



Forum on specification & Design Languages

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• Location

The symposium will be located in Cours Masséna, 06600 Antibes, France. Presentations will take place in the Salle Des Associations:



• Welcome Reception

We kindly invite all participants to the Welcome Reception and Poster Presentation on Wednesday, September 8th, at 6:00 pm.

• Social Event

Departure by boat from Port Vauban in Antibes, we'll navigate to the Lerins Islands (off Cannes) to visit the aquatic museum or to navigate around the Saint Honorat Island. All this before a good dinner next to the port.



	08.09.	09.09.	10.09.
	WEDNESDAY	THURSDAY	FRIDAY
8:00	Registration		
8:30	Opening Remarks	Keynote 2 Alexandre Bétis	Keynote 3 Guy De Spiegeleer
9:00	Session 1 (3 x 30 min) System-Level Solutions	Session 4 (3 x 30 min): Languages	Tutorial 2 Programming Deterministic Reactive Systems Using LINGUA FRANCA
10:00			Coffee Break
10:30	Coffee Break		Coffee Break
11:00	Session 2 (3 x 30 min) Functional and Non- Functional Verification	Coffee Break	Session 5 (Special 1, 3x30 min) Languages for Industry 5.0
11:30		Panel Is functionally correct correct enough for IIoT	
12:00	Lunch	Moving to Social Event	Lunch
12:30		Social Event	
13:00			
13:30	Session 3 (3 x 30 min) Design Methodologies and Applications		Session 6 (Special 2, 3x30 min) Design and Engineering of Electronic Systems
14:00			
14:30	Coffee Break		Coffee Break
15:00	Tutorial 1 UML-RT		Closing Remarks & Best Paper Award
15:30	Keynote 1 Yamine Aït Ameur		
16:00			
16:30	Teasers for PhD / Work in Progress Posters		
17:00			
17:30	Welcome Reception / Poster Presentation		
18:00			
18:30		Dinner	
19:00			
19:30			
20:00			
20:30			

September 8-10, 2021
Antibes, France



**Final
Program**





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September 8-10, 2021 Antibes, France

Wednesday 8

- 08:00 AM - 08:30 AM **Registration**
- 08:30 AM - 09:00 AM **Opening remarks**
- 09:00 AM - 10:30 AM **Session 1**
 - *System-Level Solutions*
 - 1.1 VIP-VP: Early Validation of SoCs Information Flow Policies using SystemC-based Virtual Prototypes **
 - **Mehran Goli** and Rolf Drechsler
 - 1.2 Improving Parallelism in System Level Models by Optimizing PDES Performance
 - **Emad Malekzadeh Arasteh** and Rainer Doemer
 - 1.3 RISC-V AMS VP: An Open Source Evaluation Platform for Cyber-Physical Systems
 - **Sallar Ahmadi-Pour**, Vladimir Herdt and Rolf Drechsler
- 10:30 AM - 11:00 AM **Coffee break**
- 11:00 AM - 12:30 PM **Session 2**
 - *Functional and Non-Functional Verification*
 - 2.1 In-Vivo Stack Overflow Detection and Stack Size Estimation for Low-End Multithreaded Operating Systems using Virtual Prototypes
 - **Sören Tempel**, Vladimir Herdt and Rolf Drechsler
 - 2.2 Clock-Synchronised Shared Memory and Model Checking: A proof of Concept
 - **Joaquin Aguado** and Alejandra Duenas
 - 2.3 Introducing CPU load Analysis from AADL Models for ROS applications: a use case
 - **Senn Eric**
- 12:30 PM - 13:30 PM **Lunch**
- 13:30 PM - 15:00 PM **Session 3**
 - *Design Methodologies and Applications*
 - 3.1 A Container-based Design Methodology for Robotic Applications on Kubernetes Edge-Cloud architectures **
 - **Francesco Lumpupp**, Marco Panato, Franco Fummi and Nicola Bombieri
 - 3.2 A component-based approach for simulation of autonomous underwater vehicle navigation function handling variability of parameters
 - Loïc Salmon, Pierre-Yves Pillain, Goulven Guillou and **Jean-Philippe Babau**
 - 3.3 DOHMO: Embedded Computer Vision in Co-Housing Scenarios
 - **Geri Skenderi**, Alessia Bozzini, Luigi Capogrosso, Enrico Carlo Agrillo, Giovanni Perbellini, Franco Fummi and Marco Cristani

- 14:30 PM - 15:00 PM **Coffee break**
- 15:00 PM - 16:00 PM **Tutorial 1**
 - *UML-RT (Speaker: Juergen Dingel, Queen's University, Ontario, Canada)*
- 16:00 PM - 17:00 PM **Keynote 1**
 - Refinement and proof based formal modelling of Hybrid systems with Event-B (**Speaker: Yamine Ait Ameur**, IRIT/INPT-ENSEEIH, University of Toulouse, France)
- 17:00 PM - 17:30 PM **Teasers for PhD / Work in Progress Posters**
- 17:30 PM - 19:00 PM **Poster Presentation / Welcome Reception**

Thursday 9

- 08:30 AM-09:30 AM **Keynote 2**
 - *Getting the system on the tracks (Speaker: Alexandre Betis, The Signalling Company, Belgium)*
- 09:30 AM-11:00 AM **Session 4**
 - *Languages*
 - 4.1 Debugging and Verification Tools for Lingua Franca in Gemoc Studio **
 - **Julien Deantoni**, João Cambeiro, Soroush Bateni, Shaokai Lin and Marten Lohstroh
 - 4.2 Extracting Mode Diagrams from Blech Code
 - Daniel Lucas, Alexander Schulz-Rosengarten, **Reinhard von Hanxleden**, Friedrich Gretz and Franz-Josef Grosch
 - 4.3 A Common Manipulation Framework for Transistor-Level Languages
 - **Nicola Dall'Ora**, Sadia Azam, Enrico Fraccaroli, André Alberts and Franco Fummi
- 11:00 AM - 11:30 AM **Coffee break**
- 11:30 PM - 12:30 PM **Panel**
 - Is functionally correct correct enough for IIoT - or, is it the Right Time for Real-time? (**Moderator: Frank Oppenheimer**, OFFIS e.V., Germany)
- 12:30 PM - 13:00 PM **Moving to Social Event**
- 13:00 PM - 18:30 PM **Social Event**
- 18:30 PM - 20:30 PM **Dinner**

Friday 10

- 08:30 AM - 09:30 AM **Keynote 3**
 - *Complex system design and digital twin: feedback, thoughts and perspectives (Speaker: Guy De Spiegeleer, Safran S.A., France)*
- 09:30 AM - 10:30 AM **Tutorial 2**
 - Programming Deterministic Reactive Systems Using Lingua Franca (**Speaker: Marten Lohstroh**, University of California, Berkeley, USA)
- 10:30 AM - 11:00 AM **Coffee break**
- 11:00 AM - 12:30 AM **Session 5**
 - *Languages for Industry 5.0*
 - 5.1 Modeling in Industry 5.0: What Is There and What Is Missing
 - Sebastiano Gaiardelli, Stefano Spellini, Michele Lora and **Franco Fummi**
 - 5.2 On the Role of Model Driven Engineering for Digital Twins
 - **Romina Eramo**, Francis Bordeleau, Benoit Combemale, Mark van den Brand, Manuel Wimmer and Andreas Wortmann
 - 5.3 Cognification of MBSE for an Augmented Collaborative Digital Engineering
 - **Sébastien Gérard**
- 12:30 PM - 13:30 PM **Lunch**
- 13:30 PM - 15:00 PM **Session 6**
 - *Design and Engineering of Electronic Systems*
 - 6.1 DSLs for Model Driven Development of Secure Interoperable Automation Systems
 - Jobish John, Amrita Ghosal, **Tiziana Margaria** and Dirk Pesch
 - 6.2 Modeling and Performance Estimation of Robotic Systems using ROS: Application to drone-based Services
 - **Eugenio Villar**, Hector Posadas, Javier Merino and Raul Gomez
 - 6.3 The Challenge of Agriculture: Increase the Productivity in a Sustainable Way
 - **Victor Grimblatt**
- 15:00 PM - 15:30 PM **Coffee break**
- 15:30 PM - 16:00 PM **Closing Remarks & Best Paper Award**

** Best paper award nomination