



SEAMS 2012
7th ACM/IEEE International Symposium on Software Engineering
for Adaptive and Self-Managing Systems
June 4-5, 2012 – Zürich, Switzerland
University of Zürich, Irchel; Auditorium: Y24-G-55



Association for Computing Machinery



SEAMS 2012 Advance Program – Mon, June 4, 2012	
8:30	Registration and Breakfast
9:00 - 10:10	<p style="text-align: center;">Session 1: SEAMS 2012 Opening and Keynote Session Chair: H.A. Müller, General Chair, University of Victoria, Canada Opening Remarks: L. Baresi, Program Chair, Politecnico di Milano, Italy</p> <p style="text-align: center;">Keynote: Model-Based Adaptation and Learning for Robotic Systems Raffaello D'Andrea, ETH Zürich, Switzerland and Co-Founder of Kiva Systems, USA</p> <p>Raffaello D'Andrea is professor of Dynamic Systems and Control at the Swiss Federal Institute of Technology in Zürich. He also is a co-founder of Kiva Systems, a company that develops adaptive and self-configuring warehouse automation systems using hundreds of networked, mobile robots. He was the faculty advisor and system architect of the Cornell Robot Soccer Team, four-time world champions at the international RoboCup competition in Sweden, Australia, Italy, and Japan. A creator of dynamic sculpture, he has exhibited his work at various international venues, including the Venice Biennale, Ars Electronica, the Smithsonian, and the Spoleto Festival. In addition, his work is in the permanent collections of the National Gallery of Canada, the FRAC Centre in France, and the Heinz Nixdorf Museum in Germany. D'Andrea is a recipient of the Invention and Entrepreneurship in Robotics and Automation Award, the United States Presidential Early Career Award for Science and Engineering, the National Science Foundation Career Award, and best paper awards from the American Automatic Control Council, the Institute of Electrical and Electronics Engineers, and the International Federation of Automatic Control.</p>
10:10	Nutrition Break
10:30 - 11:50	<p style="text-align: center;">Session 2: Service-Based Systems – Discussion Leader: M. Pezzè, U. of Milano Bicocca, Italy; U. of Lugano, CH Proactive Adaptation of Service Composition: R. Aschof, A. Zisman, City University London, UK Dynamic Self-Adaptation for Distributed Service-Oriented Transactions: H. Gomaa, K. Hashimoto, George Mason University, USA OSIRIS-SR: A Safety Ring for Self-Healing Distributed Composite Service Execution: N. Stojnic, H. Schuldta, University of Basel, Switzerland</p>
11:50 - 12:45	<p style="text-align: center;">Session 3: Exemplars – Discussion Leader: L. Baresi, Politecnico di Milano, Italy Traffic Routing for Evaluating Self-Adaptation: J. Wuttke, Y. Brun, J. Ramaswamy, University of Washington, USA; A. Gorla, University of Lugano, Switzerland 3-Slide Exemplar Presentations: Moderator: L. Baresi, Politecnico di Milano, Italy</p>
12:45	Luncheon
14:00 - 15:30	<p style="text-align: center;">Session 4: Control Theory and Resilience – Discussion Leader: Marin Litoiu, York University, Canada Survey on the Design of Self-Adaptive Software Systems using Control Engineering Approaches: T. Patikirikorala, A. Colman, J.H. Swinburne U. Technology; L. Wang, Royal Melbourne Institute of Tech., Australia Reliability-Driven Dynamic Binding via Feedback Control: A. Filieri, C. Ghezzi, A. Leva, Politecnico di Milano, Italy; M. Maggio, Lund University, Sweden Evaluation of Resilience in Self-Adaptive Systems Using Probabilistic Model-Checking J. Cámara, University of Coimbra, Portugal; R. de Lemos, University of Kent, UK</p>
15:30	Nutrition Break
15:30 - 17:30	<p style="text-align: center;">Session 5: Distributed Systems – Discussion Leader: C. Ghezzi, Politecnico di Milano, Italy Coordination of Distributed Systems through Self-Organizing Group Topologies: S. Guinea, P. Saeedi, Politecnico di Milano, Italy Timing Constraints for Runtime Adaptation in Real-time, Networked Embedded Systems: M. Zeller, C. Prehofer, Fraunhofer Institute for Communication Systems ESK Munich, Germany A Middleware and Algorithms for Trust Calculation from Multiple Evidence Sources: C.H. Yew, H. Lutfiyya, University of Western Ontario, Canada</p>
17:20	Report on 2012 SEFAS Book 2: H. Giese, University of Potsdam, Germany
17:30	ICSE 2012 Soccer Game
19:45	SEAMS 2012 Dinner at ETH Dozentenfoyer ETH Zentrum HG 12 th Floor



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SEAMS 2012 Advance Program – Tue, June 5, 2012

8:30	Registration and Breakfast
9:00 - 10:00	<p style="text-align: center;">Session 6: Keynote Session Chair: L. Baresi, Politecnico di Milano, Italy Keynote: Reconciling Self-Adaptation with Self-Organization Franco Zambonelli, University of Modena and Reggio Emilia, Italy</p> <p style="text-align: right;">Sponsored by </p> <p>Franco Zambonelli is full professor of Computer Science at the University of Modena and Reggio Emilia. He received his PhD in Computer Science and Engineering from the University of Bologna in 1997. His research interests include pervasive computing, multi-agent systems, self-adaptive and self-organizing systems. He has published over 70 papers in peer-reviewed journals, and has been an invited speaker at many conferences and workshops. He is the Co-Editor-in-Chief of ACM Transactions on Autonomous and Adaptive Systems, serves on the editorial boards of Elsevier's Journal of Pervasive and Mobile Computing, BCS Computer Journal, and Journal of Agent-Oriented Software Engineering, and is a member of the Steering Committee of the IEEE SASO Conference. He has been scientific manager of the EU FP6 Project CASCADAS and is currently coordinator of the EU FP7 Project SAPERE. He is a senior member of ACM and IEEE.</p>
10:00	Nutrition Break
10:30 - 12:00	<p style="text-align: center;">Session 7: Surveys and Taxonomies – Discussion Leader: Gregor Engels, University of Paderborn, Germany Claims and Supporting Evidence for Self-Adaptive Systems, A Literature Study D. Weyns, M. U. Iftikhar, J. Andersson, Linnaeus U., Sweden, S. Malek, George Mason University, USA A Taxonomy of Uncertainty for Dynamically Adaptive Systems A. Ramirez, A. Jensen, B. Cheng, Michigan State University, USA A Taxonomy and Survey of Self-Protecting Software Systems E. Yuan, S. Malek, George Mason University, USA</p>
12:00 - 12:45	<p style="text-align: center;">Session 8: Fishbowl Panel – Runtime Validation and Verification (V&V) Moderator: H.A. Müller, University of Victoria, Canada Initial Panel Members: Y. Brun, University of Washington, USA; P. Inverardi, Università dell'Aquila, Italy; J. Magee, Imperial College, UK; A. Perini, Fondazione Bruno Kessler - IRST, Italy; M. Shaw, Carnegie Mellon University, USA</p>
12:45	Luncheon
14:00 - 15:30	<p style="text-align: center;">Session 9: Models and Mediators – Discussion Leader: Jeff Magee, Imperial College, UK Model-based Adaptive DoS Attack Mitigation C. Barna, M. Shtern, M. Smit, M. Litoiu, York U., Canada A Language for Feedback Loops in Self-Adaptive Systems: Executable Runtime Megamodels T. Vogel, H. Giese, Hasso Plattner Institute at University of Potsdam, Germany Towards Mediation-Based Self-Healing of Data-Driven Business Processes T. Haupt, Mississippi State University, USA Models@runtime Meet SEAMS N. Bencomo, INRIA Paris-Rocquencour, France</p>
15:30	Nutrition Break
16:00 - 17:20	<p style="text-align: center;">Session 10: Requirements and Specifications – Discussion Leader: B. Cheng, Michigan State University, USA Synthesizing Dynamically Updating Controllers from Changes in Scenario-Based Specifications C. Ghezzi, J. Greenyer, V. Panzica La Manna, Politecnico di Milano, Italy (Requirement) Evolution Requirements for Adaptive Systems V. E. Silva Souza, A. Lapouchnian, J. Mylopoulos, University of Trento, Italy On the Role of Primary and Secondary Assets in Adaptive Security an Application in Smart Grids L. Pasquale, M. Salehie, R. Ali, I. Omoronyia, B. Nuseibeh, Lero, Limerick, Ireland</p>
17:20 - 17:40	<p style="text-align: center;">Session 11: Closing Session: Session Chair: H.A. Müller, University of Victoria, Canada SEAMS 2013 Outlook: M. Litoiu, York University, Canada; J. Mylopoulos, University of Trento, Italy SEAMS 2012 Closing Remarks: L. Baresi, Politecnico di Milano, Italy</p>
Enjoy ICSE 2012 and Switzerland! – Have a Wonderful Summer!	