



ReSIST: Resilience for Survivability in IST

A European Network of Excellence

<http://www.resist-noe.eu>

Second Open Workshop

Resilience in Computing Systems and Information Infrastructures: A Research Agenda

18 October 2007

Università degli studi di Roma *La Sapienza*, Italy



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UNIVERSITÀ DI ROMA

The challenges raised for achieving satisfactorily dependability and security of the emerging ubiquitous systems are sharpened by the statistical evidence that those systems suffer from a gap in the achieved capabilities with respect to the expectations of the stakeholders.

A central characteristic of those ubiquitous systems being the continuous evolutionary changes they are facing, scaling up their dependability and security requests a *resilience* view in order to cope with and to adapt to these evolutionary changes. The changes can be functional, technological, environmental, and include threat evolutions. Such changes drastically increase uncertainty about system and infrastructure behaviour.

The workshop is aimed at presenting the findings of the European Network of Excellence ReSIST on the research directions for *resilience* of computing systems and information infrastructures to enable their dependability and security to scale-up.



Workshop Programme

This workshop presents the findings of the ReSIST European Network of Excellence concerning research that needs to be pursued or undertaken on the resilience of computing systems and information infrastructures. Recommended research directions have been structured according to the four identified resilience-scaling technologies: evolvability, assessability, usability and diversity. For these technologies the ReSIST partners produced over forty texts addressing gaps and challenges, which were then synthesised:

- **Evolvability:** adaptation and self-organisation, models and resources for ubiquitous systems.
- **Assessability:** assessing evolvable systems, methods and techniques for assessability, assessability as an engineering discipline.
- **Usability:** operators' and designers' viewpoints; usability metrics.
- **Diversity:** large-scale vs. small-scale diversity, designed vs. spontaneous diversity.

A ReSIST report provides details on research gaps and challenges, together with the syntheses; this report will be distributed at the workshop as a CD.

An opening session will present the ReSIST view on resilience, and an overview of the ReSIST research agenda. A session devoted to each of the resilience-scaling technologies has been arranged, each with a presenter and responder. The presenters are members of ReSIST who will summarise the proposed research directions; a leading practitioner external to ReSIST will then respond with an independent reaction from an industrial perspective. A concluding session will provide the opportunity to hear the views of the European Commission.

Workshop Schedule

8h - 8h30 Registration

8h30 - 9h30 **Opening Session**

Session Chair and welcome address: Roberto Baldoni (University of Roma "La Sapienza", Italy)

From Resilience to ReSIST, Jean-Claude Laprie (LAAS-CNRS, Toulouse, France)

From Resilience-Building to Resilience-Scaling Technologies, Michel Banâtre (University of Rennes - IRISA, France)

9h30 - 10h30 **Evolvability**

Session Chair: Miguel Correia (University of Lisbon, Portugal)

Research Directions: Andras Pataricza (Budapest University of Technology and Economics, Hungary)

Industry's View: Enrico Angori (Elsag-Datamat, Italy)

Discussion

10h30 - 11h Coffee Break

11h - 12h **Assessability**

Session Chair: Karama Kanoun (LAAS-CNRS, Toulouse, France)

Research Directions: Aad Van Moorsel (University of Newcastle upon Tyne, UK)

Industry's View: Jean-Paul Blanquart (EADS-Astrium, France)

Discussion

12h - 13h **Usability**

Session Chair: Alberto Pasquini (Deep Blue, Italy)

Research Directions: Philippe Palanque (University of Toulouse - IRIT, France)

Industry's View: Colin Corbridge (Defence Science & Technology Laboratory, UK)

Discussion

13h - 14h Lunch

14h-15h **Diversity**

Session Chair: Marc Dacier (Eurecom, Sophia-Antipolis, France)

Research Directions: Lorenzo Strigini (City University, London, UK)

Industry's View: Michele Morganti (Nokia-Siemens, Italy)

Discussion

15h - 16h **Concluding Session**

Session Chair: Tom Anderson (University of Newcastle upon Tyne, UK)

Invited talk: *Resilient Systems: Current research and Future directions*, Jacques Bus (European Commission)

Discussion

Workshop registration

Registration to the workshop is free of charge. Advance registration using the registration form at the end of the programme is requested for logistics purposes, **by 1st October**.

Workshop attendance includes a CD with the report *From Resilience-Building to Resilience-Scaling Technologies: Directions*, as well as two companion reports: *Resilience-Building Technologies: State of Knowledge*, and *Support for Resilience-Explicit Computing*. Coffee breaks and the lunch are also included in workshop attendance.

Workshop Location and how to reach it

Aula Magna

Dip. di Informatica e Sistemistica dell'Univ. di Roma La Sapienza

Via Ariosto 25, Roma, Italy



Workshop location

From Leonardo da Vinci (Fiumicino) Airport.

Option 1) take a taxi (from 40 Euros to 50 Euros) to Via Ariosto 25

Option 2) take the train "Leonardo Express" to **Termini station** (there is a train every 30')

From Ciampino Airport.

Option 1) take a taxi (from 30 Euros to 40 Euros) to Via Ariosto 25

Option 2) take a bus to

Termini station for timetable please follow the following URL

<http://www.adr.it/content.asp?Subc=2398&L=1&idMen=204>

From Termini Station

Option 1) walk for 15 minutes.

Option 2) take the metro A (direction Anagnina), DIS is in the middle between **Vittorio** metro stop and **Manzoni** metro stop.

Hotels

Mercure Roma Delta Colosseo, 4 stars

Via Labicana 144, 00184 Roma

Phone: (+39)06/770021

Fax : (+39)06/77250198

http://www.accorhotels.com/accorhotels/fichehotel/gb/mer/2909/fiche_hotel.shtml

A block of rooms has been reserved:

- Single room: 129 Euros including breakfast
- Double room, single usage: 158 Euros including breakfast
- Double room, double usage: 195 Euros including breakfast

Reservation deadline: 15th September

Reservation e-mail: carla.fresia@dblue.it

Hotel Mecenate Palace, 4 stars

Via Carlo Alberto 3, 00185 Roma,

Tel. +39 06 44702024,

160 Euros including breakfast

booking online at:

<http://www.hotelmecenatepalace.com/hotel-reservations/index.php>

Hotel Milton Roma, 4 stars

Via Emanuele Filiberto 155, 00185 Roma

Tel. +39 06 4523161

130 Euros including breakfast if booked with [venere.com](http://www.venere.com) (nice and close but it could be noisy; ask for a room in the back)

Hotel Edera, 3 stars

Via Poliziano 75, 00184 Roma

Tel. +39 06 70453888

140 Euros including breakfast if booked with [booking.com](http://www.booking.com) (very close)

Hotel Novecento 3 stars

Via Carlo Emanuele I 12, 00185 Roma

Tel. +39 06 7096247

90 Euros including breakfast if booked with [travellero.com](http://www.travellero.com)

Palatino Grand Hotel, 4 stars

Via Cavour 213, 00184 Roma

Tel. +39 06 4814927

140 Euros not including breakfast

booking online at:

http://www.hotelpalatino.com/index_ita.html (a bit more far from the workshop location)

About ReSIST

ReSIST is an Network of Excellence that addresses the strategic objective “Towards a global dependability and security framework” of the European Union Work Programme, and responds to the stated “need for resilience, self-healing, dynamic content and volatile environments”.

It integrates leading researchers active in the multidisciplinary domains of Dependability, Security, and Human Factors, in order that Europe will have a well-focused coherent set of research activities aimed at ensuring that future “ubiquitous computing systems” – the immense systems of ever-evolving networks of computers and mobile devices which are needed to support and provide Ambient Intelligence (AmI) – have the necessary resilience and survivability, despite any physical and residual development faults, interaction mistakes, or malicious attacks and disruptions.

Network Partners

LAAS-CNRS, Toulouse, France (Coordinator)
Budapest University of Technology and Economics, Hungary
City University, London, UK
Technische Universität Darmstadt, Germany
Deep Blue Srl, Roma, Italy
IBM Research, Zurich, Switzerland
Institut Eurécom, Sophia Antipolis, France
France Telecom Recherche et Développement, Lannion and Caen, France
Université de Rennes 1 – IRISA, France
Université de Toulouse III – IRIT, France
Vytautas Magnus University, Kaunas, Lithuania
Fundação da Faculdade de Ciencias da Universidade de Lisboa, Portugal
University of Newcastle upon Tyne, UK
Università di Pisa, Italy
QinetiQ Ltd, Malvern, UK
Università degli studi di Roma "La Sapienza", Italy
Universität Ulm, Germany
University of Southampton, UK



ReSIST 2nd Open Workshop

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dell'Univ. di Roma *La Sapienza*, Italy



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Registration Form

Fax to +33 (0)5 61 33 64 11 or e-mail the requested information to resistmeeting@laas.fr, by **1st October**

Name (First Last) _____

Email _____

Company/Institution _____

Address _____

Phone _____

Special Dietary Needs _____