

Programme at-a-glance legend:

Architecture
Process, Tools
Quality, Safety
Verification & Validation, Diagnostics
Model Based
Human Factor
Open Do
Tool sessions

WEDNESDAY 1 FEBRUARY 2012

09:00 – 09:30	EXHIBITION	Opening Session			
		Joseph SIFAKIS – Congress General and Programme Committee Chair			
		Jean BOTTI – Congress General Chair			
		Welcome Address			
		TBC			
09:30– 10:30		Keynote address			
		<i>Embedded Systems in Automotive Industry – Trends and Challenges</i>			
		Klaus GRIMM , Daimler AG and ARTEMIS Industry Association, Germany			
10:30– 11:00		EXHIBITION VISIT / REFRESHMENT BREAK			
11:00 - 13:00		Session 1A Multi-Domain Safety Assurance	Session 1B Timing Challenges in Communication Systems	Session 1C AUTOSAR Deployment Status	Session 1D Verification & Validation I
13:00– 14:00	EXHIBITION VISIT / LUNCH				
14:00– 15:00	Panel <i>Multi-core or Energy</i>				
15:10– 16:10	Session 2A Model Based Safety	Session 2B Case studies (Systems)	Session 2C Human Factor	Session 2D Verification & Validation II	
16:10– 16:40	EXHIBITION VISIT / REFRESHMENT BREAK				
16:40– 18:40	Session 3A IMA Architecture and Partitioning I	Session 3B Timing Analysis	Session 3C Engineering Frameworks I		
18:40 – 19:40	WELCOME RECEPTION				

ERTS 2012 – Detailed Programme – 1-3 February 2012, Toulouse, France
THURSDAY 2 FEBRUARY 2012

09:00 - 10:00	EXHIBITION	Keynote address <i>Title TBA</i> Alberto SANGIOVANNI-VINCENTELLI , UC Berkeley, USA			
10:00 - 10:30		EXHIBITION VISIT / REFRESHMENT BREAK			
10:30 - 12:30		Session 4A Engineering Frameworks II	Session 4B Hardware/Software co-design	Session 4C IMA Architecture and Partitioning II	Session 4D Safety Process
12:30 - 13:30		EXHIBITION VISIT / LUNCH			
13:30 - 15:30		Session 5A Open Source Business Models	Session 5B Case Studies in Model Based Engineering	Session 5C Reuse and Product Lines	Session 5D Software Qualimetry
15:30 - 16:00		EXHIBITION VISIT / REFRESHMENT BREAK			
16:00 - 18:00		Session 6A Requirements Engineering	Session 6B SysML in Use	Session 6C Formal Code Analysis	
18:00 - 18:45		Session Tool A Model Base Approach	Session Tool B System & Safety Engineering	Session Tool C Automotive Functional Safety ISO26262	Session Tool D <i>Operating System & Implementation</i>

09:00 - 10:00	EXHIBITION	Keynote address <i>Towards a greener and more eco efficient aerospace industry</i> Denis CHAPUIS , VP Research and Technology of EADS GROUP, France		
10:00 - 10:30		EXHIBITION VISIT / REFRESHMENT BREAK		
10:30 - 12:30		Session 7A "Open DO"	Session 7B Model Based Process	Session 7C Software Implementation
12:30 - 13:30		EXHIBITION VISIT / LUNCH		
13:30 - 14:30		Panel <i>Multi-core or Energy</i>		
14:40 - 16:10		Session 8A Safety & Security	Session 8B Model Based Testing	Session 8C Diagnostics & Pronostics
16:10 - 16:40		Closing session		

Wednesday 1 February 2012

09:00-09:30 Room Auditorium St Exupery

> Opening Session

Joseph SIFAKIS – Congress General & Programme Committee Chair

Jean BOTTI – Congress General Chair

> Welcome Address

09:30-10:30 Room Auditorium St Exupery

> Keynote address

Embedded Systems in Automotive Industry- Trends and Challenges

Klaus GRIMM – Daimler AG and ARTEMIS Industry Association, Germany

10:30-11:00 Room Concorde

> Exhibition visit/ Refreshment break

11:00-13:00 Room Auditorium St Exupery

> Session 1A- Multi -Domain Safety assurance

1A.1 Criticality categories across safety standards in different domains

Jean-Paul Blanquart - Astrium Satellites, France

Jean-Marc Astruc - Continental, France

Philippe Baufreton - Sagem Défense Sécurité, France

Jean-Louis Boulanger - CERTIFER, France

Hervé Delseny - Airbus, France

Jean Gassino - IRSN, France

Gérard Ladier - Aerospace Valley, France

Emmanuel Ledinot - Dassault Aviation, France

Michel Leeman - Valeo, France

Joseph Machrouh - Thales, France

Philippe Quéré - Renault, France

Bertrand Ricque - Sagem Défense Sécurité, France

1A.2 Cross domain comparison of System Assurance

Joseph Machrouh - Thales, France

Jean-Paul Blanquart - ASTRIUM, France

Philippe Baufreton - Sagem, France

Jean-Louis Boulanger - CERTIFER, France

Hervé Delseny - Airbus, France

Jean Gassino - IRSN, France

Gérard Ladier - Aerospace Valley, France

Emmanuel Ledinot - Dassault Aviation, France

Michel Leeman - Valeo, France

Jean-Marc Astruc - Continental, France

Philippe Quéré - Renault, France

Bertrand Ricque - Sagem, France

1A.3 A cross-domain comparison of software development assurance

Emmanuel Ledinot - DASSAULT AVIATION, France

Jean Gassino - IRSN, France

Jean-Paul Blanquart - Astrium Satellites, France

Jean-Louis Boulanger - CERTIFER, France

Philippe Quéré - Renault, France

Bertrand Ricque - Sagem Défense Sécurité, France

1A.4 A multi-domain platform of safety process methods and tools for critical embedded systems

Jean-Paul Blanquart - Astrium Satellites, France

Eric Armengaud - AVL, Austria

Philippe Baufreton - Sagem Défense Sécurité, France

Quentin Bourrouilh - AVL, Austria

Joseph Machrouh - Thales, France

Thomas Peikenkamp - Offis, Germany

Tormod Wien - ABB, Sweden

11:00-13:00 Room Guillaumet

> Session 1B - Timing Challenges in Communication Systems

1B.1 Identifying Source of Pessimism in the Trajectory Approach with FIFO Scheduling

Sara Medlej - LRI-EDF, France

Steven Martin - LRI, France

Jean-Marie Cottin - EDF, France

1B.2 Fine-grained Simulation in the Design of Automotive Communication Systems

Aurelien Monot - PSA Peugeot Citroen / LORIA, France

Nicolas Navet - INRIA / RTaW, France

Bernard Bavoux - PSA Peugeot-Citroen, France

1B.3 Experimental assessment of timing verification techniques for AFDX

Marc Boyer - ONERA, France

Nicolas Navet - INRIA / RTaW, France

Marc Fumey - Thales Avionics, France

1B.4 Mastering Timing Challenges for the Design of Multi-Mode Applications on Multi-Core Real-Time Embedded Systems

Mircea Negrean - IDA, TU Braunschweig, Germany

Rolf Ernst - IDA, TU Braunschweig, Germany

Simon Schliecker - Syntavision GmbH, Germany

11:00-13:00 Room Ariane 1

> Session 1C - AUTOSAR deployment status

1C.1 DESTAR – AUTOSAR Standard Deployment

Emmanuel Coutenceau - Valeo, France

Olivier Guetta - Renault, France

Aldric Loyer - PSA Peugeot Citroën, France

1C.2 Safe development by adaption of standardized safety concepts in AUTOSAR 4.0

Michael Niklas - Continental Engineering Services GmbH, Germany

Stefan Voget - Continental Engineering Services GmbH, Germany

Jürgen Mottok - University of Applied Sciences Regensburg, Germany

1C.3 AUTOSAR BSW in real life, A summary of the last years starting and putting projects into production on AR

Matthieu Courier - Continental Automotive, France

1C.4 AUTOSAR: Achievements, roll-out, perspectives

Alain Gilberg - PSA PEUGEOT CITROEN, France

Steffen Lupp - Bosch, Germany

Simon Fuerst - BMW, Germany

Stefan Bunzel - CONTINENTAL, Germany

Stefan Schmerler - Daimler, Germany

Frank Kirschke Biller - Ford, United States

Robert Rimkus - GM, United States

Kenji Nishikawa - TMC, Japan

Andreas Titze - Volkswagen, Germany

11:00-13:00 Room Ariane 2

> Session 1D - Verification & Validation

1D.1 First steps toward a Verification and validation ontology

Mounira Kezadri - IRIT, Université de Toulouse, France, Metropolitan

Marc Pantel - IRIT, Université de Toulouse, France, Metropolitan

1D.2 Component-based Design and Verification in X-MAN

Nannan He - Oxford University, United Kingdom

Daniel Kroening - Oxford University, United Kingdom

Thomas Wahl - Oxford University, United Kingdom

Lau Kung-Kiu - Manchester University, United Kingdom

Faris Taweel - Manchester University, United Kingdom

Tran Cuong M - Manchester University, United Kingdom

Ruemmer Philipp - Uppsala University, Sweden

Sharma Sanjiv S. - Airbus Operations Limited, United Kingdom

1D.3 Context Aware Model Exploration with OBP tool to Improve Model-Checking

Philippe Dhaussy - ENSTA Bretagne, France

Jean-Charles Roger - ENSTA Bretagne, France

Luka Leroux - ENSTA Bretagne, France

Fredéric Boniol - ONERA, France

1D.4 Verification and Validation According to ISO 26262- A Workflow to Facilitate the Development of High-Integrity Software

Mirko Conrad - The mathWorks, Inc., United States

13:00-14:00 Room Caravelle

> *Exhibition visit / Lunch*

14:00-15:00 Room Auditorium St Exupery

> Panel

Multi-core or Energy

15:10-16:10 Room Auditorium St Exupery

> **Session 2A - Model Based Safety**

2A.1 Using the CESAR Safety Design Process for Functional Safety Management in the context of ISO 26262

Eric Armengaud - AVL List GmbH, Austria

Gerhard Griessnig - AVL List GmbH, Austria

Quentin Bourrouilh - AVL List GmbH, Austria

2A.2 A COTS-based Safe Design Method for Train Control Systems

Salam Hajjar - INSA de Lyon, France

Emil Dumitrescu - INSA de Lyon, France

Eric Niel - INSA de Lyon, France

15:10-16:10 Room Guillaumet

> **Session 2B - Case studies (systems)**

2B.1 Avionic-X : A demonstrator for the Next Generation Launcher Avionics

David Monchaux - CNES - Direction des Lanceurs, France

Philippe Gast - ASTRIUM Space Transportation, France

2B.2 Flight Test Engineer Station for A350 aircrafts

Yves Marcet - Airbus France, France, Metropolitan

Guillaume Monsarrat - Airbus France, France, Metropolitan

Olivier Gallot - Airbus France, France, Metropolitan

Jean-Francois Dausse - Airbus France, France, Metropolitan

15:10-16:10 Room Ariane 1

> **Session 2C - Human Factors**

2C.1 Multi-Criteria Evaluation of Aircraft Cockpit Systems by Model-based Simulation of Pilot Performance

Andreas Luedtke - OFFIS, Institute for Information Technology, Germany

Jan-Patrick Osterloh - OFFIS, Institute for Information Technology, Germany

Florian Frische - OFFIS, Institute for Information Technology, Germany

2C.2 Interactive Cockpits Applications: Modelling and Validation using a Petri-net based Formalism

Arnaud Hamon - Airbus, France

Philippe Palanque - University Toulouse 3, France

Célia Martinie - University Toulouse 3, France

David Navarre - University Toulouse 3, France

Adrienne Tankeu-Choitat - Airbus, Cameroon

Eric Barboni - University Toulouse 3, France

15:10-16:10 Room Ariane 2

> **Session 2D - Verification & Validation II**

2D.1 Validate implementation correctness using simulation: the TASTE approach

Julien Delange - ESA, Netherlands

Jerome Hugues - ISAE, France

Pierre Dissaux - Ellidiss, France

2D.2 DO-178C Compliance of Verisoft Formal Methods

Holger Blasum - SYSGO AG, Germany

Frank Dordowsky - ESG Elektroniksystem- und Logistik GmbH, Germany

Bruno Langenstein - German Research Centre for Artificial Intelligence (DFKI), Germany

Andreas Nonnengart - German Research Centre for Artificial Intelligence (DFKI), Germany

16:10-16:40 Room Concorde

> *Exhibition visit/ Refreshment Break*

16:40-18:40 Room Auditorium St Exupery

> **Session 3A - IMA Architecture and partitioning I**

3A.1 Applying the AUTOSAR timing protection to build safe and efficient ISO 26262 mixed-criticality systems

Christoph Ficek - Symtavision GmbH, Germany

Nico Feiertag - Symtavision GmbH, Germany

Kai Richter - Symtavision GmbH, Germany

Marek Jersak - Symtavision GmbH, Germany

3A.2 Modeling ARINC-653 systems in UML

3A.3 Specific certification issues about Integrated Modular Architectures

Jean François Sicard - French Ministry of Defense, France
Ghilaine Martinez - French Ministry of Defense, France
Florian Many - DGA Aeronautical techniques, France

3A.4 Reconfigurable IMA platform: from safety assessment to test scenarios on the Scarlett demonstrator

Pierre Bieber - ONERA, France
Julien Brunel - ONERA, France
Kushal Gupta - ONERA, France
Eric Noulard - ONERA, France
Claire Pagetti - ONERA, France
Thierry Planche - Airbus, France
François Vialard - Aeroconseil, France

16:40-18:40 Room Guillaumet

> Session 3B - Timing Analysis

3B.1 The TIMMO-2-USE project: Time modeling and analysis @ use

M-A Peraldi-Frati - Laboratory /Université de Nice – INRIA Sophia Antipolis, France
Daniel Karlsson - Volvo Technology AB, Sweden

3B.2 Tool Support for Continuous AUTOSAR Timing Development

Oliver Scheickl - BMW Car IT, Germany
Christoph Ainhauser - BMW Car IT, Germany
Peter Gliwa - Gliwa GmbH, Germany

3B.3 From Model-Based to Real-Time Execution of Safety-Critical Applications: Coupling Scade with OASIS

Simon Bliudze - CEA LIST, France
Mathieu Jan - CEA LIST, France
Xavier Fornari - Esterel Technologies, France

3B.4 ChronVAL/ChronSIM: A Tool Suite for Timing Analysis of Automotive Applications

Saoussen Anssi - Continental Automotive toulouse, France
Karsten Albers - Inchron GmbH, Germany
Matthias Dörfel - Inchron GmbH, Germany
Sébastien Gérard - CEA LIST Paris, France

16:40-18:40 Room Ariane 1

> Session 3C - Engineering Frameworks I

3C.1 Prototyping an Embedded Automotive System from its UML/SysML Models

Ludovic Apvrille - Telecom ParisTech, France

Alexandre Becoulet - Telecom ParisTech, France

3C.2 Efficient Embedded System Development: A Workbench for an Integrated Methodology

Nicolas Hili - CEA/LETI/DACLE/LIALP, France

Christian Fabre - CEA/LETI/DACLE/LIALP, France

Sophie Dupuy-Chessa - LIG/SIGMA, France

3C.3 TASTE An open-source toolchain for embedded software development

Maxime Perrotin - European Space Agency, Netherlands

Eric Conquet - European Space Agency, France

Julien Delange - European Space Agency, Netherlands

3C.4 A UML Profile for the Development of IEC 61508 Compliant Embedded Software

Dirk Kuschnerus - Ruhr-Universität Bochum, Germany

Felix Bruns - Ruhr-Universität-Bochum, Germany

Attila Bilgic - KROHNE Messtechnik GmbH, Germany

Thomas Musch - Ruhr-Universität Bochum, Germany

18:40-19:40 Room Concorde

> *Welcome Reception*

Thursday 2 February 2012

09:00-10:00 Room Auditorium St Exupery

> *Keynote address*

Alberto SANGIOVANNI-VINCENTELLI – UC Berkeley, USA

10:00-10:30 Room Caravelle

> *Exhibition visit/ Lunch*

10:30-12:30 Room Auditorium St Exupery

> **Session 4A- Engineering Frameworks II**

4A.1 SCADE System, a comprehensive toolset for smooth transition from Model-Based System Engineering to certified embedded control and display software

Thierry Le Sergent - Esterel Technologies, France

Alain Le Guennec - Esterel Technologies, France

François Terrier - CEA, France

Sébastien Gérard - CEA, France

Yann Tanguy - CEA, France

Kara Gremillion - Esterel Technologies, United States

4A.2 TOPCASED Results and Benefits

Pierre Gaufillet - Airbus Operations SAS, France

Patrick Farail - Airbus Operations SAS, France

4A.3 THE ASSERT SET OF TOOLS FOR ENGINEERING (TASTE): DEMONSTRATOR AND FUTURE EVOLUTION

Marc Pollina - M3Systems, France

Yann Leclerc - M3systems, France

Eric Conquet - ESA - ESTEC, France

Maxime Perrotin - ESA - ESTEC, France

Guy Bois - Space Codesign Systems, Canada

Laurent Moss - Space Codesign Systems, Canada

4A.4 The CESAR RTP as Product Line: The Configuration of an Integrated Tool Chain

Peter Graubmann - Siemens AG, Germany

Michael C. Jaeger - Siemens AG, Germany

10:30-12:30 Room Guillaumet

> Session 4B - Hardware/Software Co-Design

4B.1 COMPONENT-BASED TECHNOLOGIES FOR HW/SW CO-DESIGN

Ana Rodriguez - GMV, Spain

Francisco Ferrero - GMV, Spain

4B.2 Improving architecture efficiency of SoftCore processors

Bertrand Le Gal - IMS Laboratory - UMR CNRS 5218, France

Christophe Jego - IMS Laboratory - UMR CNRS 5218, France

4B.3 A Simulator based on QEMU and SystemC for Robustness Testing of a Networked Linux-based Fire Detection and Alarm System

Massimiliano D'Angelo - ALES S.r.l., Italy

Alberto Ferrari - ALES S.r.l, Italy

Ommund Ogaard - Autronica Fire and Security, Norway

Claudio Pinello - United Technologies Research Center, United States

Alessandro Ulisse - ALES S.r.l, Italy

4B.4 SoCKET: A HW/SW Co-Design Flow: Presentation & feedbacks from aeronautic and space application domains

Vincent Lefftz - Astrium SAS, France

Pierre Moreau - Airbus, France

10:30-12:30 Room Ariane 1

> Session 4C- IMA Architecture and partitioning II

4C.1 Building a Generic (cross-domains) Basic Software on top of the XtratuM hypervisor

Jean-Jacques Metge - CNES, France

Julien Galizzi - CNES, France

Paul Arberet - CNES, France

4C.2 LVCUGEN (TSP-based solution) and first porting feedback

Julien Galizzi - CNES, France

4C.3 IO Virtualisation in a Partitioned System

Miguel Masmano - Universidad Politécnica de Valencia, Spain

Salva Peiró - Universidad Politécnica de Valencia, Spain

Jordi Sánchez - Universidad Politécnica de Valencia, Spain

Jose Simó - Universidad Politécnica de Valencia, Spain

Alfons Crespo - Universidad Politécnica de Valencia, Spain

4C.4 An Extensible Partitioning Framework for Safety-Critical Systems

Felix Bruns - Ruhr-Universität-Bochum, Germany
Dirk Kuschnerus - KROHNE Messtechnik GmbH, Germany
Anas Showk - Ruhr-Universität-Bochum, Germany
Attila Bilgic - KROHNE Messtechnik GmbH, Germany

Room Ariane 2

Time: 10:30-12:30

Session 4D- Safety process

4D.1 Safety Standards and WCET Analysis Tools

Daniel Kästner - AbsInt GmbH, Germany
Christian Ferdinand - AbsInt GmbH, Germany

4D.2 Interoperability between Risk Assessment and System Design for Railway Safety Critical Signalling System Development

Marielle Doche-Petit - Systerel, France
Frédéric Thomas - Obeo, France
Fabien Belmonte - Alstom Transport, France

4D.3 Human-robot interactions: model-based risk analysis and safety case

Quynh Anh Do Hoang - LAAS-CNRS, France
Jérémie Guiochet - LAAS-CNRS, France
David Powell - LAAS-CNRS, France
Mohamed Kaaniche - LAAS-CNRS, France

4D.4 Definition of safety margins for safety monitoring of critical autonomous systems

Amina Mekki Mokhtar - LAAS-CNRS, France
Jérémie Guiochet - LAAS-CNRS, France
David Powell - LAAS-CNRS, France
Jean-Paul Blanquart - EADS ASTRIUM, France

12:30-13:30 Room Caravelle

> *Exhibition visit /Lunch*

13:30-15:30 Room Auditorium Saint Exupery

> Session 5A- Open Source Business Models

5A.1 Collaboration in Automotive: The Eclipse Automotive Industry Working Group

Graf Andreas - itemis GmbH, Germany
Ralph Mueller - Eclipse Foundation, Germany

5A.2 OPEES, new generation of Open Source organization, targets long-term availability of engineering tools for Embedded Systems

Gael Blondelle - Obeo, France

Paul Arberet - CNES, France

Alain Rossignol - EADS Astrium, France

Christian Labezin - Xipp, France

Romain Berrendonner - Adacore, France

Pierre Gaufillet - Airbus, France

Raphaël Faudou - Atos Origin, France

Benoît Langlois - Thales, France

Luc Maisonobe - CS, France

Pierre Moro - EADS Space Transportation, France

Jorge Rodriguez - Indra, Spain

José Manuel Puerta - TCP SI, Spain

Björn Lundell - University of Skövde, Sweden

13:30-15:30 Room Guillaumet

> **Session 5B - Case studies in model based engineering**

5B.1 Modeling and Validation of a Data Process Unit Control for Space Applications

Hai Wan - Key Lab of ISS of MOE, TNList, School of Software, Tsinghua University, China

Congdi Huang - Key Lab of ISS of MOE, TNList, School of Software, Tsinghua University, China

Yuhui Wang - Key Lab of ISS of MOE, TNList, School of Software, Tsinghua University, China

Fei He - Key Lab of ISS of MOE, TNList, School of Software, Tsinghua University, China

Ming Gu - Key Lab of ISS of MOE, TNList, School of Software, Tsinghua University, China

Marius Bozga - Verimag/CNRS, France

5B.2 Customization principles of an aeronautics SLM environment and an illustration on an aeronautics use case, the Doors Management System

Philippe Baufreton - SAGEM, France

Gérard Cristau - THALES R&T, France

Odile Laurent - AIRBUS FRANCE, France

Fabien Paganelli - SAGEM, France

Nikolaos Priggouris - HAI, Greece

Ivo Viglietti - ALENIA SIA, Italy

13:30-15:30 Room Ariane 1

> **Session 5C - Reuse and Product Lines**

5C.1 SAVOIR: Reusing specifications to improve the way we deliver avionics

Jean-Loup Terrailon - European Space Agency, Netherlands

Savoir Advisory Group - SAVOIR group represented by the European Space Agency, Netherlands

5C.2 Product-line engineering approach in a model-driven process

Hubert Dubois - CEA-LIST, France

Vincent Ibanez - THALES AVIONICS, France

Joseph Machrouh - THALES R&T, France

Nicolas Meledo - THALES AVIONICS, France

Patricia Mouy - CEA LIST, France

A Silva - Fraunhofer IESE, Germany

13:30-15:30 Room Ariane 2

> Session 5D - Software Qualimetry

5D.1 Software Qualimetry at Schneider Electric: a field background

Hervé Dondéy - Schneider Electric, France

Christophe Peron - Squoring Technologies, France

5D.2 Model Quality Assessment in Practice: How to Measure and Assess the Quality of Software Models During the Embedded Software Development Process

Ingo Stuermer - Model Engineering Solutions GmbH, Germany

Hartmut Pohlheim - Model Engineering Solutions GmbH, Germany

15:30 -16:00 Room Concorde

> Exhibition visit / Refreshment break

16:00 -18:00 Room Auditorium Saint Exupery

> Session 6A - Requirements engineering

6A.1 Improving Requirements Engineering within the European Space Industry

Silvia Mazzini - INTECS, Italy

John Favaro - INTECS, Italy

Rudolf Schreiner - ObjectSecurity Ltd., United Kingdom

Ulrich Lang - ObjectSecurity Ltd., United Kingdom

H-P De Koning - European Space Agency, Netherlands

6A.2 Model-based specification of the flight software of an autonomous satellite

Jérémie Pouly - CNES, France

Sylvain Jouanneau - ALTEN SO, France

6A.3 Integrated tool chain for improving traceability during the development of automotive systems

Eric Armengaud - AVL, Austria

Alfred Wallner - AVL, Austria

Markus Zoier - VIF, Austria

Markus Oertel - OFFIS, Germany

Christian Hein - Fraunhofer Fokus, Germany

6A.4 Efficient Methodology from Requirements to Design Models for an Automotive Application

Adedjouma Morayo - DELPHI, France, Metropolitan

Machnik Wojciech - DELPHI, Poland

Pezet Raphaël - DELPHI, France, Metropolitan

Dubois Hubert - CEA LIST, France, Metropolitan

Maaziz Kamel - DELPHI, France, Metropolitan

Terrier François - CEA LIST, France, Metropolitan

16:00 -18:00 Room Guillaumet

> Session 6B - SysML in Use

6B.1 DesyreML: a SysML profile for heterogeneous embedded systems

Alberto Ferrari - ALES S.r.l., Italy

Leonardo Mangeruca - ALES S.r.l., Italy

Orlando Ferrante - ALES S.r.l. & University of Rome La Sapienza, Italy

Alessandro Mignogna - ALES S.r.l. & Scuola Superiore Sant'Anna, Italy

6B.2 MADES: A SysML/MARTE high level methodology for real-time and embedded systems

Imran Rafiq Quadri - Softeam, France

Andrey Sadovykh - Softeam, France

Leandro Soares Indrusiak - University of York, United Kingdom

6B.3 Combining SysML and AADL for the Design, Validation and Implementation of Critical Systems

Pierre De Saqui-Sannes - LAAS/ISAE, France

Jerome Hugues - ISAE, France

6B.4 SysML for embedded automotive Systems : lessons learned

Jean-Denis Piques - VALEO - Engine and Electrical Systems, France, Metropolitan

Eric Andrianarison - VALEO - Group Electronic Expertise and Development Services, France, Metropolitan

16:00 -18:00 Room Ariane 1

> Session 6C - Formal Code Analysis

6C.1 Transferring Stability Proof Obligations from Model Level to Code Level

Michael Dierkes - Rockwell Collins France, France

Daniel Kästner - AbsInt GmbH, Germany

6C.2 The B method takes up floating-point numbers

Jean-Louis Dufour - Sagem, groupe SAFRAN, France, Metropolitan

Lilian Burdy - Clearsy, France, Metropolitan

Thierry Lecomte - Clearsy, France, Metropolitan

6C.3 Fan-C, a Frama-C plug-in for data flow verification

David Delmas - Airbus Operations SAS, France, Metropolitan

Pascal Cuoq - CEA LIST, France, Metropolitan

Victoria Moya Lamiel - Atos Origin, France, Metropolitan

Stéphane Duprat - Atos Origin, France, Metropolitan

6C.4 Formally verified optimizing compilation in ACG-based flight control software

Ricardo B. França - IRIT, Université de Toulouse, France, Metropolitan

Sandrine Blazy - IRISA, Université de Rennes 1, France, Metropolitan

Denis Favre-Felix - AIRBUS Operations SAS, France, Metropolitan

Xavier Leroy - INRIA Rocquencourt, France, Metropolitan

Marc Pantel - IRIT, Université de Toulouse, France, Metropolitan

Jean Souyris - AIRBUS Operations SAS, France, Metropolitan

18:00-18:45 Room Auditorium St Exupery

> Session Tool A - Model based approach

Tool A.1 Modernizing System Development: Requirements-Based, Model-Driven Design, Implementation, and Test

Michelle Lange - Mentor Graphics, United States

Bill Chown - Mentor Graphics, United States

Tool A.2 MBSE Applied to an Aerospace 'Force Fighting' Application

Sandrine Loembé - Dassault Systèmes, France

Nicolas Croué - Keonys, France

Bruno Vuillemin - ALTRAN, France

Tool A.3 Requirements and Test Case Tracing

Dr. Joachim Wegener - Berner & Mattner Sytemtechnik GmbH, Germany

Ute Herold - Berner & Mattner Sytemtechnik GmbH, Germany

18:00-18:45 Room Guillaumet

> Session Tool B-System & Safety engineering

Tool B.1 An integrated approach to implement system engineering and safety engineering processes with arKItect

Hycham Aboutaleb - Knowledge Inside - ENSTA, France

Mohamed Bouali - Knowledge Inside, France

Tool B.2 Consistent Safety Analyses in Model-Based System Engineering: Concepts and Tools

Valerie Bouquet - ALL4TEC, France

Frederique Vallee - ALL4TEC, France

Franck Sadmi - ALL4TEC, France

Jonathan Dumont - ALL4TEC, France

Tool B.3 Systems Engineering for Cyber-Physical Products

Bernard Clark - Dassault Systemes, United Kingdom

18:00-18:45 Room Ariane 1

> **Session Tool C-Automotive Functionnal Safety ISO26262**

Tool C.1 Automotive Systems Engineering und Functional Safety: The Way Forward

Albert Habermann - Vector Informatik GmbH, Germany

Simon Dr. Burton - Vector Informatik GmbH, Germany

Tool C.2 Hardware-in-the-Loop Testing of Safety-Relevant Functions in the Context of ISO 26262

Andreas Himmler - dSPACE GmbH, Germany

Tool C.3 Reduce Cost of ISO/DIS 26262 Compliance while Driving Productivity Gains

Mark Richardson - LDRA, United Kingdom

Mark James - LDRA, United Kingdom

18:00-18:45 Room Ariane 2

> **Session Tool D-Operating System & implementation**

Tool D.1 RTE4I (Real Time Embedded Linux for Industries)

Pierre Ficheux - Open Wide Ingénierie, France

Tool D.2 Unification of Safety-Critical Java

Kelvin Nilsen - Atego Systems, Inc., United States

Tool D.3 Evaluation of a modeling and automatic C code generation toolset as an open source alternative solution

William Fotso - ESG Automotive France, France

Xavier Querol - ESG Automotive France, France

19:30-23:00 Room Caravelle

> **Conference Dinner**

Friday 3 February 2012

09:00-10:00 Room Auditorium St Exupery

> **Keynote address**

Towards a greener and more eco efficient aerospace industry

Denis CHAPUIS- VP Research and Technology of EADS GROUP, France

10:00-10:30 Room Concorde

> **Exhibition visit/ Refresment break**

10:30-12:30 Room Auditorium St Exupery

> **Session7A- “Open Do”**

7A.1 Integrating Formal Program Verification with Testing

Cyrille Comar - AdaCore, France

Johannes Kanig - AdaCore, France

Yannick Moy - AdaCore, France

7A.2 Compilation of Heterogeneous Models: Motivations and Challenges

Matteo Bordin - AdaCore, France

Tonu Naks - IB Krates, Estonia

Andres Toom - IB Krates, Estonia

Marc Pantel - IRIT-ENSEEIH, Université de Toulouse, France

7A.3 Formalization and Comparison of MCDC and Object Branch Coverage Criteria

Cyrille Comar - Adacore, France

Jérôme Guitton- Adacore, France

Olivier Hainque - Adacore, France

Thomas Quinot - Adacore, France

7A.4 Agility & Lean for Avionic Software

Emmanuel Chenu - Thales Avionics, France

10:30-12:30 Room Guillaumet

> **Session7B - Model Based Process**

7B.1 Increasing intersystem functionalities validations efficiency thanks to Model Based Design

Pedro Moreno-Lahore - RENAULT, France

Yves Touzeau - RENAULT, France

Olivier Guetta - RENAULT, France

7B.2 Model-Based Engineering approach for system architecture exploration

Julien Delange - European Space Agency, Netherlands

Christophe Honvault - European Space Agency, Netherlands

James Windsor - European Space Agency, Netherlands

7B.3 Use of modelling methods and tools in an industrial embedded system project : works and feedback

Anthony Fernandes Pires - Atos Origin, France

Stéphane Duprat - Atos Origin, France

Tristan Faure - Atos Origin, France

Cédrik Besseyre - Airbus, France

Jack Beringuier - Atos Origin, France

Jean-François Rolland - Atos Origin, France

7B.4 Formal Model Driven Engineering for Space Onboard Software

David Lesens - EADS Astrium Space Transportation, France

Eric Conquet - ESA, France

Francois-Xavier Dormoy - Esterel Technologies, France

Iulia Dragomir - IRIT, France

Piotr Nienaltowski - Altran-Praxis, United Kingdom

Iulian Ober - IRIT, France

10:30-12:30 Room Ariane 1

> Session7C- Software Implementation

7C.1 Deterministic Execution Sequence in Component Based Multi-Contributor Powertrain Control Systems

Denis Claraz - Continental Automotive France S.A.S, Toulouse, France

Stefan Kuntz - Continental Automotive GmbH, Regensburg, Germany

Ulrich Margull - 1, Germany

Michael Niemetz - University of Applied Sciences Regensburg, Germany

Gerhard Wirrer - Continental Automotive GmbH, Regensburg, Germany

7C.2 Beyond Mutexes, Semaphores, and Critical Sections

Serge Plagnol - Green Hills Software, France

7C.3 A lightweight, code generated and fast IPC framework for C++ based applications

Martin Kalisch - Continental Villingen, Germany

Peter Reitinger - Continental Villingen, Germany

Stefan Bitzer - Continental Villingen, Germany

Valentin Uritescu - Continental Timisoara, Romania

7C.4 An ASN.1 compiler for embedded/space systems

George Mamais - Semantix, Greece

Thanassis Tsiodras - Semantix, Greece

David Lesens - Astrium Space Transportation, France

Maxime Perrotin - ESTEC, Netherlands

12:30-13:30 Room Caravelle

> *Exhibition visit/ Lunch*

13:30-14:30 Room Auditorium St Exupery

> **Panel**

Multi-core or Energy

14:40-16:10 Room Auditorium St Exupery

> **Session 8A- Safety & Security**

8A.1 Security and Safety Assurance for Aerospace Embedded Systems

Pierre Bieber - Onera, France

Jean-Paul Blanquart - Astrium, France

Gilles Descargues - Thales, France

Michael Dulucq - SERMA Technologies, France

Yannick Fourastier - EADS France, France

Eric Hazane - EADS Cassidian Apsys, France

Mathias Julien - Altran, France

Laurent Léonardon - Rockwell-Collins France, France

Gabrielle Sarouille - Thales, France

8A.2 Similarities and dissimilarities between safety levels and security levels

Jean-Paul Blanquart - Astrium Satellites, France

Pierre Bieber - Onera, France

Gilles Descargues - Thales DAE, France

Eric Hazane - EADS APSYS, France

Mathias Julien - Altran, France

Laurent Leonardon - Rockwell Collins France, France

8A.3 Secure architecture for information systems in avionics

Maxime Lastera - CNRS ; LAAS, France

Eric Alata - CNRS ; LAAS, France

Jean Arlat - CNRS ; LAAS, France

Yves Deswarte - CNRS ; LAAS, France

Bertrand Leconte - AIRBUS Operations SAS, France

David Powell - CNRS ; LAAS, France

14:40-16:10 Room Guillaumet

> Session 8B- Model based Testing

8B.1 ISO 26262 Compliant Automatic Requirements-Based Testing for TargetLink models and generated code

Udo Brockmeyer - BTC Embedded Systems AG, Germany

Adrian Valea - BTC Embedded Systems AG, Germany

Markus Gros - dSPACE SARL, France

8B.2 DIVERSITY–TG: Automatic Test Case Generation from Matlab/Simulink models

Diane Bahrami - CEA, LIST, LISE Laboratory, France

Alain Faivre - CEA, LIST, LISE Laboratory, France

Arnault Lapitre - CEA, LIST, LISE Laboratory, France

8B.3 Application of Model-Based Testing on a Railway Project

Mathieu Steiner - ALL4TEC, France

Anthony Faucogney - ALL4TEC, France

Valerie Bouquet - ALL4TEC, France

14:40-16:10 Room Ariane 1

> Session 8C- Diagnostic & Pronostic

8C.1 Online model adaptation for aircraft operational reliability assessment

Kossi Tiassou - LAAS-CNRS, France

Karama Kanoun - LAAS-CNRS, France

Mohamed Kaaniche - LAAS-CNRS, France

Christel Seguin - ONERA, France

Chris Papadopoulos - AIRBUS Operations Ltd, United Kingdom

8C.2 Pattern recognition diagnosis: a step toward condition based maintenance and prognosis.

Poulard Hervé - Actia Automotive, France

Thomas Jérôme - Actia Automotive, France

8C.3 Hybrid Causal Model Based Diagnosis. Application to Automotive Embedded Functions.

Renaud Pons - LAAS-CNRS, France

Audine Subias - LAAS-CNRS, France

Louise Travé-Massuyès - LAAS-CNRS, France

16:10-16:40 Room Auditorium St Exupery

> Closing session