

Research



Welcome to SEAMS 2009

*Software Engineering for
Adaptive and Self-Managing Systems*



Thank you!



- Organizers
- Program Committee
- Authors
- Attendees
- Sponsors
- ICSE 2009 Chiefs



Sponsoring Organizations



ICSE 2009
31th International Conference on Software Engineering
The Westin Bayshore Vancouver, British Columbia, Canada
May 16 – 24, 2009 <http://www.cs.uregon.edu/events/icse2009>

Corporate Organizations



Supporting Organizations





Speaker and Session Chair Guidelines



- SEAMS 2009 will be interactive
 - Balance between presentation and discussion
 - Discussion sessions
 - Fishbowl panels
- Speakers
 - Each paper has a 20 minute slot
 - Aim for 15 mins presentation and 5 mins Q&A
- Session Chairs
 - 30 minute discussion after every 3 papers
 - Are expected to orchestrate their discussion periods
 - Be flexible, if an interesting discussion arises



SEAMS 2009 Program

Monday, May 18 Morning



- **9:00 — Keynote**
The Impact of Scale
Linda Northrop, SEI, USA



- **10:00 — Self-Adaptive Services**
M. Litoiu, York University Canada and D.B. Smith, SEI, USA
 - A Model for Dynamic and Adaptable Services Management
 - 10 mins Discussion
- **10:30 — 30 mins Nutrition Break**
 - SLA Protection Models for Virtualized Data Centers
 - The Design of a Self-Healing Composition Cycle for Web Services
 - Behavioural Self-Adaptation of Services in Ubiquitous Computing Environments
 - 30 mins Discussion

Research



SEAMS 2009 Program

Monday, May 18 Afternoon



- **13:30 — Implementing Self-Adaptive Systems**
R. de Lemos, University of Coimbra, Portugal and David Garlan, CMU, USA
 - Reflecting on Self-Adaptive Software Systems
 - Identifying Implicitly Declared Self-Tuning Behavior through Dynamic Analysis
 - StarMX: A Framework for Developing Self-Managing Java-based Systems
 - 30 mins Discussion
- **15:00 — Self-Organizing Systems**
A. Perini, FBK-IRST, Trento, Italy
 - On Exploiting Decentralized Bio-inspired Self-Org. Algorithms to Develop Real Systems
 - 10 mins Discussion
- **15:30 — 30 mins Nutrition Break**
- **16:00 — Fishbowl Panel: Self-Adaptive & Self-Managing Systems**
Moderators: H.A. Müller, University of Victoria and J. Magee, Imperial College, UK
Panel Members
R. de Lemos, University of Coimbra, Portugal
D. Garlan, Carnegie Mellon University, USA
M. Pezzè, University of Lugano, Switzerland
M. Shaw, Carnegie Mellon University, USA
R. Taylor, University of California, Irvine, USA

**60 mins
discussion
with audience**



SEAMS 2009 Program

Tuesday, May 19 Morning



- **9:00 — Self-Adaptive and Self-Managing Architectures**

H. Giese, Hasso Plattner Inst., Germany & Paola Inverardi, Univ. L'Aquila, Italy

- Reinforcement Learning-Based Dynamic Adaptation Planning Method for Architecture-based Self-Managed Software, *D. Kim, Sogang and S. Park, Sogang University, SK*
- Using Dynamic Workflows for Coordinating Self-Adaptation of Software Systems
C.E. da Silva, University of Kent, UK and R. de Lemos, University of Coimbra, Portugal
- A Generic Software Framework for Role-based Organic Computing Systems
F. Nafz, F. Ortmeier, H. Seebach, J.-P. Steghöfer and W. Reif, U. Augsburg, Germany

- **10:00 — 30 mins Discussion**

- **10:30 — 30 mins Nutrition Break**

- **11:00 — Self-Adaptive Models**

B.H.C. Cheng, Michigan State Uni., USA & Nelly Bencomo, Lancaster Univ., UK

- Towards an Assume-Guarantee Theory for Adaptable Systems
P. Inverardi, P. Pelliccione and M. Tivoli, Università studi dell' Aquila, Italy
- Formal Model for Self-Adaptive and Self-Healing Organizations
R. Haesevoets, D. Weyns, T. Holvoet and W. Joosen, Katholieke Universiteit Leuven, Belgium
- Engineering Adaptive Requirements
N. Qureshi and A. Perini, Fondazione Bruno Kessler - IRST, Italy

- **12:00 — 30 mins Nutrition Break**



SEAMS 2009 Program

Tuesday, May 19 Afternoon



- **14:00 — Self-Adaptive and Self-Managing Architectures**
J. Magee, Imperial College, UK
 - Evaluating the Effectiveness of the Rainbow Self-Adaptive System
 - Architecture-Driven Self-Adaptation and Self-Management in Robotics Systems
 - A Non-Intrusive Component-Based Approach to Deployment of Unanticipated Self-Management Behaviour
- **15:00 — 30 mins Discussion**
- **15:30 — 30 mins Nutrition Break**



SEAMS 2009 Program

Tuesday, May 19 Afternoon



- **16:00 — Report SEAMS Steering Committee Meeting
SEAMS 2010 and SEAMS 2011 Outlook**
R. de Lemos, University of Coimbra, Portugal
- **SEAMS 2010**
 - With ICSE 2010 in South Africa
 - General Chair: Rogério de Lemos, University of Coimbra, Portugal
 - Program Chair: Mauro Pezzè, University of Lugano, Switzerland
- **SEAMS 2011**
 - With ICSE 2011 in Hawaii
 - General Chair: Holger Giese, Hasso Plattner Institute, Berlin, Germany
 - Program Chair: Betty Cheng, Michigan State University, USA



SEAMS 2009 Program

Tuesday, May 19 Afternoon



- **16:10 — SEAMS Brainstorming Fishbowl Panel**

J. Magee, Imperial College, UK & H.A. Müller, Univ. of Victoria, Canada

- **SEAMS challenge projects**
- **Define SEAMS patterns**
- **SEAMS models**
- **SEAMS benchmarks (e.g., Znn.com)**
- **Self-adaptive versus self-organizing**
- **Making control loops explicit**
- **Managing and leveraging uncertainty — trade-offs between flexibility and assurance**



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Remember — the more you get involved in this workshop, the more you will get out of it!

Enjoy SEAMS 2009 !!

Thank you
Danke
Xie xie
Khawp khun
Yum ōtio
Mahalo
Selamat
Juspaña
Spacibo
Obrigada
Arigato