



ACSE 2004: 4th International Workshop on Adoption-Centric Software Engineering

[ICSE 2004, the 26nd International Conference on Software Engineering](#)



ACSE 2004
May 25, 2004
Edinburgh International
Conference Centre
Edinburgh, Scotland, UK

<http://www.acse2004.cs.uvic.ca/>

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Software Engineering Institute, USA

Margaret-Anne Storey, University of Victoria, Canada

Scott R. Tilley, Florida Institute of Technology, USA

Ken Wong, University of Alberta, Canada

Key Objective Workshop Theme  **Program Attendance Submission Dates Links Organizers**

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Key Objective

The key objective of this workshop is to explore innovative approaches to the adoption of software engineering tools and practices through the extension of Commercial Off The Shelf Software (COTS) products and/or middleware technologies. The workshop aims to advance the understanding and evaluation of adoption of software engineering tools and practices by bringing together researchers and practitioners who investigate novel solutions to software engineering adoption issues.

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Workshop Theme

Understanding adoption of software engineering tools and practices is critical for the software and information technology sectors, which are continually challenged to increase their productivity. The goal of this workshop is to bring together researchers and practitioners who investigate innovative solutions to software engineering adoption issues. The key objective of this workshop is to explore approaches where software engineering tools and practices are implemented as extension of Commercial Off The Shelf Software (COTS) products and middleware technologies that work in conjunction with software engineering tools as well as mined components. The workshop aims to advance the understanding and evaluation of adoption of software engineering tools and practices.

Research tools in software engineering often fail to be adopted and deployed in industry. Important barriers to adopting these tools include their unfamiliarity with users, their lack of interface maturity, their limited support for complex work products of software development, their poor interoperability, and their limited support for the realities of system documentation engineering. Developing and deploying innovative research tools and ideas as extensions to modern, commonly used platforms may ease these barriers. Recently, tool builders and standards bodies have invented effective standards and interfaces for tool extension and customization. These advances have opened new research avenues on how innovations in software engineering tools can be made more easily adopted by inserting them as extensions to commonly used office suites and middleware platforms.

Users will more likely adopt tools that work in an environment they use daily and know intimately. For example, common office suites are used daily to browse Web content, produce multimedia documents, prepare presentations, and maintain budgets. These suites and other middleware-based environments can be extended and leveraged to provide familiar cognitive support for software engineering tasks.

Injecting more of the great software engineering research results into industrial practice has potentially a significant impact on the production of quality software. Thus, this research addresses two diverse markets: the software developers, who need to understand and document existing software systems, but also the researchers, who want to inject and validate their research tools in industrial development processes.

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Attendance

This workshop will be run in a highly interactive style. ACSE 2004 will include invited talks and short position statements. Participants should come to the workshop prepared to engage in lively discussion sessions. The contributions to the ACSE 2004 workshop will be consolidated into a summary report, which is

expected to evolve into a roadmap to assist in achieving best practice in software engineering adoption. This report will be published in ACM SIGSoft Notes.

Workshop participants will be solicited first and foremost through the ICSE 2004 Web site, ICSE 2004 mailing lists, invited speakers, and mailing lists from two previous related workshops. Participants will be selected according to their position papers.

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Submission

We invite short position papers, limited to 4-6 pages, that describe ongoing work or new ideas within the scope of the workshop. Papers must not have been previously published or submitted elsewhere.

Please submit papers for ACSE 2004 electronically using CyberChairPROv6 at <http://icse.acm.org/acse2004papers/submit/>

Accepted papers will be published as part of the ICSE 2004 workshop publications. The proceedings of ACSE 2003, which was held at ICSE 2003 in Portland, Oregon, were published with the ICSE 2003 workshop publications as well as an SEI Tech Report at:

[R. Balzer, J .H.. Jahnke, M. Litoiu, H. A. Muller, M.-A. Storey, S. R. Tilley, K. Wong \(eds.\) "Proceedings of the Third International Workshop on Adoption-Centric Software Engineering \(ACSE 2003\)" Technical Report CMU/SEI-2003-SR-004 \[~4 MB PDF file\].](#)

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Important Dates

Submission Date: April 12, 2004
Notification: April 16, 2004
Camera-ready Copy: April 26, 2004
Workshop: May 25, 2004

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Related Links

Adoption-Centric Tool Development (ACTD); CASCON 2001
<http://www.cas.ibm.com/archives/2001/workshops/descriptions37.shtml>

2nd Int. Workshop on Adoption-Centric Software Engineering; STEP 2002
<http://iwcase.org/step2002/Workshop-CFP-ACSE-2002.pdf>

3rd Int. Workshop on Adoption-Centric Software Engineering; ICSE 2003
<http://www.acse2003.cs.uvic.ca>

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Organizing Committee



Dr. Robert Balzer, Teknowledge Corporation, USA [Homepage](#)

After several years at the Rand Corporation, Dr. Balzer left to help form the University of Southern California's Information Sciences Institute (USC-ISI) where he served as Director of ISI's Software Sciences Division and Professor of Computer Science at USC. In 2000 he joined Teknowledge Corporation as their CTO and Director of their Distributed Systems Unit, which combines AI, DB, and SE techniques to automate the software development process. His current research includes wrapping COTS products to provide safe and secure execution environments, extend their functionality, and integrate them together; instrumenting software architectures; and generating systems from domain specific specifications.



Dr. Marin Litoiu, IBM Canada Ltd., Canada [Homepage](#)

Dr. Litoiu is member of the Centre for Advanced Studies at the IBM Toronto Laboratory where he initiates and manages joint research projects between IBM and Universities across the globe in the area of Application Development Tools. Prior to joining IBM (1997), he was a faculty member with the Department of Computers and Control Systems at the University Politecnica of Bucharest and held research visiting positions with Polytechnic of Turin, Italy, (1994 and 1995) and Polytechnic University of Catalonia (Spain), and the European Center for Parallelism (1995). Dr. Litoiu's other research interests include distributed objects; high performance software design; performance modeling, performance evaluation and capacity planning for distributed and real time systems.



Dr. Hausi A. Müller, University of Victoria, Canada [Homepage](#)

Dr. Müller is a Professor at the University of Victoria, Canada. He is a Visiting Scientist with the Centre for Advanced Studies at the IBM Toronto Laboratory and the Carnegie Mellon Software Engineering Institute. He is a principal investigator of CSER. Together with his research group he investigates technologies to build adoption-centric software engineering tools and to migrate legacy software to object-oriented and network-centric platforms. Dr. Müller's research interests include software engineering, software evolution, reverse engineering, software reengineering, program understanding, software engineering tool evaluation, software architecture, and the generation of software engineering tools using Scalable Vector Graphics (SVG) technology. He was GC for ICSE 2001 & IWPC-2003 and PC Chair for CASCON 2003.



Dr. Dennis B. Smith, Carnegie Mellon Software Engineering Institute, USA [Homepage](#)

Dr. Smith is a senior member of the technical staff in the Product Line Systems Program at the Software Engineering Institute. He is the technical lead in the effort for migrating legacy systems to product lines. In this role he has integrated a number of techniques for modernizing legacy systems from both a technical and business perspective. Dr. Smith has been the lead in a variety of engagements with external clients. He led a widely publicized audit of the FAA's troubled ISSS system. This report produced a set of recommendations for change, resulting in major changes to the development process, and the development of an eventual successful follow-on system. Earlier, Dr. Smith was project leader for the CASE environments project. This project examined the underlying issues of CASE integration, process support for environments and the adoption of technology. He is also a co-editor of the IEEE and ISO recommended practice on CASE Adoption. He has been general chair of two international conferences, IWPC'99 and STEP'99.



Dr. Margaret-Anne Storey, University of Victoria, Canada [Homepage](#)

Dr. Storey is an Associate Professor at the University of Victoria. Her main research interests involve understanding how people solve complex tasks, and designing technologies to facilitate navigating and understanding large information spaces. With her students and she is working on a variety of projects within the areas of software engineering, human-computer interaction, information visualization, social informatics and knowledge management. Dr. Storey is a fellow of the ASI and as such collaborates with the IBM PDC on HCI issues for eCommerce and distributed learning applications, and with ACD systems. She is a principal investigator for CSER developing and evaluating software migration technology and a visiting researcher at the IBM Centre for Advanced Studies.



Dr. Scott R. Tilley, Florida Institute of Technology, USA
[Homepage](#)

Scott Tilley is an Associate Professor at the Florida Institute of Technology. He is also Principal of S.R. Tilley & Associates, a Southern California-based information technology consulting boutique. He maintains an appointment as Visiting Scientist with the Software Engineering Institute at Carnegie Mellon University. He was PC Chair for SIGDOC 2001 and GC of the WSE 2003. Dr. Tilley is the President of ACM SIGDOC.



Dr. Kenny Wong, University of Alberta, Canada **[Homepage](#)**

Ken Wong is an Assistant Professor at the University of Alberta. His main areas of research are software architecture, integration, evolution, and visualization. This research includes conducting case studies, building and using integrated environments for reverse engineering, and exploring collaborative program understanding of heterogeneous systems. Current industrial collaborations include IBM and klocwork Inc. He is a principal investigator of CSER and ASERC. He co-manages a Canadian Foundation for Innovation facility to study collaborative software development and issues of system diversity. Dr. Wong was also PC Chair for IWPC 2003 and WSE 2003.

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ACSE 2004 Program

Tuesday, May 25, 2004	
8:30 - 9:00	Workshop Overview and Objectives Hausi Müller, University of Victoria, Canada

9:00 - 10:15	<p>Challenges: Adoption-Centric Software Engineering Session Chair: Dennis Smith, Carnegie Mellon Software Engineering Institute (SEI), USA</p> <p><i>Adoption-Centric Software Evolution</i> Ying Zou Queen's University, Canada Kostas Kontogiannis, University of Waterloo, Canada</p> <p><i>Autonomic Computing: Engineering and Scientific Challenges</i> Marin Litoiu, Center for Advanced Studies, IBM Toronto Laboratory, Canada</p> <p><i>On the Adoption of an Approach to Reengineering Web Application Transactions</i> Scott Tilley, Florida Institute of Technology Damiano Distante, University of Lecce, Italy</p> <p><i>Testing Challenges in Adoption of Component-Based Software</i> Ladan Tahvildari, University of Waterloo, Canada</p>
10:15 - 10:30	Discussion
10:30 - 11:00	Nutrition Break
11:00 - 12:15	<p>Modelling and Components Session Chair: Marin Litoiu, Center for Advanced Studies, IBM Toronto Laboratory, Canada</p> <p><i>Toward a Unified Model for Requirements Reengineering</i> Brian Berenbach, Siemens Corporate Research, Inc. USA</p> <p><i>Domain Modelling for Consumer Electronics Product Families</i> Muthu Ramachandran, Leeds Metropolitan University</p> <p><i>Using Components to Build Software Engineering Tools</i> Holger M. Kienle, University of Victoria, Canada Marin Litoiu, Center for Advanced Studies, IBM Toronto Laboratory, Canada Hausi Müller, University of Victoria, Canada</p>
12:15 - 12:30	Discussion
12:30 - 1:30	Lunch

1:30 - 2:45	<p>Evaluation and Applications Session Chair: Scott Tilley, Florida Institute of Technology</p> <p><i>Value Assessment by Potential Tool Adopters: Towards a Model that Considers Costs, Benefits and Risks of Adoption</i> Timothy Lethbridge, University of Ottawa, Canada</p> <p><i>On Understanding Software Tool Adoption Using Perceptual Theories</i> Dabo Sun and Ken Wong, University of Alberta, Canada</p> <p><i>Lessons Learnt in Adopting an Automated Standards Enforcement Tool</i> Bala Brahmam Dasoji, Tata Consultancy Services, India</p> <p><i>On Goals and Codes in Distributed Systems: An Explanation to the Notion of Perfect Ball in Software Development</i> Zhou Zhiying, Tsinghua University, Beijing, China</p>
2:45 - 3:15	Discussion
3:15 - 3:45	Nutrition Break
3:45 - 5:00	<p>Interoperability, Integration, and Synchronization Session Chair: Ken Wong, University of Alberta, Canada</p> <p><i>Adoption-Centric Problems in the Context of Systems Interoperability</i> Dennis Smith, Edwin Morris, and David Carney, Carnegie Mellon Software Engineering Institute (SEI), USA</p> <p><i>Data and State Synchronicity Problems while Integrating COTS Software into Systems</i> Alexander Egyed, Sven Johann, and Robert Balzer, Teknowledge Corporation, USA</p> <p><i>Challenges Posed by Adoption Issues from a Bioinformatics Point of View</i> Daniel Moise, Ken Wong, and Gabriela Moise, University of Alberta, Canada</p> <p><i>Leveraging XML Technologies in Developing Program Analysis Tools</i> Jonathan Maletic, Michael Collard, and Huzefa Kagdi, Kent</p>

	State University, USA
5:00 - 5:30	Discussion, Summary, Wrap-Up, and Future of ACSE Session Chair: Hausi Müller

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