Design II
Marquette/Lasalle
Panel: The Future of SE Research Funding
Duluth

17.30- Closing Session and Awards
Salon D
Some Trends in Web Application Development  
Mehdi Jazayeri

Collaboration in Software Engineering: A Roadmap  
Jim Whitehead

Research Demos: Testing and Analysis  
Room: Marquette/Lasalle  
Session Chair: Andreas Zeller

Kato: A Program Slicing Tool for Declarative Specifications  
Engin Uzuncaova, Sarfraz Khurshid

Korat: A Tool for Generating Structurally Complex Test Inputs  
Aleksandar Miličević, Saša Misailović, Darko Marinov, Sarfraz Khurshid

Crisp - A Fault Localization Tool for Java Programs  
Ophelia C. Chesley, Xiaoxia Ren, Barbara G. Ryder, Frank Tip

Experience Reports: Software Development Processes  
Room: Hennepin/Carver  
Session Chairs: Michael Hirsch, Frank Maurer

Can Requirements be Creative? Experiences with an Enhanced Air Space Management System  
Neil Maiden, Cornelius Neube, Suzanne Robertson

Applying ISO 9001:2000, MPS BR and CMMI to Achieve Software Process Maturity: BL Informatica's Pathway  
Analía Iriogoyen Ferreira, Gelson Santos, Roberta Cerqueira, Mariano Montoni, Ailton Barreto, Andrea O. Soares Barreto, Ana Regina da Rocha

Maturity Status within Front-End Support Organisations  
Mira Kajko-Mattsson

The Impact of Assertion Research on Industrial Software Development  
Room: Duluth  
Session Chairs: Lori A. Clarke, David S. Rosenblum  
Panelists: James C. Browne, Gary T. Leavens, Bertrand Meyer, Nachi Nagappan, Sriram Sankar

3:30 PM – 4:00 PM

Break

4:00 PM – 5:30 PM

Most Influential Paper Award – ICSE 1997  
Room: Salon D  
Session Chair: Wolfgang Emmerich

Designing Distributed Applications with Mobile Code Paradigms  
Antonio Carzaniga, Gian Pietro Picco, Giovanni Vigna.

FRIDAY MAY 25

9:00 AM – 10:30 AM

Keynote Address: Bev Littlewood  
Limits To Dependability Assurance - A Controversy Revisited  
Room: Salon D

10:30 AM – 11:00 AM

Break

11:00 AM – 12:30 PM

Research Papers: Program Analysis III  
Room: Salon F  
Session Chair: Matt Dwyer

Overview and Evaluation of Constraint Validation Approaches in Java  
Lorenz Froihofer, Gerhard Glos, Johannes Osrael, Karl M. Goeschka

Ownership and Immutability Inference for UML-Based Object Access Control  
Yin Liu, Ana Milanova

Automatic Inference of Structural Changes for Matching Across Program Versions  
Miryung Kim, David Notkin, Dan Grossman

Research Papers: Human Aspects in Software Development  
Room: Salon E  
Session Chair: Kumiyo Nakakoji

Information Needs in Collocated Software Development Teams  
Andrew J. Ko, Robert DeLine, Gina Venolia

The Social Dynamics of Pair Programming  
Jan Chong, Tom Hurlbutt

Role Migration and Advancement Processes in OSSD Projects: A Comparative Case Study  
Chris Jensen, Walt Scacchi

Research Papers: Design II and Future of Software Engineering VI  
Room: Salon G  
Session Chair: Pankaj Jalote

[FoSE Paper] Software Design and Architecture: The Once and Future Focus of Software Engineering  
Richard Taylor, André van der Hoek

[Research Paper] The Role of Experience and Ability in Comprehension Tasks supported by UML Stereotypes  
Filippo Ricca, Massimiliano Di Penta, Marco Torchiano, Paolo Tonella, Mariano Ceccato

[Research Paper] Information Hiding and Visibility in Interface Specifications  
Gary T. Leavens, Peter Müller

Future of Software Engineering VII  
Room: Marquette/Lasalle  
Session Chair: Lionel Briand, Alexander Wolf

A Perspective on the Future of Middleware-Based Software Engineering  
Valerie Issarny, Mauro Caporuscio, Nikolaos Georgantas

Self-Managed Systems: An Architectural Challenge  
Jeff Kramer, Jeff Magee

Software Deployment: Past, Present and Future  
Alan Dearle

Education Papers: Evaluation [Short Papers]  
Room: Marquette/Lasalle  
Session Chair: David Budgen

A Leveled Examination of Test-Driven Development Acceptance  
David S. Janzen, Hossein Saiedian

Using Soloman-Felder Learning Style Index to Evaluate Pedagogical Resources for Introductory Programming Classes  
Imran A. Zualkernan
Design and Evaluation of a Diagrammatic Notation to Aid in the Understanding of Concurrency Concepts
Shaohua Xie, Eileen Kraemer, R.E.K. Stirewalt

Research Demos: Development, Integration, and Maintenance
Room: Hennepin/Carver
Session Chair: John Grundy
Suade: Topology-Based Searches for Software Investigation
Frédéric Weigand Warr, Martin P. Robillard
SYNTHESIS: a tool for automatically assembling correct and distributed component-based systems
Marco Autili, Paola Inverardi, Alfredo Navarra, Massimo Tivoli

Presentations by Programmers for Programmers
Li-Te Cheng, Michael Desmond, Margaret-Anne Storey

Portraits in Practice: Open-Source Software at IBM Rochester
Room: Duluth
Session Chair: Dan Berry
Speakers: Sam Ellis, Jeffrey Scheel, Marybeth Markland, Tony Wells

12:30 PM – 2:00 PM
Lunch
Room: Salon C

Food for Thought: Modeling for Maintainability
Room: Salons A,B
Speaker: Andrew Watson

2:00 PM – 3:30 PM
Research Papers: Testing II
Room: Salon F
Session Chair: Alex Orso
Using GUI Run-Time State as Feedback to Generate Test Cases
Xun Yuan, Atif M. Memon
Automated Generation of Context-Aware Tests
Zhimin Wang, Sebastian Elbaum, David S. Rosenblum
Hybrid Concolic Testing
Rupak Majumdar, Koushik Sen

Research Papers: Refactoring & Reuse
Room: Salon E
Session Chair: John Grundy
Refactoring-aware Configuration Management for Object-Oriented Programs
Danny Dig, Kashif Manzoor, Ralph Johnson, Tien N. Nguyen
Refactoring for Parameterizing Java Classes
Adam Kiezun, Michael D. Ernst, Frank Tip, Robert M. Fuhrer
Supporting the Investigation and Planning of Pragmatic Reuse Tasks
Reid Holmes, Robert J. Walker

Future of Software Engineering VIII
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf
Research Directions in Requirements Engineering
Betty H.C. Cheng, Joanne M. Atlee
Software Project Economics: A Road Map
Martin Shepperd
The Future of Programming Environments: Integration, Synergy, and Assistance
Andreas Zeller

Education Papers: Curricula & Course Design II [Short Papers]
Room: Marquette/Lasalle
Session Chair: André van der Hoek
Creating a Computer Security Curriculum in a Software Engineering Program
Bradley S. Rubin, Bhabani S. Misra
Introducing Accessibility Requirements Through External Stakeholder Utilization in an Undergraduate Requirements Engineering Course
Stephanie Ludi
Bringing the Systems Analysis and Design Course into 21st Century: A Case Study in Implementing Modern Software Engineering Principles
Christopher G. Jones
A Template for Real World Team Projects for Highly Populated Software Engineering Classes
Burak Turhan, Ayşe Bener

Research Demos: Modeling
Room: Hennepin/Carver
Session Chair: Sebastian Uchitel
UML/Analyzer: A Tool for the Instant Consistency Checking of UML Models
Alexander Egyed
Revel8or: Model Driven Capacity Planning Tool Suite
Liming Zhu, Yan Liu, Ngoc Bao Bui, Ian Gorton
Tool Support for Developing Advanced Mechatronic Systems: Integrating the Fujaba Real-Time Tool Suite with CAMEL-View
Sven Burmester, Holger Giese, Stefan Henkler, Martin Hirsch, Matthias Tichy, Alfonso Gambuzza, Eckehard Münch, Henner Vöcking

The Impact of Research on Middleware Technology
Room: Duluth
Session Chairs: Wolfgang Emmerich, Mikio Aoyama
Panelists: Francisco Curbera, Steven Reiss, Santosh Shrivastava, Andrew Watson

3:30 PM – 4:00 PM
Break

4:00 PM – 5:30 PM
Research Papers: Security
Room: Salon F
Session Chair: Jens Jahnke
Mining Security-Sensitive Operations in Legacy Code using Concept Analysis
Vinod Ganapathy, David King, Trent Jaeger, Somesh Jha
Committee Meetings

ICSE Steering Committee Meeting
Room: Rochester
Tuesday May 22, 6:30PM

SIGSoft Executive Committee Meeting
Room: Board Room 1
Wednesday May 23, 12:30PM

ESEC Steering Committee Meeting
Room: Board Room 1
Wednesday May 23, 6:00PM

Editorial Board Meeting of Empirical Software Engineering Journal
Meeting point: Springer Exhibit
Wednesday May 23, 6:00PM

TSE Board Meeting
Room: Board Room 2
Wednesday May 23, 6:30PM

SigSoft Town Hall Meeting
Room: Marquette/Lasalle
Wednesday May 23, 7:30PM

ICSE 2008 Organizers Committee Meeting
Room: Board Room 2
Thursday May 24, 12:30PM

TOSEM Editorial Board Meeting
Room: Board Room 1
Thursday May 24, 12:30PM

ICSE 2008 Program Committee Meeting
Room: Board Room 1
Friday May 25, 12:30PM

ICSE 2007 Post Mortem Meeting
Room: Symphony IV
Saturday May 26, 9:00AM

Future of Software Engineering IX
Room: Salon G
Session Chair: Lionel Briand, Alexander Wolf

New Frontiers of Reverse Engineering
Gerardo Canfora, Massimiliano Di Penta

The Current State and Future of Search-Based Software Engineering
Mark Harman

The Future of Empirical Methods in Software Engineering Research
Dag I. K. Sjoberg, Tore Dybå, Magne Jørgensen

Panel: The Future of SE Research Funding
Room: Duluth
Session Chair: Carlo Ghezzi
Panelists: Sol Greenspan, NSF, Gerrit Sonntag DfG, Remy Chabot, NSERC, Claire Hindcliff, EPSRC, Paolo Bresciani, EU Framework VII

ICSE 2007 Exhibitors

Auerbach Publications
Cambridge University Press
Elsevier
InfoSys
John Wiley & Sons, Ltd
Semmle Ltd.
Springer
Tech Excel

Speaker’s Facilities

ICSE 2007 Speakers' Breakfast
Room: Rochester
Wednesday 7:30-8:30 am
Thursday 8:00-9:00 am
Friday 8:00-9:00 am

Session chairs shall meet their presenters for breakfast at the speakers’ breakfast on the day of their session.

Speakers’ Ready Room
Room: Board Room 3
Times: Tuesday evening and during the day on Wednesday, Thursday, and Friday of the conference

Available for speakers to prepare presentations and make sure that the presentation works with the equipment provided in the actual meeting rooms.
# Workshops, Tutorials and Co-located Events at a Glance

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<td>AM PM</td>
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<tr>
<td>(W1) Mining Software Repositories (MSR) Marquette</td>
<td>(W12) Aerospace SE (AeroSE) Conrad A</td>
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<tr>
<td>(W2) SHAring and Reusing architectural Knowledge (SHARK/ADI) Hennepin</td>
<td>(W7) Early Aspects (EA) Conrad C</td>
<td>(W13) Realising Evidence-Based SE (REBSE) Conrad C</td>
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<td>(W4) Modeling in SE (MiSE) Lasalle</td>
<td>(W9) Software Quality (WoSQ) Marquette</td>
<td>(W15) S/W Technologies for Ultra-Large-Scale Sys (ULS) Marquette</td>
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<tr>
<td>(F1) Evaluating Dependability of Component-Based Specs Ramsey</td>
<td>(F3) Safety &amp; Security Requirements for Software Intensive Systems Lasalle</td>
<td>(F4) Migration of Legacy Assets to SOA Environments Hennepin</td>
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<tr>
<td>(H1) Reqs Eng. So Things Don't Get Ugly Nicollet</td>
<td>(H3) Empirical Methods in SE Research Nicollet</td>
<td>(H5) Mining SE Data Ramsey</td>
<td>(F5) Agile Methods: Crossing the Chasm Lasalle</td>
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<tr>
<td>(H2) Testing Concurrent Java Components Duluth</td>
<td>(H4) Lean Software Development Duluth</td>
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<td>(F6) Cost-Benefit Analysis of Software Development Techniques Ramsey</td>
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<tr>
<td>International Conference on Software Process Conrad A and B</td>
<td>New SE Faculty Symposium Duluth</td>
<td>Symposium on The Legacy of Barry W. Boehm Duluth</td>
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<td>AM PM</td>
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<tr>
<td>(W22) SE for Adaptive and Self-Managing Systems (SEAMS) Symphony II</td>
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<td>(W20) SE for Pervasive Computing (SEPCASE) Hennepin</td>
<td>(W21) Automation of Software Test (AST) Lasalle</td>
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<tr>
<td>(F7) Aspect-Oriented Design in Java/AspectJ and Ruby Ramsey</td>
<td>(F8) Variability Management in Software Product Line Engineering Nicollet</td>
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Tutorials

SUNDAY 20 MAY

(F1) Evaluating Dependability Attributes of Component-Based Specifications
Room: Ramsey
Full Day
   Presenters: Ivica Crnkovic, Lars Grunske

(H1) Requirements Engineering So Things don't Get Ugly
Room: Nicollet
Half Day (Morning)
   Presenter: Deb Jacobs

(H2) Testing Concurrent Java Components
Room: Duluth
Half Day (Morning)

(H3) Empirical Methods in Software Engineering Research
Room: Nicollet
Half Day (Afternoon)
   Presenters: Walter F. Tichy, Frank Padberg

(H4) Lean Software Development
Room: Duluth
Half Day (Afternoon)
   Presenters: Mary Poppendieck, Tom Poppendieck

MONDAY 21 MAY

(F3) Engineering Safety and Security Related Requirements for Software Intensive Systems
Room: Lasalle
Full Day
   Presenter: Donald G. Firesmith

(H5) Architecture Knowledge Management: Challenges, Approaches and Tools
Room: Ramsey
Half Day (Morning)
   Presenters: Ian Gorton, Ali Babar

(H6) Mining Software Engineering Data
Room: Ramsey
Half Day (Afternoon)
   Presenters: Tao Xie, Jian Pei, Ahmed E. Hassan

TUESDAY 22 MAY

(F4) Migration of Legacy Assets to Service-Oriented Architecture Environments
Room: Hennepin
Full Day
   Presenters: Dennis Smith, Grace Lewis

(F5) Agile Methods: Crossing the Chasm
Room: Lasalle
Full Day
   Presenters: Frank Maurer, Grigori Melnik

(F6) Cost-Benefit Analysis of Software Development Techniques and Practices
Room: Ramsey
Full Day
   Presenter: Hakan Erdogmus

(H7) Languages for Safety-Critical Software: Issues and Assessment
Room: Nicollet
Half Day (Morning)
   Presenter: Ben Brosbol

(H8) Developing Secure Embedded Systems: Pitfalls and How to Avoid Them
Room: Nicollet
Half Day (Afternoon)
   Presenter: Jan Jürjens

SATURDAY 26 MAY

(F7) Aspect-Oriented Design in Java/AspectJ and Ruby
Room: Ramsey
Full Day
   Presenter: Dean Wampler

(F8) Variability Management in Software Product Line Engineering
Room: Nicollet
Full Day
   Presenters: Klaus Pohl, Andreas Metzger

Workshops

SATURDAY 19 MAY

(W1) 4th Workshop on Mining Software Repositories (MSR'07)
Room: Marquette
Note: Two day workshop, starts 9am, May 19
   Co-Chairs: Harald Gall, Michele Lanza

(W2) 2nd Workshop on SHAring and Reusing architectural Knowledge - Architecture, rationale, and Design Intent (SHARK/ADI'07)
Room: Hennepin
Note: Two day workshop, starts 9am, May 19
   Organizers: Paris Avgeriou, Paul S. Grisham, Philippe Kruchten, Patricia Lago, Dewayne E. Perry

(W3) 3rd Workshop on SE for Secure Systems (SESS'07)
Room: Carver
Note: 1½ day workshop, starts 2pm, May 19
   Organizers: Danilo Bruschi, Bart De Win, Seok-Won Lee, Mattia Monga

(W4) Workshop on Modeling in SE (MiSE'07)
Room: Lasalle
Note: 1½ day workshop, starts 2pm, May 19
   Organizers: Joanne Atlee, Robert France, Geri Georg, Ana Moreira, Bernhard Rumpe, Steffen Zschaler
SUNDAY 20 MAY

(W5) 3rd Workshop on Predictor Models in SE (PROMISE'07)
Room: Conrad D
Organizers: Gary D. Boetticher, Tim Menzies, Tom Ostrand

(W6) Workshop on the Economics of Software and Computation (ESC'07)
Room: Conrad C
Organizers: Rick Kazman, Kevin Sullivan, Mary Shaw, Barry Boehm, Jyrki Kontio

MONDAY 21 MAY

(W7) Early Aspects at ICSE: Workshop in Aspect-Oriented Requirements Engineering and Architecture Design
Room: Conrad C
Organizers: Ruzanna Chitchyan, Ana Moreira, Awais Rashid, Bedir Tekinerdogan, Elisa Baniassad, João Araújo, Paul Clements

(W8) 6th Workshop on Scenarios and State Machines (SCESM'07)
Room: Carver
Co-Chairs: Wolfgang Grieskamp, Nicolas Kicillof

(W9) 5th Workshop on Software Quality (WoSQ'07)
Room: Marquette
Organizers: Barry Boehm, Sunita Chulani, June Verner, Bernard Wong

(W10) Workshop on Systems Development in SOA Environments (SDSOA)
Room: Conrad B
Organizers: Grace Lewis, Dennis Smith, Kostas Kontogiannis, Stefan Schuster, Marin Litoiu

(W11) Workshop on Emerging Trends in FLOSS Research and Development (FLOSS'07)
Room: Conrad D
Organizers: Andrea Capiluppi, Gregorio Robles, Walt Scacchi, Brian Fitzgerald, Joe Feller, Karim Lakhani, Scott Hissam

(W12) Workshop on Aerospace SE (AeroSE'07)
Room: Conrad A
Note: Two day workshop, starts 9am, May 21
Organizers: Mats Heimdahl, Henry Muccini

(W14) Workshop on Dynamic Analysis (WODA'07)
Room: Conrad D
Co-Chairs: Alessandro Orso, Andreas Zeller

(W15) Workshop on Software Technologies for Ultra-Large-Scale Systems (ULS'07)
Room: Marquette
Organizers: Richard P. Gabriel, Rick Kazman, Linda Northrop, Douglas C. Schmidt, Kevin Sullivan

(W16) 2nd Workshop on Incorporating COTS Software into Software Systems (IWICSS'07)
Room: Carver
Co-Chairs: Alexander Egyed, Hausi Müller, Dewayne E. Perry, Dennis B. Smith, Scott Tilley

(W17) Workshop on Assessment of Contemporary Modularization Techniques (ACoM.07)
Room: Conrad B
Co-Chairs: Elisa Baniassad, Alessandro Garcia, Cristina Videira Lopes, Christa Schwanninger, Jianjun Zhao

TUESDAY 22 MAY

(W18) 4th Workshop on SE for Automotive Systems (SEAS'07)
Room: Marquette
Organizers: Alexander Pretschner (chair), Christian Salzmann, Bernhard Schätz, Thomas Stauner

(W19) 3rd Workshop on SE for High Performance Computing Applications (SE-HPC'07)
Room: Carver
Organizers: Jeffrey Carver, Philip Johnson, Adam Porter, Walter Tichy, Lawrence Votta

(W20) Workshop on SE for Pervasive Computing Applications, Systems and Environments (SEPCASE'07)
Room: Hennepin
Organizers: Anand Tripathi, Roy Campbell, Liviu Iftode, Paolo Bellavista

(W21) 2nd Workshop on Automation of Software Test (AST'07)
Room: Lasalle
Co-Chairs: Hong Zhu, Eric Wong, Amit Paradkar

(W22) Workshop on SE for Adaptive and Self-Managing Systems (SEAMS'07)
Room: Symphony II
Note: Two day workshop, starts 9am, May 26
Organizers: Betty Cheng, Rogério de Lemos, Stephen Fickas, David Garlan, Marin Litoiu, Jeff Magee, Hausi A. Müller, Richard Taylor
**Co-located Events**

**SAT 19 MAY – SUN 20 MAY**

**International Conference on Software Process (ICSP’07)**

**Room:** Conrad A and B  
**General Chair:** David M. Raffo, Portland State University, USA  
**Program Co-Chairs:** Dietmar Pfahl, University of Calgary, Canada  
Qing Wang, China

**MONDAY 21 MAY**

**New Software Engineering Faculty Symposium**

**Room:** Duluth  
**9:00 Welcome, Introductions, Overview**  
**9:30 Mapping out a Research Agenda**  
**10:00 Publication Strategies**  
**10:30 BREAK**  
**11:00 Ethics**  
**11:30 Teaching and Mentoring Students**  
**12:00 LUNCH Obtaining Research Funding (breakout groups by nationality)**  
**1:00 How to (improve the chances that you will) get a paper accepted at ICSE/FSE/ASE**  
**1:30 How to get Promoted**  
**2:00 Time Allocation: Balancing Research, Teaching, and Service**  
**2:30 Networking**  
**3:00 BREAK**  
**3:30 How to Have a Life as Well as a Career—and Why!**  
**4:00 A view from the trenches – Panel of successful young faculty members**  
**4:45 Summary and final advice**

**Doctoral Symposium**

**Room:** Directors Row 4  
**On Sufficiency of Mutants**  
Akbar Siami Namin  
**Testing and Analysis of Access Control Policies**  
Evan E Martin  
**A Context-Oriented Framework for Software Testing in Pervasive Environment**  
Heng Lu  
**A Data Model to Support End User Software Engineering**  
Christopher Scaffidi  
**Ajaxifying Classic Web Applications**  
Ali Mesbah  
**A Discrete, Fault-Tolerant, and Scalable Software Architectural Style for Internet-Sized Networks**  
Yuriy Brun  
**Handling Safety-related Feature Interaction in Safety-Critical Product Lines**  
Jing (Janet) Liu  
**Toward Applying Information Hiding Modularity On Dynamic Adaptation**  
Yuanyuan Song

**Adaptive Probabilistic Model for Ranking Code-Based Static Analysis Alerts**  
Sarah Smith Heckman  
**Stakeholder Value Driven Threat Modeling for Off The Shelf Based Systems**  
Yue Chen  
**Mining Object Usage Models**  
Andrzej Wasylkowski  
**Modular-like Transformations and Style Checking for Crosscutting Programming Concepts**  
Macneil Charles Shonle  
**Assessing Changeability by Investigating the Propagation of Change Types**  
Beat Fluri  
**Using Software Model Checking for Software Component Certification**  
Ali Taleghani  
**Understanding and Aiding Code Evolution By Inferring Change Patterns**  
Miryung Kim  
**A Quality-Driven Approach to Enable Decision-Making in Self-Adaptive Software**  
Mazeiar Salehie

**TUESDAY 22 MAY**

**Software Engineering: The Legacy of Barry W. Boehm**

**Room:** Duluth  
**Symposium Organizer:** Richard Selby, Northrop Grumman Space Technology, USA  
**Introduction. Biography of Barry W. Boehm**  
Richard Selby  
**Software Architecture and Quality**  
Larry Bernstein  
**Software Economics**  
Richard Selby  
**Software Tools**  
Art Pyster  
**Software Process: Early Spiral Model**  
Walker Royce  
**Software Risk Management**  
Tom DeMarco  
**Software Process: Emerging Extensions**  
Lee Osterweil  
**Software and Systems Management**  
Fred Brooks  
**Software Engineering State-of-the-Art/Practice**  
Vic Basili  
**Value-Based Software Engineering**  
Kevin Sullivan  
**Thoughts for the Future**  
Barry Boehm
Meals and Social Events

WEDNESDAY MAY 23

Food for Thought: Retrospectives on Peopleware
Room: Salon D
Starts 12:45pm
The first of our “food for thought” sessions, new at ICSE this year. Since its publication twenty years ago “Peopleware Productive Projects and Teams” (Dorset House, 1987) by Tom DeMarco and Tim Lister has enlightened software professionals and non-professionals alike. Peopleware introduced among other topics - team jell, design patterns, and the “Furniture Police” - to the software engineering community and suggested that “sociology matters more than technology or even money”. Plan to attend this unique session with the pioneers of our profession to learn, reflect, and share experiences - looking forward to the future. Panelists include Barry Boehm, Fred Brooks Jr., Tom DeMarco, Tim Lister, Linda Rising, and Ed Yourdon. Collect a plate of food from the buffet lunch served in Salons A,B,C, and bring it to Salon D to join in this remarkable panel session.

ICSE Poster Session and Reception
Room: Symphony Ballroom
Starts 6pm
Meet and chat to ICSE friends, old and new, while wandering among posters presented by authors of the research demo papers and the students from the Doctoral Symposium.

SIGSOFT Town Hall Meeting
Room: Marquette/Lasalle
Starts 7:30pm
Come hear what ACM SIGSOFT – a sponsor of ICSE – is doing for the community, and let the SIGSOFT leadership know about your concerns and how they can better serve you. Refreshments and libations provided.

THURSDAY MAY 24

Food for Thought: Agile Contracts
Room: Salons A,B
Starts 12:45pm
The second of our lunchtime food for thought sessions features a talk by Mary Poppendieck, managing director of the Agile Alliance. In the mid 1980’s Toyota came to the US and showed Detroit how to work with suppliers on a win-win basis. In just five years, Toyota was the most trusted automaker among all automotive suppliers, had the lowest procurement costs, and the highest contribution of innovation from supplier companies. What does Toyota know about working with contracts that we can learn? For starters, they know that trust lies in specific actions, not interpersonal relationships. They understand the ‘game’ of contracting, and know how to structure relationships so both sides are motivated to contribute to the common good. There’s much we can learn from Toyota about how to change the contracting game in software development for the benefit of both parties.

ICSE 2007 Banquet
Location: Nicollet Island
Beginning with departures from the Hilton hotel at 5:30pm, buses will be providing a round-trip shuttle service between the hotel and Nicollet Island approximately every 15 minutes until 10:30 p.m.
The ICSE 2007 banquet will be held at the Island Pavilion, on Nicollet Island. Buses will be available to transport attendees to and from the island. The banquet will include a chance to try out an island tour on a Segway, try your hand at fishing for trout, cook s’mores on a campfire, wander through displays of authentic teepees, join a traditional tribal camp, toss a tomahawk, try archery with a traditional bow, and listen to the Native American elders tell stories. Native dancers and drummers will entertain us, as we dine from bountiful buffets, featuring local favorite dishes.

FRIDAY MAY 25

Food for Thought: Modeling for Maintainability
Room: Salons A,B
Starts 12:45pm
The last of our food for thought sessions features a talk by Andrew Watson, of the OMG. Software maintenance is the Cinderella of Software Engineering. The cost of creating a long-lived application is dwarfed by the cost of maintaining, updating and porting it over a lifetime sometimes measured in decades, yet few software engineers plan for maintainability. The only alternative to maintenance is to routinely re-implement working systems to a revised specification, but this is an even more expensive proposition. In fact, as the deployed software base continues to grow, we may already have reached the point where it’s economically impossible to replace working applications, and there’s no alternative to maintaining them. Fortunately, recent studies show that model-driven development methods (such as OMG’s Model Driven Architecture) not only help develop quality applications quickly and cheaply in the first place, but also yield dramatic savings in the time and effort needed to maintain them. Use of model-driven techniques may literally be the only way businesses can afford to keep their software infrastructure running over the next few decades.
Welcome to the Local Excursions Program for the International Conference on Software Engineering.

- Excursions include trips for shopping, museums, dancing, walking, and a pedal-cart tour.
- Register for excursions (and pay for those requiring advance payments) at the conference registration desk.
- Each trip has a minimum size and maximum capacity; trips not meeting the minimum size will be canceled and money refunded.
- All trips will depart from in front of the registration desk.
- Many trips will use public transportation—our Metro area light-rail and/or bus.
- Each trip will be escorted to its destination by a member of the conference volunteer staff; for most trips, a return escort will be provided as well.

We have scheduled the following events (Consult schedule in front of registration desk for trip details):

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Type</th>
<th>Location</th>
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<td>Historic site</td>
<td>Fort Snelling</td>
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<td>PM</td>
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<td>Evening</td>
<td>Meal &amp; Dance</td>
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<td>Day</td>
<td>Museum</td>
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<td>Sports</td>
<td>Minnesota Twins</td>
<td>No</td>
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In addition, visits to the Charles Babbage Institute for the History of Information Technology will be arranged upon request. The Charles Babbage Institute is an archives and research center dedicated to preserving the history of information technology and promoting and conducting research in the field (http://www.cbi.umn.edu/).

Prior to the conference, direct any questions to Paul Stachour via email at Pstachour@acm.org, or leave a telephone messages at 952-884-5977
ICSE 09 Vancouver
May 16-24
Westin Bayshore Hotel

Organizing Committee:
Stephen Fickas (General Chair),
Jo Atlee (PC Co-Chair), Paola Inverardi (PC Co-Chair)
www.cs.uoregon.edu/events/icse2009

Special New Event: Student Contest in Software Engineering (http://score.elet.polimi.it).