

Invitation to SAFECOMP 2010, Vienna

29th International Conference on Computer Safety, Reliability and Security

Vienna, Austria, Schönbrunn Palace Conference Centre

Sept. 14-17, 2010



You are welcome at SAFECOMP 2010, which takes place at a very attractive site, the Schönbrunn Palace Conference Center in Vienna, Austria, with an attractive programme, including scientific papers as well as industrial experience reports.

More information and registration:

www.safecomp.org and www.ocg.at/safecomp2010

The venue: City of Vienna, Schönbrunn Palace Conference Centre

Vienna, the capital of Austria, located at the Danube, often described as Europe's cultural capital, is a city of unique charm and flair. With about 2 million inhabitants in the area, it's still a metropolis, but not too large. Vienna is attractive to tourists as a romantically imperial city, with a long historical background and many sightseeing opportunities, and as a city of music, art and culture. Vienna is full of life, and according to Mercer's 2009 Quality of Living survey, it ranks now first in worldwide quality of living. It may be less well known that Vienna is a City of Science as well, with many research facilities. Vienna is a "green" city – almost surrounded by the green belt of the Vienna Woods, and with many large parks, like the Prater, Lobau, Danube Island, Schönbrunn Park, Stadtpark and so on. Vienna is easy to reach by public transport (railways, airplanes), and provides a very good hotel infrastructure.

The conference venue is the Schönbrunn Palace Conference Centre in the former Apothecaries Wing on the east side of the imperial palace, just one minute to walk from the Underground Station "Schönbrunn". Nevertheless, contemporary interior design and latest technology are provided for the conference facilities.

SAFECOMP Conference Contacts:

Erwin Schoitsch, AIT Austrian Institute of Technology,

erwin.schoitsch@ait.ac.at

Conference Secretariat: ocg@ocg.at

Schönbrunn Palace Conference Center,
Apothecaries' Wing, nearest entrance Grünbergstraße,
Meidlinger Gate, 1130 Vienna (see Map [G3], U4 Metro Schönbrunn)



WORKSHOPS, TUTORIALS (details on the web site):

PLEASE REGISTER NOW!!!!

Tuesday, Sept. 14, is a tutorial and workshop day, with currently planned two workshops (fixed) and two tutorials (if enough registrations for the tutorials):

For Workshop and Tutorial participants, SAFECOMP Early Bird rates are still valid until Sept. 6, 2010 !!

(Authors, members of OCG, EWICS, GI and associated computer societies: 440 Euros, others 500 Euros) (later on rates will be 500/550 Euros resp.)

Workshop 1:

S&D4RCES – International Workshop on Security and Dependability for Resource Constrained Embedded Systems

Workshop 2:

ERCIM/DECOS/MOGENTES - Dependable Embedded Systems: Model-based Design and Validation (Automated Test Case Generation) (full day)

Tutorial 1:

Integration and Complexity of Flight Systems - The Role of Data Buses (9:00 - 12:30)

Tutorial 2:

Goal directed Specification, Measurement and Certification of Functionality, Integrity, Privacy, Safety and Security (14:00 - 17:30)

EXHIBITION:

A Technical Exhibition and Tool Fair is open during the whole conference in the communication area where coffee breaks and lunches take place

PROCEEDINGS are published as SPRINGER LNCS 6351

They will be available as part of the participant's conference package!!

Conference Program

SAFECOMP 2010 Key Theme
Critical Embedded Systems – Challenges and Risks

Keynotes (9:30 – 10:15)

Wednesday, 15. Sept.:

"System of Systems Challenges"
(Hermann Kopetz - Vienna University of Technology, Austria)

Thursday, 16. Sept.:

"Murphy Was An Optimist" (Kevin Driscoll - Honeywell Laboratories, USA)

Friday, 17. Sept.:

"Process Control Security: go Dutch! (united, shared, lean and mean)"
(Eric Luijff - TNO, The Hague, The Netherlands)

Preconference - Monday 13th - Tuesday 14th

EWICS TC 7 Meeting: Monday/Tuesday (free of charge)

for details see <http://www.ewics.org>.

Monday, Sept.13, 2010: TechGate, Donau-City-Straße 1, TechGate Tower, 5th floor, AIT-Safety & Security Department (see Map, U1 Metro, Kaisermühlen-VIC)

Tuesday, Sept. 14, 2010: at SAFECOMP Conference Venue, Schönbrunn Palace Conference Center

Workshops, Tutorials: Tuesday, 14th

Schönbrunn Palace Conference Center

For details see <http://www.ocg.at/safecomp2010>, <http://www.safecomp.org>

Main Conference - Wednesday 15th - Friday 17th

Wednesday 15th

9:00 - 9:30 Welcome Adresses

- Francesca Saglietti, EWICS Chair, University of Erlangen-Nuremberg, Germany
- Gerald Futschek, Technical University of Vienna, President of the Austrian Computer Society, Austria
- Erwin Schoitsch, Conference Chair, AIT Austrian Institute of Technology, Austria

9:30 - 10:15 Keynote I

System of Systems Challenges

Hermann Kopetz, Vienna University of Technology, Austria

10:15 - 10:45 Coffee Break

10:45 - 12:45 Session 1: System Analysis

Reliability Analysis of Safety-Related Communication Architectures

Oliver Schulz, Jan Peleska, University of Bremen, Germany

A Novel HAZOP Study Approach in the RAMS Analysis of a Therapeutic Robot for Disabled Children

Thomas Gruber, Petr Böhm, AIT Austrian Institute of Technology, Austria

Variability Management of Safety and Reliability Models: An Intermediate Model towards systematic Reuse of Component Fault Trees

Carolina Gomez, Peter Liggesmeyer, TU Kaiserslautern, Germany; Ariane Sutor, Siemens Corp. Research, Munich, Germany

QoS Analysis of Weighted Multistate Probabilistic Networks via Decision Diagrams

Roberta Terruggia, Andrea Bobbio, University Piemonte Orientale, Italy

12:45 - 14:00 Lunch

14:00 - 16:00 Session 2: Safety Cases and Certification

Comparison between IEC 60880 and IEC 61508 for Certification Purposes in the Nuclear Domain

Jussi Lahtinen, Jukka Ranta, Hannu Harju, VTT, Finland; Mika Johansson, Risto Nevalainen, Tampere University of Technology, Finland

Deriving Safety Cases for Hierarchical Structure in Model-Based Development

Nurlida Basir, Bernd Fischer, University of Southampton, UK; Ewen Denney, NASA Ames Research Center, USA

Assurance of Automotive Safety - A Safety Case Approach

Robert Palin, Jaguar Land Rover, Coventry, UK; Ibrahim Habli, University of York, UK

How to "Survive" a Safety Case According to ISO 26262
Torsten Dittel, Ford, Cologne, Germany; Hans-Jörg Aryus, SystemA Engineering, Immenstaad, Germany

16:00 - 16:30 Coffee Break

16:30 - 18:00 Session 3: Aerospace

Benchmarking Software Requirements Documentation for Space Application
Paulo Veras, Rodrigo P. Pontes, Emilia Villani, Aeronautical Institute, São José dos Campos-SP, Brazil; Ana Maria Ambrosio, National Institute for Space Research, São José dos Campos-SP, Brazil; Henrique Madeira, Marco Vieira, Aeronautical University of Coimbra, Portugal

Verifying Mode Consistency for On-Board Satellite Software
Alexei Iliasov, Alexander Romanovsky, University of Newcastle, UK; Elena Troubitsyna, Linas Laibinis, Abo University, Finland; Kimmo Varpaaniemi, Pauli Väisänen, Dubravka Ilic, Timo Latvala, Space Systems Finland, Finland

Computational Concerns in the Integration of Unmanned Airborne Systems into Controlled Airspace
Christopher Johnson, University of Glasgow, Scotland, UK

20:00 Welcome Reception

City Hall, Restaurant Wiener Rathauskeller

Thursday 16th

8:30 - 9:30 Session 4: Error Detection

Residual Error Probability of Embedded CRC by Stochastic Automata
Frank Schiller, Tina Mattes, TU Munich, Germany

ANB- and ANBDMem-Encoding: Detecting Hardware Errors in Software
Ute Schiffel, Andre Schmitt, Martin Süßkraut, Christof Fetzner, TU Dresden, Germany

9:30 - 10:15 Keynote II

Murphy Was An Optimist

Kevin Driscoll - Honeywell Laboratories, USA

10:15 - 10:45 Coffee Break

10:45 - 12:45 Session 5: Validation and Verification

Field Test Methods for a Co-operative Integrated Traffic Management System
Thomas Gruber, Egbart Althammer, Erwin Schoitsch, AIT Austrian Institute of Technology, Austria

100% Coverage for Safety-Critical Software - Efficient Testing by Static Analysis
Daniel Kästner, Reinhold Heckmann, Christian Ferdinand, AbsInt GmbH, Saarbrücken, Germany

MODIFI: A MODEL-Implemented Fault Injection Tool
Rickard Svenningsson, Jonny Vinter, Henrik Eriksson, SP Technical Research Inst. of Sweden, Sweden; Martin Törngren, KTH Stockholm, Sweden

Automated Test Coverage Measurement for Reactor Protection System Software Implemented in Function Block Diagram
Eunyoung Jee, Insup Lee, University of Pennsylvania, USA; Suin Kim, KAIST, Daejeon, Rep. of Korea; Sungdeok Cha, Korea University, Seoul, Rep. of Korea

12:45 - 14:00 Lunch

14:00 - 15:00 Session 6: Testing

Overcoming Non-determinism in Testing Smart Devices: a Case Study
Peter Bishop, CSR City University and Adelard, London, UK; Lukasz Cyra, Adelard, London, UK

Software Testing by People with Autism
Sjaak Brinkkemper, Suzanne Haanappel, Utrecht University, The Netherlands

14:00 - 15:00 EWICS TC7 presentation

EWICS TC7 Subgroup Presentations

16:00 - 16:30 Coffee Break

16:30 - 18:00 Session 7: Critical Infrastructure - Smart Grid

Information Flow Analysis of Energy Management in a Smart Grid
Ravi Akella, Bruce McMillin, Missouri University of Science and Technology, USA

Integrated Cyber-Physical Fault Injection for Reliability Analysis of the Smart Grid
Sahra Sedigh, Bruce McMillin, Ayman Faza, Missouri University of Science and Technology, USA

A Metric for Measuring the Strength of Inter-dependencies
Silvia Ruzzante, Elisa Castorini, Elena Marchei, Vincenzo Fioriti, ENEA, Roma, Italy

18:30 - 19:30 Guided Tour

The guided tour through **Schoenbrunn Castle** will take you through the rooms of the palace showing you the apartments of Emperor Franz Joseph and Empress Elisabeth, as well as the magnificent ceremonial rooms in the central part of the palace. Afterwards a panorama train will take you to **Gloriette**, the belvedere of Schoenbrunn Castle, where the conference dinner will be held.

19:30 Conference Dinner: Schoenbrunn Palace, Gloriette

Friday 17th

8:30 - 9:30 Session 8: Security and Safety

Security Analysis of Open Building Automation Systems

Wolfgang Granzer, Wolfgang Kastner, Vienna University of Technology, Austria

A UML Profile for Requirements Analysis of Dependable Software

Denis Hatebur, ITESYS GmbH and University Duisburg-Essen, Germany; Maritta Heisel, University Duisburg-Essen, Germany

9:30 - 10:15 Keynote III

Process Control Security: go Dutch! (united, shared, lean and mean)

Eric Luijff, TNO, The Hague, The Netherlands

10:15 - 10:45 Coffee Break

10:45 - 12:45 Session 9: Safety Engineering I

Model-Based Safety Engineering of Interdependent Functions in Automotive Vehicles Using EAST-ADL2

Anders Sandberg, Mecel AB, Gothenburg, Sweden; Martin Törngren, DeJiu Chen KTH Stockholm, Sweden; Henrik Lönn, Lei Feng, Ramin Tavakoli-Kolagari, Volvo Technology, Gothenburg, Sweden; Rolf Johansson, Mentor Graphics, Gothenburg, Sweden; Sandra Torchiario, CRF, Orbassano, Italy; Andreas Abele, Continental Automotive, Regensburg, Germany

Experiences in Applying Formal Verification in Robotics

Dennis Walter, Holger Täubig, Christoph Lüth, German Research Institute for AI, Bremen, Germany

Evolving a Safe System Design Iteratively

Alexandre Mota, Edson Watanabe, Felipe Ferri, University of Pernambuco, Brazil; Adriano Gomes, Joabe Jesus, Embraer, Brazil

An Approach to Using Non Safety-Assured Programmable Components in Modest Integrity Systems

Peter Bishop, CSR City University and Adelard, London, UK; Kostas Tourlas, Nick Chozos, Adelard, London, UK

12:45 - 14:00 Lunch

14:00 - 16:00 Session 10: Safety Engineering II

Development of High-Integrity Software Product Lines Using Model Transformation

Stuart Hutchesson, John McDermid, Aero Engine Controls, Derby & University of York, UK

On the Safety Implications for e-Governance: Assessing the Hazards of Enterprise Information Architectures in Safety-Critical Applications

Christopher Johnson, Stefan Raue, University of Glasgow, Scotland, UK

The Right Degree of Configurability for Safety-Critical Embedded Software in Variable Message Signs

Thomas Novak, Christoph Stoegerer, SWARCO FUTURIT, Perchtoldsdorf, Austria

INDEXYS, A Logical Step Beyond GENESYS - INDUSTRIAL EXPLOITATION OF THE GENESYS cross-domain architecture

Andreas Eckel, Christian Fidi, TTTech, Vienna, Austria; Roman Obermaisser TU Vienna, Austria; Paul Milbredt, Audi AG, Germany; Zaid Al-Ars, Delft University of Technology, The Netherlands; Stefan Schneele, EADS Germany GmbH, Germany; Bart Vermeulen, NXP Semiconductors Netherlands B.V., The Netherlands; György Csertan, OptXware Research and Development Ltd., Hungary; Christoph Scheerer, Thales Rail Signalling Solutions GesmbH, Austria; Neerai Suri, Abdelmajid Khelil, Technical University of Darmstadt, Germany; Gerhard Fohler, Technical University of Kaiserslautern, Germany

16:00 - 16:30 Closing Session

Announcement of SAFECOMP 2011

Best Paper Award

Closing Remarks and Farewell

16:30 - 17:00 Coffee and Wrap Up

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