

10-12 September, Firenze, Italy
safeComp 2014
international conference on computer safety, reliability & security

Workshops Program

1st ISSE'14 Workshop
1st workshop on the Integration of Safety and Security Engineering
Monday, September 8th
Auditorium al Duomo Florence – “Donatello room” – Via de Cerretani 54/r, Firenze

9:00 **WELCOME – Morning Session**

9:15 - 9:30 **Introduction** **L. Rioux & J. Favaro**

9:30 - 10:00 **ITEA MERGE Project**
“Current Works &
Priorities” **C. Robinson**
(THALES)

10:00 - 11:00 **ARTEMIS SESAMO Project**
“Work Achieved and
Perspectives” **J. Favaro**
(INTECS)

11:00 - 11:30 **COFFEE BREAK**

11:30 - 13:00 **Invited Talks**

11:30 - 12:15 **Integration of Security and**
Air-worthiness in the
Context of Certification and
Standardization **J. Joyce**
(Critical Systems Labs)

12:15 - 13:00 **Security considerations in**
automotive safety
standardization activities **R. Mariani**
(Yogitech)

13:00 - 14:30 **LUNCH**

14:30 - 16:00 **AFTERNOON SESSION - Technical Papers**

14:30 - 15:00	From Safety Models to Security Models: Preliminary Lessons Learnt	P. Bieber, J. Brunel ONERA, France
15:00 - 15:30	FMVEA for Safety and Security Analysis of Intelligent and Co-operative Vehicles	C. Schmittner Zhendong Ma, and Paul Smith AIT, Austria
15:30 - 16:00	Uniform approach of risk communication in distributed IT environments combining safety and security aspects	Jana Fruth and Edgar Nett Uni Magdeburg, Germany
16:00 - 16:30	COFFEE BREAK	
16:30 - 17:15	PANEL & Discussions “Safety and Security: Convergence or Concurrency?” Panelists: F. Vallée (All4Tec), S. Paul (THALES), M. Bouissou (EDF), J. Joyce (Critical Systems Labs), R. Mariani (YOGITECH)	Moderators: L. Rioux, J. Favaro
17:15 - 17:30	Conclusions & Closing Remarks	L. Rioux, J. Favaro
17:30	END OF THE WORKSHOP	

DEVVARTS'14 Workshop
1st International Workshop on DEvelopment, Verification and VALidation of cRiTical Systems
Monday, September 8th 2014
Palazzo Coppini – “Komech room”, Via del Giglio, 10 – Firenze

9:00 - 9:10	Welcome Speech	
9:10 - 10:00	Keynote – Andras Pataricza, Department of Measurement and Information Systems, Budapest University of Technology and Economics.	
10:00 - 11:00	Session 1: Model-checking approaches	
10:00 - 10:30	Verification of fault-tolerant system architectures using model checking”	Jussi Lahtinen
10:30 - 11:00	Verification of a real-time safety-critical protocol using a modelling language with formal data and behaviour semantics	András Vörös, Tamás Tóth and István Majzik
11:00 - 11:30	COFFEE BREAK	
11:30 - 12:30	Session 2: Tools	
11:30 - 12:00	Visualization of Model-Implemented Fault Injection Experiments	S. Daniel Skarin, Jonny Vinter and Rickard Svenningsson
12:00 - 12:30	Cost-Effective Testing for Critical Off-The-Shelf Services	Fabio Duchi, Nuno Antunes, Andrea Ceccarelli, Giuseppe Vella, Francesco Rossi and Andrea Bondavalli

12:30 - 13:00	Session 1 & 2 Closing Discussion	
13:00 - 14:30	LUNCH	
14:30 - 15:30	Session 3 System and tool assessment	
14:30 - 15:00	On Security Countermeasures Ranking through Threat Analysis	Andrea Bondavalli, Andrea Ceccarelli, Felicita Di Giandomenico, Fabio Martinelli, Ilaria Matteucci and Nicola Nostro
15:00 - 15:30	Enabling Cross-domain Reuse of Tool Qualification Certification Artefacts	Barbara Gallina, Shaghayegh Kashiyarandi, Karlheinz Zugsbratl and Arjan Geven
15:30 - 16:00	Session 3 Closing Discussion	
16:00 - 16:30	COFFEE BREAK	
16:30 - 17:20	Panel Discussion	
17:20 - 17:30	Conclusions & Closing Remarks	

ASCoMS'14 Workshop
3rd Workshop on Architecting Safety in Collaborative Mobile Systems
Monday, September 8th
Palazzo Coppini – “Beglaryan room”, Via del Giglio, 10 – Firenze

08:45 – 08:50	Introduction to ASCoMS	Renato Librino, Martin Törngren
08:50 – 09:20	Intelligent Transport Systems: the Role of Information Modelling for Holistic Safety Management	Kenneth Östberg, Martin Törngren, Fredrik Asplund and Magnus Bengtsson.
09:20 – 09:50	Safety Verification of Multiple Autonomous Systems by Formal Approach	Kozo Okano and Toshifusa Sekizawa
	Leg stretch (10 mins)	
10:00 – 10:30	Checking Verification Compliance of Technical Safety Requirements on the AUTOSAR Platform Using Annotated Semi-Formal Executable Models	Martin Skoglund, Thomas Arts, Alex Gerdes, Hans Svensson, Henrik Eriksson and Rolf Johansson
10:30 – 11:00	Evaluation of Safety Rules in a Safety Kernel-based Architecture	Eric Vial and António Casimiro
11:00 – 11:30	COFFEE BREAK	
11:30 – 12:00	Driving with Confidence: Local Dynamic Maps that Provide LoS for the 0 Test-bed	Christian Berger, Oscar Morales, Thomas Petig and Elad Michael Schiller

12:00 – 12:30	Sensor- and environment dependent performance adaptation for maintaining safety requirements	Tino Brade, Georg Jäger, Sebastian Zug and Joerg Kaiser
12:30 – 13:00	Collaborative Development of Safety-Critical Automotive Systems: Automation, Views and Metrics	Johan Ekberg, Urban Ingelsson, Henrik Lönn, Magnus Skoog and Jan Söderberg
13:00 - 14:30	LUNCH	
14:30 – 15:00	Towards Energy Efficient, High-speed Communication in WSNs	Attila Nagy and Olaf Landsiedel
15:00 – 15:30	Comparing Adaptive TDMA Against a Clock Synchronization Approach	Luis Almeida, Frederico Santos and Luis Oliveira
15:30 – 16:10	Panel debate	
16:10	Workshop closing	
	Coffee served!	

International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems (SASSUR)
Tuesday, September 9th
Palazzo Coppini – “Komech room”, Via del Giglio, 10 – Firenze

9:00 – 9:15 **WELCOME – Alejandra Ruiz**

Keynote

9:15 – 10:00 **Challenges of safe adaptation architecture for vehicles** **Gereon Weiss**

10:00 – 10:30 **Rethinking of Strategy for Safety Argument Development** **Linling Sun, Nuno Silva and Tim Kelly**

10:30 – 11:00 **Metamodel Comparison and Model Comparison for Safety Assurance** **Yaping Luo, Luc Engelen and Mark Van Den Brand**

11:00 – 11:30 **COFFEE BREAK**

11:30 – 12:00 **Assuring Avionics – Updating the Approach for the 21st Century** **Tom Ferrell and Uma Ferrell**

12:00 – 12:30 **Does Visualization Speed up the Safety Analysis Process?** **Ragaad Altarawneh, Max Steiner, Davide Taibi and Shah Rukh Humayoun**

12:30 – 13:00 **A Software Safety Verification Method Based on System-Theoretic Process Analysis (Position Paper)** **Asim Abdulkhaleq and Stefan Wagner**

13:00 – 14:30	LUNCH	
14:30 – 15:00	Quantifying Uncertainty in Safety Cases Using Evidential Reasoning	Sunil Nair, Neil Walkinshaw and Tim Kelly
15:00 – 15:30	Agile Change Impact Analysis of Safety Critical Software	Tor Stålhane, Geir Kjetil Hanssen, Thor Myklebust and Børge Haugset
15:30 – 16:00	Towards a Cross-domain Software Safety Assurance Process for Embedded Systems	Marc Zeller, Kai Hoefig and Martin Rothfelder
16:00 – 16:30	COFFEE BREAK	
16:30 – 17:30	Industrial Panel	
17:30 – 17:45	Wrap Up	Alejandra Ruiz

DECSoS'14 Workshop
1st International Workshop on Dependable Embedded and Cyber-physical Systems and Systems-of-Systems
Tuesday, September 9th
Auditorium al Duomo Florence – “Donatello room” – Via de Cerretani 54/r, Firenze

9:30 – 10:00	Introduction	
	ERCIM, EWICS, ARTEMIS: An (European) introduction to different aspects of critical systems engineering	Erwin Schoitsch and Amund Skavhaug
10:00 – 11:00	Formal Analysis and Verification (I)	
10:00 – 10:30	True Error or False Alarm? Refining Astree’s Abstract Interpretation Results by EmbeddedTester’s Automatic Model-based Testing [MBAT]	Sayali Salvi, Daniel Kästner, Tom Bienmüller and Christian Ferdinand
10:30 – 11:00	Formal Verification of Implementation Models against Safety Specifications [MBAT]	Markus Oertel, Omar Kacimi and Eckard Boede
11:00 – 11:30	COFFEE BREAK	
11:30 – 13:00	Railway applications: Safety analysis and verification	
11:30 – 12:00	Report on the Railway Use case of the Crystal project: Objectives and Progress [CRYSTAL]	Vallée Frédérique, Alexandre Ginisty, Elie Soubiran and Vidal Delmas Tchapet-Nya

12:00 – 12:30	Contract-based Analysis for verification of Communication-Based Train Control (CBTC) system [MBAT]	Marco Carloni, Orlando Ferrante, Alberto Ferrari, Gianpaolo Massaroli, Antonio Orazio, Luigi Velardi and Ida Petrone
12:30 – 13:00	An Interoperable Testing Environment for ERTMS/ETCS control systems [CRYSTAL]	Gregorio Barberio, Beniamino Di Martino, Nicola Mazzocca, Luigi Velardi, Aniello Amato, Renato De Guglielmo, Ugo Gentile, Stefano Marrone, Roberto Nardone, Adriano Peron and Valeria Vittorini
13:00 – 14:30	LUNCH	
14:30 – 16:00	Resilience and Trust: Dynamic issues	
14:30 – 15:00	Modelling Resilient Systems-of-Systems in Event-B	Linus Laibinis, Inna Pereverzeva and Elena Troubitsyna
15:00 – 15:30	Towards Assured Dynamic Configuration of Safety-critical Embedded Systems	Nermin Kajtazovic, Christopher Preschern, Andrea Höller and Christian Kreiner
15:30 – 16:00	Towards Trust Assurance and Certification in Cyber-Physical Systems [EMC²]	Daniel Schneider, Eric Armengaud and Erwin Schoitsch
16:00 – 16:30	COFFEE BREAK	
16:30 – 17:30	Formal Analysis and Verification (II)	
16:30 – 17:00	MTBF Inconsistency Analysis on Inferred Product Breakdown	Christian Ellen, Martin Böschen and Thomas Peikenkamp

Structures [CRYSTAL]

17:00 – 17:30
Critical Systems
Verification in
MetaMORP(h)OSY
[CRYSTAL]

Francesco Moscato, Rocco Aversa
and Beniamino Di Martino

17:30 **END**

1st ReSA4CI'14 Workshop
1st International Workshop on Reliability and Security Aspects for Critical Infrastructure Protection
Tuesday, September 9th
Palazzo Coppini – “Beglaryan room”, Via del Giglio, 10 – Firenze

9:45 – 10:00 **WELCOME**

Keynote 1

10:00 – 11:00 **Critical Infrastructure Protection: the eternal return of dependability-related essential principles** **Dr. Barb**

11:00 – 11:30 **COFFEE BREAK**

11:30 – 13:00 **Session 1: Security and Dependability of Critical Infrastructure**

11:30 – 12:00 **Modeling and evaluation of maintenance procedures for gas distribution networks with time-dependent parameters** **Laura Carnevali, Marco Paolieri, Fabio Tarani, Enrico Vicario and Kumiko Tadano**

12:00 – 12:30 **Quantification of the Impact of Cyber Attack in Critical Infrastructures** **Peter Popov, Kizito Salako and Oleksandr Netkachev**

12:30 – 13:00 **Probabilistic inference in the physical simulation of interdependent critical infrastructure systems** **Paolo Franchin and Luigi Laura**

13:00 – 14:30 **LUNCH**

14:30 – 16:00	Session 2: Methodologies and Analysis of Distributed Systems	
14:30 – 15:00	Energy-Based Detection of Multi-Layer Flooding Attacks on Wireless Sensor Network	Cesario Di Sarno and Alessia Garofalo
15:00 – 15:30	Towards a non-Intrusive Recognition of Anomalous System Behavior in Data Centers	Luca Montanari, Roberto Baldoni, Claudio Ciccotelli, Federico Lombardi, Alessandro Donno and Adriano Cerocchi
15:30 – 16:00	Toward Resilience Assessment in Business Process Architectures	Richard M. Zahoransky, Thomas Koslowski and Rafael Accorsi
16:00 – 16:30	COFFEE BREAK	
	Keynote 2	
16:30 – 17:30	Critical infrastructures: Show must go on	Michele Colajanni
17:30	END OF THE WORKSHOP	

Conference Venue

About Florence

Florence (Italian: Firenze) is the capital city of Tuscany and the most populous city in Tuscany, with approximately 370,000 inhabitants, expanding to over 1.5 million in the metropolitan area. Florence is famous for its history. A centre of medieval European trade and finance and one of the wealthiest cities of the time, Florence is considered the birthplace of the Renaissance, and has been called the Athens of the Middle Ages. From 1865 to 1871 the city was also the capital of the Kingdom of Italy. The historic centre of Florence attracts millions of tourists each year, and it was declared a World Heritage Site by UNESCO in 1982. Due to Florence's artistic and architectural heritage, it has been ranked by Forbes as one of the most beautiful cities in the world. The city also contains numerous museums and art galleries, such as the Uffizi Gallery and the Pitti Palace, amongst others.

Auditorium al Duomo

The main conference will take place at the “[Congressi al Duomo](#)” Florence Centre ([Auditorium al Duomo](#)). The congress centre is located in the heart of the historic center of Florence, a few steps from the central railway station (Santa Maria Novella), the Duomo cathedral, the Uffizi Gallery, the Ponte Vecchio, and the Accademy of Fine Arts.

Auditorium al Duomo

www.auditoriumalduomo.com

Via de' Cerretani, 54/R – 50123 Firenze, Italy

Phone: +39 055 2381752 – Fax: +39 055 268308



Palazzo Coppini

Some of the Workshops will be held at [Palazzo Coppini](#), an historical palace of unquestionable interest, whose structural and decorative elements reflect some of the most crucial periods in the city's history, especially those before its expansion beyond the 13th century walls, in the 19th century.

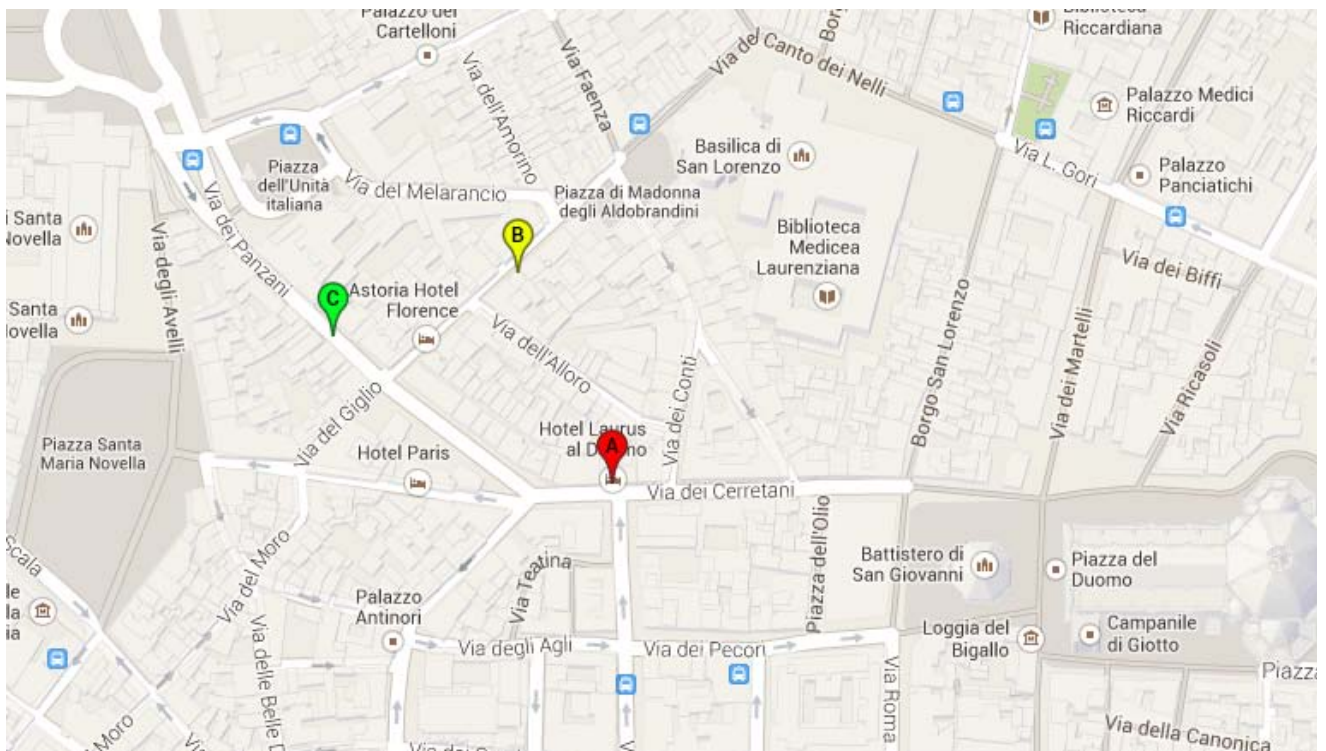
Palazzo Coppini

<http://www.palazzocoppini.org>

Via del Giglio, 10 – 50123 Firenze, Italy

Phone: +39 055 216066

Conference Map



A

Auditorium al Duomo

Via de' Cerretani, 54/R – Firenze

- Main Conference and Workshop Registration
- Main Conference
- ISSE Workshop
- DECSoS Workshop

B

Palazzo Coppini

Via del Giglio, 10 – Firenze

- DEVVARTS Workshop
- ASCoMS Workshop
- SASSUR Workshop
- ReSA4CI Workshop

C

Ristorante Sabatini

Via Panzani, 9/a – Firenze

Lunches and Coffe Breaks