



**ICST**



# Autonomics

**First International Conference on Autonomic Computing  
and Communication Systems**

**Villa Mondragone, Frascati, 28-30 October 2007**



**SAPIENZA**  
UNIVERSITÀ DI ROMA

**MIDLAB**

Middleware Laboratory

# Autonomics 2007

The First International Conference on Autonomic Computing and Communication Systems  
October 28–30, 2007

Conference Program

## Sunday, October 28, 2007

**13:30–2:30pm** Registration

### Openings

Chair: Roberto Baldoni (Sapienza Università di Roma)

**2:30–3:00pm**

Welcome: Fabrizio Davide, General Chair

Message from the Program Committee: Violet Syrotiuk, PC-CoChair

### Keynote Address

**2:30–3:30pm** Rachid Guerraoui (EPFL), “Sensor Ad hoc Networks with Malicious Devices”

**3:30–4:00pm** Coffee Break

### Session: Localization in Autonomic Systems

Session Chair: Fabrizio Davide (Telecom Italia)

**4:00–4:30pm** Li Li (Communications Research Centre, Canada) and Thomas Kunz (Carleton University, Canada), “Localization Applying An Efficient Neural Network Mapping”

**4:30–5:00pm** Konstantinos Vandikas, Lito Kriara, Tonia Papakonstantinou, Anastasia Katranidou, Haris Baltzakis and Maria Papadopouli (University of Crete, Greece), “Empirical-based Analysis of a Cooperative Location-Sensing System”

**5:00–5:30pm** Keshu Zhang, Haifeng Li, Kari Torkkola, and Mike Gardner (Motorola Inc., USA), “Adaptive Learning of Semantic Locations and Routes”

**5:30–7:00pm** Light hors d’oeuvres

## Monday, October 29, 2007

### Invited Session on Trust Management (Parallel Session)

Organizer: Fabio Martinelli (CNR, Italy)

**8:30–9:00am** Alvaro Arenas (STFC, United Kingdom) ”Trust management issues in GRID systems”

**9:00–9:30am** Sandro Etalle, Jerry den Hartog (University of Twente, Holland), Stephen Marsh (National Research Council of Canada) ”Trust and punishment”

**9:30am–10:00am** Carmen Fernandez, Rodrigo Roman, Javier Lopez, (University of Malaga, Spain) ”Featuring Trust and Reputation Management Systems for Constrained Hardware Devices”

### **Invited Session on Bio-Inspired Approaches to Autonomic Systems Design (Parallel Session)**

Organizer: Daniele Miorandi (CREATE-NET)

**8:30-9:00am** Falko Dressler, Isabel Dietrich, Bettina Krger (University of Erlangen, Germany), “Efficient Operation in Sensor and Actor Networks inspired by Cellular Signaling Cascades”

**9:00–9:30am** Francoise Baude, Ludovic Henrio, Paul Naoumenko (INRIA, France), “A Component Platform for Experimenting with Autonomic Composition”

**9:30am–10:00am** Emma Hart (Napier University, United Kingdom), “Immunological Inspiration for Building a New Generation of Autonomic Systems”

**10:00–10:30pm** Coffee Break

### **Session: Distributed Algorithms for Autonomic Computing**

Session Chair: Roberto Baldoni (Sapienza Università di Roma)

**10:30–11:00am** Cormac Doherty and Neil Hurley (University College Dublin, Ireland), “Autonomic Distributed Data Management with Update Accesses”

**11:00–11:30am** Yann Busnel (IRISA/UR1-ENS Cachan, France), Marin Bertier and Anne-Marie Kermarrec (IRISA/INRIA Rennes, France), and Eric Fleury (CITI/INSA Lyon, France), “GCP: Gossip-based Code Propagation for Large-scale Mobile Wireless Sensor Networks”

**11:30–12:00pm** Kleoni Ioannidou and Alessia Milani (Sapienza Università di Roma,” Italy), “Distributed Aerial Scanning in Mobile Ad-Hoc Networks”

**12:00–14:00pm** Lunch

### **Keynote Address**

**2:00-3:00pm** Ozalp Babaoglu (Università di Bologna, Italy)

**3:00–3:30pm** Coffee Break

## **Session: Management of Autonomic Systems**

Session Chair: Roberto Beraldi (Sapienza Università di Roma)

**3:30–4:00pm** Jens Bruhn and Guido Wirtz (University of Bamberg, Germany), “mKernel: A Manageable Kernel for EJB-based Systems”

**4:00–4:30pm** Keping Chen, Kenneth R. Mayes, and John R. Gurd (University of Manchester, United Kingdom), “Autonomous Performance Control of Distributed Applications in a Heterogeneous Environment”

**4:30–5:00pm** Liliana Rosa, Luís Rodrigues, and Antónia Lopes (University of Lisbon, Portugal), “A Framework to Support Multiple Reconfiguration Strategies”

**7:00pm** Banquet at Hotel Villa Vecchia

## **Tuesday, October 30, 2007**

### **Invited Session on Ubiquitous Applications (Parallel Session)**

Organizer: Michel Banâtre (IRISA, France)

**8:30–9:00am** Pedro Jose Marron (University of Bonn) , Daniel Minder , Andreas Grau (University of Stuttgart) “On Group Formation for Self-Adaptation in Pervasive Systems”

**9:00–9:30am** Philipp Bolliger, Moritz Khler and Kay Rmer (ETH Zurich) ”Facet: Towards a Smart Camera Network of Mobile Phones”

**9:30–10:00pm** Xavier Le Bourdon and Paul Couderc (IRISA, Bretagne Atlantique Research Centre) ”Collaborative multimedia capture in spontaneous networks”

### **Invited Session on Opportunistic Networks (Parallel Session)**

Organizer: Daniele Miorandi (CREATE-NET)

**8:30–9:00am** Vania Conan, Jeremie Leguay, and Timur Friedman (Thales Communications, France), “Pairwise Inter-contacts in Delay Tolerant Networks”

**9:00–9:30am** Simon Heimlicher, Merkouris Karaliopoulos, Hanoch Levy, and Martin May (ETH Zurich, Switzerland), ”End-to-end vs. Hop-by-hop Transport under Intermittent Connectivity”

**9:30–10:00pm** Alaeddine El Fawal, Jean-Yves Le Boudec, and Kave Salamatian (EPFL, Switzerland), “Design and Implementation of Self-Limiting Epidemic Forwarding”

**10:00–10:30pm** Coffee Break

## **Session: Mobile Autonomic Networks and Services**

Session Chair: Violet Syriotuk (Arizona State University)

**10:30–11:00am** Roberto Beraldi (Sapienza Università di Roma,” Italy), “Service Discovery in MANET via Biased Random Walks”

**11:00–11.30am** Mohamad Aljnidi and Jean Leneutre (Telecom Paris, France), “A Security Policy System for Mobile Autonomic Networks”

**11:30–12:00pm** Massimiliano de Leoni, Fabio De Rosa, Massimo Mecella (Sapienza Università di Roma, Italy), and Schahram Dustdar (Vienna University of Technology, Austria) “Resource Disconnection Management in MANET Driven by Process Time Plan”

## **Closing Session: Self-\* Architectures**

Session Chair: Fabrizio Davide (Telecom Italia)

**12:00–12:30pm** Tomasz Szydlo, Robert Szymacha, and Krzysztof Zielinski (University of Science and Technology, Poland), “Context Generation and Structuralization for Ambient Networks”

**12:30–1:00pm** Davide Devescovi, Elisabetta Di Nitto, Daniel Dubois, and Raffaella Mirandola (Politecnico di Milano, Italy), “Self-Organization Algorithms for Autonomic Systems in the SelfLet Approach”

**1:00–2:00pm** Lunch

## **INSERTech: Workshop on INnovative SERvice Technologies**

Organizer: Antonio Manzalini (Telecom Italia)

Monday, 29th

**3:30-3:40pm** Opening Antonio Manzalini (Telecom Italia)

**3:40-5:40pm** Session 1

- Franco Zambonelli (Univ. di Modena e Reggio Emilia)
- Peter Deussen (Fokus Fraunhofer)
- Antonio Di Ferdinando (Imperial College of London)
- Corrado Moiso (Telecom Italia)

Tuesday, 30th

**10:30-10:40am** Opening Antonio Manzalini (Telecom Italia)

**10:40-12:40pm** Session 2

- Fabrice Suffre (BT)
- Thierry Pollet (Alcatel-Lucent)
- Elizer Dekel (IBM)
- Roberto Grizzioli (Whitestein Technologies)

**12.40-1:00pm** Closing