

# MODELS 2014

## VALENCIA, SPAIN

September 28, 2014 to October 3, 2014

ACM/IEEE 17th International Conference on  
Model Driven Engineering Languages and Systems



# CONFERENCE PROGRAM

[www.modelsconference.org](http://www.modelsconference.org)



## Welcome

On behalf of the organizing team, we cordially welcome you to MODELS 2014, the ACM/IEEE 17th International Conference on Model Driven Engineering. This year the conference takes place in Valencia, Spain at the Universitat Politècnica de València from September 28 through October 3, 2014.

The conference continues the MODELS tradition by providing researchers and practitioners a premier venue for the exchange of innovative ideas and experiences in software and systems modeling. This year the modeling community is challenged to promote the *magic of modeling* by solidifying and extending the foundations and successful applications of modeling in areas such as business information and embedded systems, but also by exploring the use of modeling for new and emerging systems, paradigms, and challenges including cyber-physical systems, cloud computing, services, social media, security, and open source. The conference offers a strong technical program with broad appeal to researchers, industrial practitioners, students, and educators in the field of model driven engineering.

The Satellite Events program is featured with seventeen workshops on different scientific and practical topics, eight exciting tutorials to develop skills in and advance awareness of model-driven engineering practices, Doctoral Symposium and Educators Symposium.

The MODELS 2014 main conference consists of three keynotes (Nuria Oliver, Telefonica Research, Spain; Francis Bordeleau, Ericsson, Canada; and José Meseguer, University of Illinois at Urbana-Champaign, USA), two panels (*Modeling Outside the Box* and *What Practitioners and Industry Really Want*), paper presentations on the Foundations and Model Driven Engineering In Practice tracks, demonstrations, poster sessions and the second edition of the ACM Student Research Competition sponsored by Microsoft Research.

In addition to the scientific opportunities available this week at MODELS, we also invite you to take advantage of the Social Events that we have prepared for you and many cultural activities that surround the venue. We are in “Valentia” the term used by the Roman Empire to name a fortified position to fight against Cartago (2nd century BC). After being ruled several centuries by the Muslims, King James I gained Valencia for the Christianity in 1238, and in the 15th century Valencia was the main city of the Kingdom of Aragon controlling the main cities of the Mediterranean Sea. We invite you to discover this historical city in a Tour specially designed to MODELS attendees. You are going to see splendid gothic civil buildings (Lonja, Generalitat, etc.), Renaissance courts (El Patriarca, the 15th century University site), Modernist 19th century buildings (the Mercat Central), etc. The small squares, old styled palaces, narrow streets (Carrer Cavallers) and plenty of good restaurants, bars, craft stores, and art galleries as well as the sunny gold beaches are waiting for you after the intensive scientific sessions at MODELS 2014.

Finally, we would like to express our gratitude to all the institutions and sponsors that supported MODELS 2014, and to our outstanding keynote speakers. We also are greatly indebted to all members of the organization committee for their dedication and effort. Thanks also to the members of the program committee, selection committee, steering committee, and last but not least to the twenty-two local and foreign student volunteers. All of them helped us to make MODELS 2014 a success.

We hope you find the conference program enriching and stimulating. Enjoy the conference, the social activities, the food, and the beautiful city of Valencia!



**Isidro Ramos**  
General Chair



**Silvia Abrahão**  
General Chair



**Emilio Insfran**  
Local Chair



**Juergen Dingel**  
Foundations Track Chair



**Wolfram Schulte**  
MDE In Practice  
Track Chair



## Organizing Committee

### General Chairs:

Isidro Ramos, U Politècnica de València, Spain  
Silvia Abrahão, U. Politècnica de València, Spain

### Local Chair:

Emilio Insfran, U. Politècnica de València, Spain

### Foundation Track Chair:

Juergen Dingel, Queen's University, Canada

### MDE In Practice Track Chair:

Wolfram Schulte, Microsoft Research, USA

### Workshop Chairs:

Alfonso Pierantonio, University of L'Aquila, Italy  
Gabriele Taenzer, Philipps- Universität  
Marburg, Germany

### Tutorial Chairs:

Juan de Lara, U. Autónoma de Madrid, Spain  
Michel Chaudron, Chalmers University of  
Technology, Sweden

### Panel Chair:

Timothy C. Lethbridge, U. of Ottawa, Canada

### Demonstration Chairs:

Tao Yue, Simula Research Lab, Norway  
Benoit Combemale, U. Rennes 1/INRIA, France

### Poster Chairs:

Manuel Wimmer, Vienna University of  
Technology, Austria  
Stefan Sauer, University of Paderborn,  
Germany

### Social Media Chairs:

Jordi Cabot, École des Mines de Nantes/INRIA,  
France  
Dimitris Kolovos, University of York, UK

### Doctoral Symposium Chair:

Benoit Baudry, INRIA, France

### Educators Symposium Chairs:

Birgit Demuth, TU Dresden, Germany  
Dave Stikkorum, Leiden University, Netherlands

### ACM Student Research Competition Chair:

Marcela Genero, U. of Castilla-la-Mancha, Spain  
Shaz Qadeer, Microsoft Research, USA

### Publicity Chairs:

Alessandro Garcia, PUC-Rio, Brazil  
Nelly Bencomo, Aston University, UK

### Student Volunteers:

M. Carmen Penadés, U. Politècnica de València,  
Spain

### Financial Chairs:

José Ángel Carsí, U. Politècnica de València, Spain  
Patricio Letelier, U. Politècnica de València, Spain

### Local Facilities Chair:

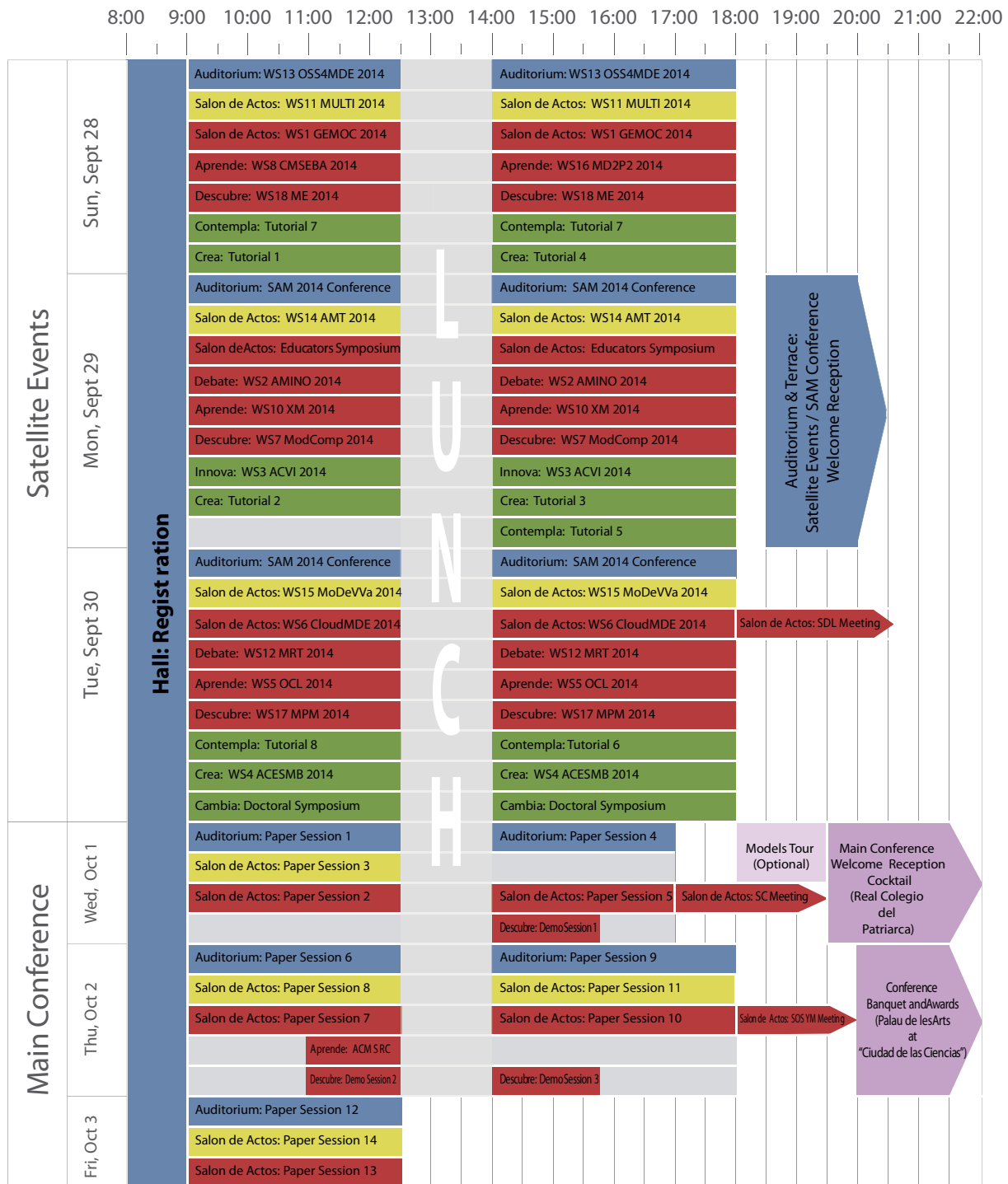
Javier Gonzalez, U. Politècnica de València, Spain

### Web Chair:

Priscila Cedillo, U. Politècnica de València, Spain



# Program at-a-Glance



Locations: Blue Cube Yellow Cube Red Cube Green Cube





# Satellite Events at-a-Glance

Sunday, September 28

8:00-9:00	Registration Auditorium Hall				
9:00-10:30	WS1 GEMOC 2014 (Salón de Actos)	WS8 CMSEBA 2014 (Aprende)	WS11 MULTI 2014 (Salón de Actos)	WS13 OSS4MDE 2014 (Auditorium)	WS18 ME 2014 (Descubre)
	T1 - AADLv2, a Domain Specific Language for the Modeling, the Analysis and the Generation of Real-Time Embedded Systems (Crea)			T7 - How to Run a Multi-Customer Software Engineering Capstone Course (Contempla)	
10:30-11:00	Coffee Break (Auditorium Hall)				
11:00-12:30	WS1 GEMOC 2014 (Salón de Actos)	WS8 CMSEBA 2014 (Aprende)	WS11 MULTI 2014 (Salón de Actos)	WS13 OSS4MDE 2014 (Auditorium)	WS18 ME 2014 (Descubre)
	T1 - AADLv2, a Domain Specific Language for the Modeling, the Analysis and the Generation of Real-Time Embedded Systems (Crea)			T7 - How to Run a Multi-Customer Software Engineering Capstone Course (Contempla)	
12:30-14:00	Lunch at Kube Restaurant (Grey Cube)				
14:00-15:30	WS1 GEMOC 2014 (Salón de Actos)	WS16 MD2P2 2014 (Aprende)	WS11 MULTI 2014 (Salón de Actos)	WS13 OSS4MDE 2014 (Auditorium)	WS18 ME 2014 (Descubre)
	T4 - Metamodeling, Model Processing and Simulation – Putting the Puzzle Pieces Together Based on Industrial Experiences (Crea)			T7 - How to run a Multi-Customer Software Engineering Capstone Course (Contempla)	
15:30-16:00	Coffee Break (Auditorium Hall)				
16:00-18:00	WS1 GEMOC 2014 (Salón de Actos)	WS16 MD2P2 2014 (Aprende)	WS11 MULTI 2014 (Salón de Actos)	WS13 OSS4MDE 2014 (Auditorium)	WS18 ME 2014 (Descubre)
	T4 - Metamodeling, Model Processing and Simulation – Putting the Puzzle Pieces Together Based on Industrial Experiences (Crea)			T7 - How to Run a Multi-Customer Software Engineering Capstone Course (Contempla)	

Locations: Blue Cube Yellow Cube Red Cube Green Cube





## Monday, September 29

8:00-9:00	Registration (Auditorium Hall)				
9:00-10:30	WS3 ACVI 2014 (Innova)	WS2 AMINO 2014 (Debate)	WS7 ModComp 2014 (Descubre)	WS10 XM 2014 (Aprende)	WS14 AMT 2014 (Salón de Actos)
	T2 - Language Modeling Principles (Crea)			Educators Symposium (Salón de Actos)	
10:30-11:00	Coffee Break (Auditorium Hall)				
11:00-12:30	WS3 ACVI 2014 (Innova)	WS2 AMINO 2014 (Debate)	WS7 ModComp 2014 (Descubre)	WS10 XM 2014 (Aprende)	WS14 AMT 2014 (Salón de Actos)
	T2 - Language Modeling Principles (Crea)			Educators Symposium (Salón de Actos)	
12:30-14:00	Lunch at Kube Restaurant (Grey Cube)				
14:00-15:30	WS3 ACVI 2014 (Innova)	WS2 AMINO 2014 (Debate)	WS7 ModComp 2014 (Descubre)	WS10 XM 2014 (Aprende)	WS14 AMT 2014 (Salón de Actos)
	T3 - Applying Model Driven Engineering Technologies in the Creation of Domain Specific Modeling Languages (Crea)		T5 - How to Megamodel Diagrammatically: Theory and Practices (Contempla)		Educators Symposium (Salón de Actos)
15:30-16:00	Coffee Break (Auditorium Hall)				
16:00-18:00	WS3 ACVI 2014 (Innova)	WS2 AMINO 2014 (Debate)	WS7 ModComp 2014 (Descubre)	WS10 XM 2014 (Aprende)	WS14 AMT 2014 (Salón de Actos)
	T3 - Applying Model Driven Engineering Technologies in the Creation of Domain Specific Modeling Languages (Crea)		T5 - How to Megamodel Diagrammatically: Theory and Practices (Contempla)		Educators Symposium (Salón de Actos)
18:30	Satellite Events / SAM Conference Welcome Reception (Auditorium / Terrace)				

Locations: Blue Cube Yellow Cube Red Cube Green Cube





**Tuesday, September 30**

8:00-9:00	Registration (Auditorium Hall)					
9:00-10:30	WS4 ACESMB 2014 (Crea)	WS5 OCL 2014 (Aprende)	WS6 Cloud MDE 2014 (Salón de Actos)	WS12 MRT 2014 (Debate)	WS15 MoDeVVa 2014 (Salón de Actos)	WS17 MPM 2014 (Descubre)
	T8 - Open Modelica (Contempla)			Doctoral Symposium (Cambia)		
10:30-11:00	Coffee Break (Auditorium Hall)					
11:00-12:30	WS4 ACESMB 2014 (Crea)	WS5 OCL 2014 (Aprende)	WS6 Cloud MDE 2014 (Salón de Actos)	WS12 MRT 2014 (Debate)	WS15 MoDeVVa 2014 (Salón de Actos)	WS17 MPM 2014 (Descubre)
	T8 - Open Modelica (Contempla)			Doctoral Symposium (Cambia)		
12:30-14:00	Lunch at Kube Restaurant (Grey Cube)					
14:00-15:30	WS4 ACESMB 2014 (Crea)	WS5 OCL 2014 (Aprende)	WS6 Cloud MDE 2014 (Salón de Actos)	WS12 MRT 2014 (Debate)	WS15 MoDeVVa 2014 (Salón de Actos)	WS17 MPM 2014 (Descubre)
	T6 - Model Driven Requirements Engineering (Contempla)			Doctoral Symposium (Cambia)		
15:30-16:00	Coffee Break (Auditorium Hall)					
16:00-18:00	WS4 ACESMB 2014 (Crea)	WS5 OCL 2014 (Aprende)	WS6 Cloud MDE 2014 (Salón de Actos)	WS12 MRT 2014 (Debate)	WS15 MoDeVVa 2014 (Salón de Actos)	WS17 MPM 2014 (Descubre)
	T6 - Model Driven Requirements Engineering (Contempla)			Doctoral Symposium (Cambia)		

Locations: Blue Cube Yellow Cube Red Cube Green Cube





# Main Conference at-a-Glance

## Wednesday, October 1

8:00-9:00	Registration (Auditorium Hall)		
9:00-10:20	Welcome + Opening <b>Keynote:</b> Nuria Oliver, "Towards Data-driven Models of Human Behavior" (Auditorium)		
10:20-10:30	Demo Madness 1 (Auditorium)		
10:30-11:00	Coffee Break, Poster Session and ACM SRC First Round (Auditorium Hall)		
11:00-12:30	Session 1: Cloud, Mobile and Web (Auditorium)	Session 2: Model Transformation 1 (Salón de Actos)	Session 3: Behavioral Modeling (Salón de Actos)
12:30-14:00	Lunch at Kube Restaurant (Grey Cube)		
14:00-15:30	Session 4: MDE: Past, Present and Future (Auditorium)	Session 5: Formal Semantics (Salón de Actos)	Demo Session 1 (Descubre)
15:30-16:00	Coffee Break, Poster Session and ACM SRC First Round (Auditorium Hall)		
16:00-17:00	<b>Panel 1:</b> Modeling Outside the Box (Auditorium)		
17:00-18:00	SC Meeting (Salón de Actos)		
18:00-19:30		MODELS 2014 tour <i>Optional</i>	
19:40-21:40	<b>Main Conference Welcome Reception Cocktail</b> (Real Colegio del Patriarca)		

Locations: Blue Cube    Yellow Cube    Red Cube





## Thursday, October 2

8:00-9:00	Registration (Auditorium Hall)			
9:00-10:20	Introductory Remarks <b>Keynote:</b> TBD (Auditorium)			
10:20-10:30	Demo Madness 2 (Auditorium)			
10:30-11:00	Coffee Break & Poster Session (Auditorium Hall)			
11:00-12:30	Session 6: Models at Runtime (Auditorium)	Session 7: Variability Modeling (Salón de Actos)	Session 8: Composition and Adaptation (Salón de Actos)	
	ACM SRC Second Round Oral Presentation (Aprende)			Demo Session 2 (Descubre)
12:30-14:00	Lunch at Kube Restaurant (Grey Cube)			
14:00-15:30	Session 9: Practices and Experience (Auditorium)	Session 10: Modeling for Analysis (Salón de Actos)	Session 11: Pragmatics (Salón de Actos)	Demo Session 3 (Descubre)
15:30-16:00	Coffee Break & Poster Session (Auditorium Hall)			
16:00-17:00	<b>Panel 2:</b> What Practitioners and Industry Really Want (Auditorium Hall)			
17:00-18:00	Most Influential Paper Session (Auditorium)			
18:00-19:30	SOSYM Editorial Board Meeting (Salón de Actos)			
20:00	<b>Conference Banquet and Awards</b> (Best Papers, Best Poster, ACM SRC, and Most Influential Paper) (Palau de Les Arts at "Ciudad de las Ciencias")			

Locations: Blue Cube    Yellow Cube    Red Cube





## Friday, October 3

8:00-9:00	Registration (Auditorium Hall)		
9:00-10:30	Closing + Invitation to MODELS 2015 <b>Keynote:</b> José Meseguer, "Why Formal Modeling Language Semantics Matters" (Auditorium)		
10:30-11:00	Coffee Break (Auditorium Hall)		
11:00-12:30	Session 12: Model Extraction, Manipulation and Persistence (Auditorium)	Session 13: Model Transformation 2 (Salón de Actos)	Session 14: Querying (Salón de Actos)

Locations: Blue Cube Yellow Cube Red Cube





## General Information

### Conference Venue

MODELS 2014 Satellite Events and MODELS 2014 will take place at the **third floor** of the **Ciudad Politécnica de la Innovación** (CPI) at the Universitat Politècnica de València campus.

The CPI is located at:

Ciudad Politécnica de la Innovación  
Universitat Politècnica de València  
Ingeniero Fausto Elio street (with Camino de Vera street)  
46022 Valencia, Spain  
GPS Coordinates: 39°28'37,21", -0°20'1,41"



### Registration Opening Hours

Sunday	Sept 28	08:00-18:00
Monday	Sept 29	08:00-18:00
Tuesday	Sept 30	08:00-20:00
Wednesday	Oct 01	08:00-18:00
Thursday	Oct 02	08:00-18:00
Friday	Oct 03	08:00-14:00

The MODELS 2014 Secretariat is located at the Hall of Blue Cube.

### Internet Access

Free wireless connection is available for the MODELS Satellite Events and Main Conference attendees. Guest login information is in your delegate package.



*eduroam* is a project created to facilitate the mobility of users Researchers in most European research centers as well as in some other countries (e.g., Australia, USA). If you are a member of an affiliated institution visiting the Universitat Politècnica de València (UPV), you can connect to *eduroam* using your organization credentials:

Parameter	Values
Network Authentication	<b>WPA2-Enterprise</b>
Data Encryption	<b>AES</b>
Kind of EAP	which you use in your original side
Authentication Mode	which you use in your original side
Issuer of the certificate server's RADIUS	which you use in your original side
Username	username@ <b>domain</b>
Password	which you use to all services
Roaming Identity (this field exists in some wifi servers)	like field: 'Username'

## Access to Proceedings

The delegates registered to the MODELS conference will receive a USB stick with the MODELS 2014 proceedings (LNCS 8767) in the delegate package. There is also a *free online access* during the conference but restricted to the conference venue. The online access will be activated one week before the conference and will end two weeks after the conference. You will find the URL for downloading the electronic MODELS 2014 proceedings in your delegate package. For information about the proceedings of all MODELS 2014 Satellite Events, please visit the website of the event.

## Main Conference Schedule

Wednesday, October 1                    09:00-12:30 and 14:00-17:00  
 Thursday, October 2                    09:00-12:30 and 14:00-18:00  
 Friday, October 3                        09:00-12:30 and 14:00-12:30

## General Schedule for all Satellite Events

09:00-10:30    Session 1\*  
 10:30-11:00    Coffee Break  
 11:00-12:30    Session 2  
 12:30-14:00    Lunch  
 14:00-15:30    Session 3  
 15:30-16:00    Coffee Break  
 16:00-17:30    Session 4\*

\* Note that the starting and ending time for some satellite event may be different. Please visit the website of specific events for updated information.

## Conference Website

Updated and extended information is available on the conference website <http://modelsconference.org>

## Co-located with SAM 2014

<http://sdl-forum.org/Events/SAM2014>

September 29-30, 2014



## Plenary Sessions

### Keynotes

#### Keynote 1

*Wednesday, October 1 (9:00 – 10:20), Auditorium – Blue Cube*

**“Towards Data-Driven Models of Human Behavior”**

**Chair:** Silvia Abrahão

#### Abstract

We live in a world of data, of big data, a big part of which has been generated by humans through their interactions with both the physical and digital world. A key element in the exponential growth of human behavioral data is the mobile phone. There are almost as many mobile phones in the world as humans. The mobile phone is the piece of technology with the highest levels of adoption in human history. We carry them with us all through the day (and night, in many cases), leaving digital traces of our physical interactions. Mobile phones have become sensors of human activity in the large scale and also the most personal devices.

In my talk, I will present some of the work that we are doing at Telefonica Research in the area of modeling humans from large-scale human behavioral data, such as inferring personality, socioeconomic status, attentiveness to messages or taste. I will highlight opportunities and challenges associated with building data-driven models of human behavior.



**Nuria Oliver**

Telefonica Research,  
Spain

#### Keynote 2

*Thursday, October 2 (9:00 – 10:15), Auditorium – Blue Cube*



**Francis Bordeleau**

Ericsson,  
Canada



## Keynote 3

*Friday, October 3 (9:00 – 10:30), Auditorium – Blue Cube*

**“Why Formal Modeling Language Semantics Matters”**

**Chair:** Isidro Ramos

### Abstract

The point of modeling languages is not just modeling, but modeling as a powerful means of making software development much more reliable, reusable, automated, and cost effective. For all these purposes, model transformations, as a disciplined technique to systematically relate models within a modeling language and across languages, play a crucial role. In particular, automatic code generation from models is one of its great advantages. As in the case of programming languages and compilers for such languages —which can be seen as a specific, special case of modeling languages and model transformations — there are two ways of going about all this: (i) the usual, engineering way of building and using practical tools, like parsers, compilers, and debuggers and, likewise, modeling tools and model transformations, where the semantics is implicit in the tools themselves and informal; and (ii) a formal semantics based approach, where the different languages involved are given a formal semantics and correctness issues, such as the correctness of programs and models, and of compilers and model transformers, can be addressed head-on with powerful methods. It seems fair to say that, both for programming and for modeling languages, the usual engineering approach is at present the prevailing one. But this should not blind us to the existence of intrinsically superior technological possibilities for the future.

Furthermore, the reasons for taking formal semantics seriously are even more compelling for modeling languages than for programming languages. Specifically, the following crucial advantages can be gained: 1) Formal Analysis of Model-Based Designs, to uncover costly design errors much earlier in the development cycle; 2) Correct-by-Construction Model Transformations based on formal patterns, that can be amortized across many instances; 3) Modeling-Language-Generic formal analysis tools that are semantics-based and can likewise be amortized across many languages; 4) Correct-by-Construction Code Generators, a burning issue for cyber-physical systems, and a must for high-quality, highly reliable implementations.

Although the full potential for enjoying all these advantages has yet to be exploited and much work remains ahead, none of this is some pie-in-the-sky day dreaming. There is already a substantial body of research, tools, and case studies demonstrating that a formal semantics based approach to modeling languages is a real possibility. For example, formal approaches to modeling language semantics based on: (i) type theory, (ii) graph transformations, and (iii) rewriting logic, all converge in giving strong evidence about the many practical advantages that can be gained. Besides discussing in more detail the issues involved, the talk will give a report from the trenches based on my own personal involvement in advancing semantics-based approaches to modeling and programming languages. In particular, I will discuss relevant advances within the rewriting logic semantics project, which explicitly aims at basing both programming and modeling languages on a formal executable semantics; and at developing language-generic, semantics-based formal analysis tool and methods.



**Jose Meseguer**

University of Illinois at  
Urbana-Champaign,  
USA



## Most Influential Paper Presentation (2004)

The Most Influential Paper Award is given to the authors of the paper that was determined by the Steering Committee to have the most impact 10 years after publication (at UML 2004). A plenary session will be held to honor the work of Dániel Varró (presenter) and András Pataricza for the following paper:

*Thursday, October 2 (17:00 – 18:00), Auditorium – Blue Cube*

**“Generic and Meta-transformations for Model Transformation Engineering”**

**Chair:** Juergen Dingel

### Abstract

Although many model transformation approaches exist, their focus is almost exclusively put on functional correctness and intuitive description language while the importance of engineering issues such as reusability, maintainability, performance or compactness are neglected. To tackle these problems following the MDA philosophy, we argue in the paper that model transformations should also be regarded as models (i.e., as data).

We demonstrate (i) how generic transformations can provide a very compact description of certain transformation problems and (ii) how meta-transformations can be designed that yield efficient transformations as their output model. This is an extract from the abstract of our UML 2004 paper.

In the current talk, I provide (1) a brief summary of the paper itself, and (2) an overview of research results on higher-order transformations in the past 10 years. This paper was also the first to present the VIATRA2 model transformation framework based on Eclipse, so a brief history of the tool itself will conclude the talk.



**Dániel Varró**

Budapest University  
of Technology and  
Economics, Hungary



## Panels

### Panel 1: Modeling Outside the Box

*Wednesday, October 1 (16:00 – 17:00), Auditorium – Blue Cube*

The panelists and audience will think about MDE from a different perspective, i.e. “outside the box”. The aim is to inspire everyone to look beyond their own research agenda, which typically focuses on the next 2-5 years, and to think about new radical scenarios for MDE that perhaps address the grand challenges for society in the near future. There will be no slides or introductory statements, to maximize time for discussion and audience participation. Everybody is encouraged to come prepared with your own radical ideas.

**Panelists:**

- Francis Bordeleau, Ericsson, Canada
- Siobhan Clarke, Trinity College Dublin, Ireland
- Nuria Oliver, Telefonica Research, Spain
- Friedrich Steimann, Fernuniversität Hagen, Germany

**Moderator:** Jon Whittle, Lancaster University, UK

**Organizers:** Joerg Kienzle and Gunter Mussbacher, McGill University, Canada

### Panel 2: What Practitioners and Industry Really Want

*Thursday, October 2 (16:00 – 17:00), Auditorium – Blue Cube*

The goal for this panel is to work towards a greater consensus about what working practitioners really need from modeling techniques, tools and research. Panelists and audience members will be asked to consider questions such as what it might take to get the broad development community to adopt modeling more fully (i.e. beyond the safety-critical, automotive/aerospace and related sectors); what modeling tools and techniques do developers wish for that are not yet available, usable, reliable, or economical; what elements of current research are likely to have real industrial benefit; what are the obstacles to adoption of these, and how can the obstacles be overcome. The panelists are from industry or else have studied industrial practice. They will present only one slide with their main points at the start of the panel; the remainder of the session will be driven by audience participation, with the moderator injecting provocative questions as needed. Come prepared with your experiences and wisdom.

**Panelists:**

- Ronan Barrett, Ericsson, Sweden
- Christian Berger, University of Gothenberg, Sweden
- Peter Feiler, SEI – Carnegie Mellon University, USA
- Bran Selic, Malina Corporation, Canada
- Gaël Blondelle, Eclipse Foundation, France

**Moderator and Organizer:** Timothy C. Lethbridge, University of Ottawa, Canada



## Satellite Events

### Workshop Keynotes & Invited Talks

Several workshops will have keynote talks. Please find below a summary of the workshop keynotes for MODELS 2014.

#### Sunday – September 28, 2014

- **GEMOC 2014:** (Salón de Actos – Red Cube) 9:15 – 10:30  
*Unification or integration: The Challenge of Semantics in Heterogeneous Modeling Languages*, Gabor Karsai, Vanderbilt University, USA
- **CMSEBA 2014:** (Aprende – Red Cube) 9:05 – 10:05  
*Searching models for proactive software diversification*  
Benoit Baudry, University of Rennes/INRIA, France
- **MULTI 2014:** (Salón de Actos – Yellow Cube) 9:15 – 9:45  
*What is Multi-Level Modeling?*  
César González Pérez, CSIC, Spain
- **OSS4MDE 2014:** (Auditorium – Blue Cube) 9:05 – 9:30  
*Model-Based Engineering: A New Era Based on Papyrus and Open Source Tooling (Invited talk)*  
Francis Bordeleau, Ericsson, Canada
- **OSS4MDE 2014:** (Auditorium – Blue Cube) 9:30 – 10:30  
*Open Source — Innovation platforms for MBSE?*  
Bernhard Schätz, Fortiss, Germany
- **OSS4MDE 2014:** (Auditorium – Blue Cube) 11:00 - 11:30  
*MDE 2020: The PolarSys opportunity (Invited Talk)*  
Gaël Blondelle, Eclipse Foundation, France
- **OSS4MDE 2014:** (Auditorium – Blue Cube) 11:30 - 12:00  
*The Papyrus Open Source Modeling Environment (Invited Talk)*  
Sebastian Gerard, CEA-List, France
- **MD2P2 2014:** (Aprende – Red Cube) 14:00 - 14:45  
*Approaches to Automation and Interoperability in Systems Engineering*  
Tom Ritter, Fraunhofer FOKUS, Germany
- **ME 2014:** (Descubre – Red Cube) 9:05 - 10:30  
*From Model Evolution to Evolution Models*  
Gerti Kappel, Vienna University of Technology, Austria



## Monday – September 29, 2014

- **ACVI 2014:** (Innova – Green Cube) 8:15 – 9:00  
*The Story of AADL*  
Peter Feiler, SEI – Carnegie Mellon University, USA
- **ModComp 2014:** (Descubre – Red Cube) 9:15 – 10:30  
*Component-Based and Model-Driven Engineering: The possible synergies of the approaches in meeting new challenges*  
Ivica Crnkovic, Mälardalen University, Sweden
- **XM 2014:** (Aprende – Red Cube) 9:10 – 10:10  
*Putting Engineering into MDE: Components and contracts for models and transformations*  
Steffen Zschaler, King's College London, UK
- **AMT 2014:** (Salón de Actos – Yellow Cube) 9:05 – 10:00  
*Exploring the non-functional properties of model transformation techniques used in industry*  
Ronan Barrett, Ericsson, Sweden

## Tuesday – September 30, 2014

- **ACESMB 2014:** (Crea – Green Cube) 9:15 - 10:15  
*Towards Formal Model Driven Engineering*  
Julien DeAntoni, INRIA, France
- **CloudMDE 2014:** (Salón de Actos – Red Cube) 9:15 - 10:30  
*Distributed Incremental Model Queries over the Cloud: Engineering and Deployment Challenges*  
Dániel Varró, Budapest University of Technology and Economics, Hungary
- **MoDeVVa 2014:** (Salón de Actos – Yellow Cube) 9:15 - 10:30  
*Language Workbenches: Opportunities and Challenges for V&V*  
Markus Völter, Independent/Itemis, Germany
- **MPM 2014:** (Descubre – Red Cube) 9:15 - 10:30  
*WebGME*  
Akos Ledeczi, Vanderbilt University, USA



## Workshops

### Sunday – September 28, 2014

- WS1 (Salón de Actos – Red Cube) 9:00 – 17:00  
**GEMOC: 2nd Internantional Workshop On the Globalization of Modeling Languages**  
*Benoit Combemale, Julien DeAntoni, Robert France*
- WS8 (Aprende – Red Cube) 9:00 – 12:30  
**CMSEBA: 1st International Workshop on Combining Modelling with Search- and Example-Based Approaches**  
*Richard Paige, Marouane Kessentini, Philip Langer, James Williams and Manuel Wimmer*
- WS11 (Salón de Actos – Yellow Cube) 9:00 – 17:00  
**MULTI: 1st International Workshop on Multi-Level Modelling**  
*Colin Atkinson, Georg Grossmann, Thomas Kühne and Juan de Lara*
- WS13 (Auditorium – Blue Cube) 9:00 – 17:00  
**OSS4MDE: 1st International Workshop on Open Source Software for Model Driven Engineering**  
*Francis Bordeleau, Juergen Dingel, Sebastien Gerard and Sebastian Voss*
- WS16 (Aprende – Red Cube) 14:00 – 18:00  
**MD2P2: 1st International Workshop on Model-Driven Development Processes and Practices**  
*Regina Hebig, Reda Bendraou, Markus Völter and Michel Chaudron*
- WS18 (Descubre – Red Cube) 9:00 – 17:00  
**ME: 9th International Workshop on Models and Evolution**  
*Alfonso Pierantonio, Dalila Tamzalit and Bernhard Schätz*



## Monday – September 29, 2014

- WS2 (Debate – Red Cube) 9:00 – 17:00  
**AMINO: International Workshop on TowArds the Model DrIveN Organization**  
*Tony Clark, Balbir Barn, Vinay Kulkarni, Ulrich Frank, Robert France and Dan Turk*
- WS3 (Innova – Green Cube) 8:00 – 18:00  
**ACVI: 1st International Workshop on Architecture-Centric Virtual Integration**  
*Julien Delange and Peter Feiler*
- WS7 (Descubre – Red Cube) 9:00 – 18:00  
**ModComp: 1st International Workshop on Model-Driven Engineering for Component-Based Software Systems**  
*Federico Ciccozzi, Jan Carlson and Massimo Tivoli*
- WS10 (Aprende – Red Cube) 9:00 – 17:00  
**XM: 3rd International Workshop on Extreme Modelling**  
*Davide Di Ruscio, Alfonso Pierantonio and Juan De Lara*
- WS14 (Salón de Actos – Yellow Cube) 9:00 – 17:30  
**AMT: 3rd International Workshop on Analysis of Model Transformations**  
*Juan de Lara, Juergen Dingel, Levi Lucio and Hans Vangheluwe*



## Tuesday – September 30, 2014

- WS4 (Crea – Green Cube) 9:00 – 17:15  
**ACESMB: 7th International Workshop on Model-Based Architecting and Construction of Embedded Systems**  
*Florian Noyrit, Susanne Graf and Iulia Dragomir*
- WS5 (Aprende – Red Cube) 9:00 – 18:00  
**OCL: 14th International Workshop on OCL and Textual Modeling Applications and Case Studies**  
*Achim D. Brucker, Carolina Dania, Geri Georg and Martin Gogolla*
- WS6 (Salón de Actos – Red Cube) 9:00 – 17:30  
**CloudMDE: 2nd International Workshop on Model-Driven Engineering on and for the Cloud**  
*Richard Paige, Louis Rose, Jordi Cabot, Marco Brambilla and James Hill*
- WS12 (Debate – Red Cube) 9:00 – 18:00  
**MRT: 9th International Workshop on Models@run.time**  
*Sebastian Götz, Nelly Bencomo and Robert France*
- WS15 (Salón de Actos – Yellow Cube) 9:00 – 18:00  
**MoDeVVa: 11th International Workshop on Model-Driven Engineering, Verification and Validation Integrating Verification and Validation in MDE**  
*Frédéric Boulanger, Michalis Famelis and Daniel Ratiu*
- WS17 (Descubre – Red Cube) 9:00 – 17:30  
**MPM: 8th International Workshop on Multi-Paradigm Modeling**  
*Daniel Balasubramanian, Tamás Mészáros, Christophe Jacquet, Pieter Van Gorp and Sahar Kokaly*



## Tutorials

### Sunday – September 28, 2014

- T1 (Crea – Green Cube) 9:00 – 12:30  
**AADLv2, a Domain Specific Language for the Modeling, the Analysis and the Generation of Real-Time Embedded Systems**  
*Frank Singhoff and Jérôme Hugues*
- T4 (Crea – Green Cube) 14:00 – 18:00  
**Metamodeling, Model Processing and Simulation – Putting the Puzzle Pieces Together Based on Industrial Experiences**  
*Gergely Mezei, Laszlo Lengyel, Tamás Mészáros and Tamás Vajk*
- T7 (Contempla – Green Cube) 9:00 – 18:00  
**How to run a Multi-Customer Software Engineering Capstone Course**  
*Bernd Brügge, Stephan Krusche and Lukas Alperowitz*

### Monday – September 29, 2014

- T2 (Crea – Green Cube) 9:00 – 12:30  
**Language Modeling Principles**  
*Ralf Laemmel*
- T3 (Crea – Green Cube) 14:00 – 18:00  
**Applying Model Driven Engineering Technologies in the Creation of Domain Specific Modeling Languages**  
*Bruce Trask and Angel Roman*
- T5 (Cambia – Green Cube) 14:00 – 18:00  
**How to Megamodel Diagrammatically: Theory and Practices**  
*ZinovyDiskin, Sahar Kokaly, Tom Maibaum and Richard Paige*

### Tuesday – September 30, 2014

- T8 (Contempla – Green Cube) 9:00 – 12:30  
**Open Modelica**  
*Peter Fritzon and Hans Vangeluwe*
- T6 (Contempla – Green Cube) 14:00 – 18:00  
**Model-Driven Requirements Engineering**  
*João Araújo, Ana Moreira, Gunter Mussbacher and Pablo Sanchez*



## Educators Symposium

**Monday – September 29, 9:00 – 17:00**

**Room:** Salón de Actos – Red Cube

**Chairs:** Birgit Demuth and Dave Stikkolorum

- Welcome and Introduction (9:00 – 9:15)
- Keynote Speech: **Bad Modelling Teaching Practices** (9:15 – 10:00)  
Richard Paige  
*University of York, UK*
- **Teaching in a Software Design Studio: Implications for Modeling Education** (10:00 – 10:30)  
Jon Whittle, Christopher Bull, Jaejoon Lee and Gerald Kotonya  
*Lancaster University, UK*
- **CASE Tools versus Pencil and Paper – A Student's Perspective on Modeling Software Design** (11:00-11:30)  
Imed Hammouda, Håkan Burden, Rogardt Heldal and Michel R.V. Chaudron  
*Chalmers and University of Gothenburg, Sweden*
- **Exploiting the Internet of Things to teach Domain-Specific Languages and Modelling** (11:30-12:00)  
Sebastien Mosser, Philippe Collet, and Mireille Blay-Fornarino  
*Université Nice-Sophia Antipolis*
- **Symbolic Representation of Models Improves Model Understanding and Tendency to Use Models** (12:00-12:30)  
Mira Balaban  
*Ben-Gurion University of the Negev, Israel*
- **Short Paper Presentations** (14:00 – 15:30)
  - **Real Projects with Informal Models**  
Dora Dzvonyar, Stephan Krusche, and Lukas Alperowitz
  - **Model-based Student Admission**  
Vadim Zaytsev
  - **Reflections on Courses for Software Language Engineering**  
Any Helene Bagge, Ralf Lämmel, and Vadim Zaytsev
  - **Introductory Software Engineering with a Focus on Dependency Management**  
Christine Hofmeister
- **Panel Discussion** (16:00 – 17:00)



## Doctoral Symposium (by invitation only)

**Tuesday – September 30, 9:00 – 17:00**

**Room:** Cambia – Green Cube

**Chair:** Benoit Baudry

The Doctoral Symposium is “closed” and by invitation only to those students who are participating and the Symposium Committee. The following are the papers that will be presented:

- **A Multi-Paradigm Modelling Approach for the Engineering of Modelling Languages**  
Bart Meyers, *McGill University, Canada*  
Hans Vangheluwe, *McGill University, Canada & University of Antwerp, Belgium*
- **Variability Management in Domain-Specific Languages**  
David Méndez-Acuña, *University of Rennes 1, France*
- **GECO: Automatic Generator-Composition for Aspect-Oriented DSLs**  
Reiner Jung, *Kiel University, Germany*
- **Towards a Structured Workflow Language for Model Management**  
Sahar Kokaly, *McMster University, Canada*
- **An Approach to Extend NDT in the Development of Web Applications into SOA-based Organizations**  
Jorge Sedeño, *University of Seville, Spain*
- **A Domain Specific Transformation Language to Support the Interactive Definition of Model Transformation Rules**  
Luis Silvestre, *University of Chile, Chile*
- **A Model-Driven Approach for Mobile Business Information Systems Applications**  
Luís Pires Da Silva, *Universidade Nova de Lisboa, Portugal*  
Fernando Brito E Abreu, *Universidade Nova de Lisboa, Portugal*  
Vasco Amaral, *Universidade Nova de Lisboa, Portugal*
- **Model-based Software Refactoring Driven by Performance Analysis**  
Davide Arcelli, *University of L'Aquila, Italy*
- **Seamless Model-Based Safety Engineering from Requirement to Implementation**  
Georg Macher, *Graz University of Technology, Austria*
- **Enhancing Xtext for General Purpose Languages**  
Adolfo Sanchez-Barbudo Herrera, *University of York, UK*
- **Explicit Modelling of Model Debugging and Experimentation**  
Simon Van Mierlo, *McGill University, Canada*



## Main Conference

(F = Foundations Track, MEIP = Model-driven Engineering In Practice Track)

### Wednesday, October 1

#### Session 1: Cloud, mobile and web computing

11:00 – 12:30

**Room:** Auditorium – Blue Cube

**Session Chair:** Friedrich Steimann

##### **Model-Driven Development of Mobile Applications Allowing Role-Driven Variants (F)**

Steffen Vaupel, *Philipps-Universität Marburg, Germany*  
Gabriele Taentzer, *Philipps-Universität Marburg, Germany*  
Jan Peer Harries, *Philipps-Universität Marburg, Germany*  
Raphael Stroh, *Philipps-Universität Marburg, Germany*  
Rene Gerlach, *Technische Hochschule Mittelhessen, Germany*  
Michael Guckert, *Technische Hochschule Mittelhessen, Germany*

##### **A Model-Based System to Automate Cloud Resource Allocation and Optimization (MEIP)**

Yu Sun, *Vanderbilt University, United States*  
Jules White, *Vanderbilt University, United States*  
Sean Eade, *Siemens Industry US, United States*

##### **An Evaluation of the Effectiveness of the Atomic Section Model (F)**

Sunitha Thummala, *George Mason University, United States*  
Jeff Offutt, *George Mason University, United States*

#### Session 2: Model Transformation 1

11:00 – 12:30

**Room:** Salón de Actos – Red Cube

**Session Chair:** Ferhat Khendek

##### **Automated Chaining of Model Transformations with Incompatible Metamodels (F)**

Francesco Basciani, *DISIM, University of L'Aquila, Italy*  
Davide Di Ruscio, *DISIM, University of L'Aquila, Italy*  
Ludovico Lovino, *DISIM, University of L'Aquila, Italy*  
Alfonso Pierantonio, *DISIM, University of L'Aquila, Italy*



**Streaming Model Transformations by Complex Event Processing (F)**

István Dávid, *Budapest University of Technology and Economics, Hungary*

István Ráth, *Budapest University of Technology and Economics, Hungary*

Dániel Varró, *Budapest University of Technology and Economics, Hungary*

**On the use of Signatures for Source Incremental Model-to-text Transformation (F)**

Babajide Ogunyomi, *University of York, United Kingdom*

Louis M. Rose, *University of York, United Kingdom*

Dimitris S. Kolovos, *University of York, United Kingdom*

**Session 3 - Behavioral Modelling**

**11:00 – 12:30**

**Room:** Salón de Actos – Yellow Cube

**Session Chair:** Shaukat Ali

**Modeling Systemic Behavior by State-Based Holonic Modular Units (F)**

Luca Pazzi, *University of Modena and Reggio Emilia, DIEF, Italy*

**Semantic Model Differencing Utilizing Behavioral Semantics Specifications (F)**

Philip Langer, *Vienna University of Technology, Austria*

Tanja Mayerhofer, *Vienna University of Technology, Austria*

Gerti Kappel, *Vienna University of Technology, Austria*

**Formalizing Execution Semantics of UML Profiles with fUML Models (F)**

Jérémie Tatibouet, *CEA, France*

Arnaud Cuccuru, *CEA, France*

Sébastien Gérard, *CEA, France*

François Terrier, *CEA, France*

**Session 4 - MDE: Past, Present and Future**

**14:00 – 15:30**

**Location:** Auditorium – Blue Cube

**Session Chair:** Bran Selic

**Who Knows/Uses What of the UML: A Personal Opinion Survey (F)**

Gianna Reggio, *University of Genova, Italy*

Maurizio Leotta, *University of Genova, Italy*

Filippo Ricca, *University of Genova, Italy*



### **Assessing the State-of-Practice of Model-Based Engineering in the Embedded Systems Domain (F)**

Grischa Liebel, *University of Gothenburg, Sweden*  
Nadja Marko, *Virtual Vehicle Research Center, Graz, Austria*  
Matthias Tichy, *University of Gothenburg, Sweden*  
Andrea Leitner, *Virtual Vehicle Research Center, Graz, Austria*  
Jörgen Hansson, *University of Gothenburg, Sweden*

### **The Relevance of Model-Driven Engineering Thirty Years from Now (F)**

Daniel Amyot, *University of Ottawa, Canada*  
Ruth Breu, *University of Innsbruck, Austria*  
Jean-Michel Bruel, *University of Toulouse, France*  
Betty H.C. Cheng, *Michigan State University, United States*  
Philippe Collet, *University of Nice-Sophia Antipolis, France*  
Benoit Combemale, *University of Rennes / INRIA, France*  
Robert B. France, *Colorado State University, United States*  
Rogardt Heldal, *Chalmers University of Technology, Sweden*  
Gunter Mussbacher, *McGill University, Canada*  
James Hill, *Indiana University-Purdue University Indianapolis, United States*  
Jörg Kienzle, *McGill University, Canada*  
Matthias Schöttle, *McGill University, Canada*  
Friedrich Steimann, *Fernuniversität Hagen, Germany*  
Dave Stikkolorum, *Leiden University, Netherlands*  
Jon Whittle, *Lancaster University, United Kingdom*

## **Session 5 - Formal Semantics, Specification and Verification**

**14:00 – 15:30**

**Room:** Salón de Actos – Red Cube

**Session Chair:** Andrzej Wasowski

### **Model-Driven Verifying Compilation of Synchronous Distributed Applications (F)**

Sagar Chaki, *Carnegie Mellon University, United States*  
James Edmondson, *Carnegie Mellon University, United States*

### **Environment-Centric Contracts for Design of Cyber-Physical Systems (F)**

Jonas Westman, *KTH, Sweden*  
Mattias Nyberg, *KTH, Sweden*

### **Removing Redundancies and Deducing Equivalences in UML Class Diagrams (F)**

Azzam Maraee, *Ben-Gurion University of the Negev, Israel*  
Mira Balaban, *Ben-Gurion University of the Negev, Israel*



## Thursday, October 2

### Session 6 - Models at Runtime

11:00 – 12:30

**Room:** Auditorium – Blue Cube

**Session Chair:** Jean-Marc Jezequel

#### **A Native Versioning Concept to Support Historized Models at Runtime (F)**

Thomas Hartmann, *University of Luxembourg, Luxembourg*

Francois Fouquet, *University of Luxembourg, Luxembourg*

Gregory Nain, *University of Luxembourg, Luxembourg*

Brice Morin, *SINTEF ICT Norway, Norway*

Jacques Klein, *University of Luxembourg, Luxembourg*

Olivier Barais, *Université de Rennes 1, France*

Yves Le Traon, *University of Luxembourg, Luxembourg*

#### **Modelling Adaptation Policies as Domain-Specific Constraints (F)**

Hui Song, *SINTEF, Norway*

Xiaodong Zhang, *Peking University, China*

Nicolas Ferry, *SINTEF, Norway*

Franck Chauvel, *SINTEF, Norway*

Arnor Solberg, *SINTEF, Norway*

Gang Huang, *Peking University, China*

#### **Scalable Armies of Clone Models through Data Sharing (F)**

Erwan Bousse, *University of Rennes 1, France*

Benoit Combemale, *University of Rennes 1, France*

Benoit Baudry, *Inria Rennes, France*

### Session 7 - Feature and Variability Modeling

11:00 – 12:30

**Room:** Salón de Actos – Red Cube

**Session Chair:** Øystein Haugen

#### **Three Cases of Feature-Based Variability Modeling in Industry (MEIP)**

Thorsten Berger, *University of Waterloo, Canada*

Divya Nair, *University of Waterloo, Canada*

Ralf Rublack, *University of Leipzig, Germany*

Joanne M. Atlee, *University of Waterloo, Canada*

Krzysztof Czarnecki, *University of Waterloo, Canada*

Andrzej Wasowski, *IT University of Copenhagen, Denmark*



**Supporting Multiplicity and Hierarchy in Model-based Configuration: Experiences and Lessons Learned (MEIP)**

Rick Rabiser, *Johannes Kepler University Linz, Austria*  
Michael Vierhauser, *Johannes Kepler University Linz, Austria*  
Paul Grünbacher, *Johannes Kepler University Linz, Austria*

Deepak Dhungana, *Siemens AG, Austria*  
Herwig Schreiner, *Siemens AG, Austria*  
Martin Lehofer, *Siemens VAI, Austria*

**Propagating Decisions to Detect and Explain Conflicts in a Multi-step Configuration Process (F)**

Jaime Chavarriaga, *Universidad de los Andes, Colombia*  
Carlos Noguera, *Vrije Universiteit Brussel, Belgium*  
Rubby Casallas, *Universidad de los Andes, Colombia*  
Vivianne Jonckers, *Vrije Universiteit Brussel, Belgium*

**Session 8 - Composition and Adaptation**

**11:00 – 12:30**

**Room:** Salón de Actos – Yellow Cube

**Session Chair:** Ruth Breu

**An MDA Approach for the Generation of Communication Adapters Integrating SW and FW Components from Simulink (MEIP)**

Marco Di Natale, *Scuola Superiore S. Anna, Italy*  
Francesco Chirico, *Elettronica, Italy*  
Andrea Sindico, *Elettronica, Italy*  
Alberto Sangiovanni-Vincentelli, *University of California Berkeley, United States*

**A UML Model-Driven Approach to Efficiently Allocate Complex Communication Schemes (F)**

Andrea Enrici, *Telecom ParisTech, France*  
Ludovic Apvrille, *Telecom ParisTech, France*  
Renaud Pacalet, *Telecom ParisTech, France*

**Model-Integrating Software Components (F)**

Mahdi Derakhshanmanesh, *University of Koblenz-Landau, Germany*  
Jürgen Ebert, *University of Koblenz-Landau, Germany*  
Thomas Iguchi, *University of Koblenz-Landau, Germany*  
Gregor Engels, *University of Paderbor, Germany*



## Session 9 - Practices and Experience

14:00 – 15:30

**Room:** Auditorium – Blue Cube

**Session Chair:** Dániel Varró

### **Experiences in Applying Model Driven Engineering to the Telescope and Instrument Control System Domain (MEIP)**

Luigi Andolfato, *European Southern Observatory, Germany*

Robert Karban, *European Southern Observatory, Germany*

Marcus Schilling, *European Southern Observatory, Germany*

Heiko Sommer, *European Southern Observatory, Germany*

Michele Zamparelli, *European Southern Observatory, Germany*

Gianluca Chiozzi, *European Southern Observatory, Germany*

### **Model Driven Grant Proposal Engineering Domain (MEIP)**

Dimitrios S. Kolovos, *University of York, United Kingdom*

Nicholas Matragkas, *University of York, United Kingdom*

James R. Williams, *University of York, United Kingdom*

Richard F. Paige, *University of York, United Kingdom*

### **Agile Model-Driven Engineering in Mechatronic Systems – An Industrial Case Study (MEIP)**

Ulf Eliasson, *Volvo Car Group, Sweden*

Rogardt Heldal, *Chalmers University of Technology, Sweden*

Jonn Lantz, *Volvo Car Group, Sweden*

Christian Berger, *University of Gothenburg, Sweden*

## Session 10 - Modeling for Analysis

14:00 – 15:30

**Room:** Salón de Actos – Red Cube

**Session Chair:** Steffen Zschaler

### **Using UML for Modeling Procedural Legal Rules: Approach and a Study of Luxembourg's Tax Law (F)**

Ghanem Soltana, *University of Luxembourg, Luxembourg*

Elizabeta Fourneret, *University of Luxembourg, Luxembourg*

Morayo Adedjouma, *University of Luxembourg, Luxembourg*

Mehrdad Sabetzadeh, *University of Luxembourg, Luxembourg*

Lionel Briand Trust, *University of Luxembourg, Luxembourg*

### **Ontology-based Modeling of Context-aware Systems (MEIP)**

Daniel Lüddecke, *Volkswagen AG, Germany*

Nina Bergmann, *Volkswagen AG, Germany*

Ina Schaefer, *Technische Universität Braunschweig, Germany*

### **Resolution of Interfering Product Fragments in Software Product Line Engineering (F)**

Anatoly Vasilevskiy, *SINTEF, Norway*

Øystein Haugen, *SINTEF, Norway*



## Session 11 - Pragmatics

14:00 – 15:30

**Room:** Salón de Actos – Yellow Cube

**Session Chair:** Gianna Reggio

### Comprehending Feature Models Expressed in CVL (F)

Iris Reinhartz-Berger, *Department of Information Systems, University of Haifa, Israel*

Kathrin Figl, *Institute for Information Systems & New Media, Vienna, Austria*

Øystein Haugen, *University of Oslo, Norway, Norway*

### On the Impact of Layout Quality to Understanding UML Diagrams: Size Matters (F)

Harald Störrle, *Technical University of Denmark, Denmark*

### Enabling the Development of Cognitive Effective Visual DSLs (MEIP)

David Granada, *Universidad Rey Juan Carlos, Spain*

Juan M. Vara, *Universidad Rey Juan Carlos, Spain*

Veronica A. Bollati, *Universidad Rey Juan Carlos, Spain*

Esperanza Marcos, *Universidad Rey Juan Carlos, Spain*

## Friday, October 3

## Session 12 - Model Extraction, Manipulation and Persistence

11:00 – 12:30

**Room:** Auditorium – Blue Cube

**Session Chair:** Richard Page

### JUMP---From Java Annotations to UML Profiles (F)

Alexander Bergmayr, *Vienna University of Technology, Austria*

Michael Grossniklaus, *University of Konstanz, Germany*

Manuel Wimmer, *Vienna University of Technology, Austria*

Gerti Kappel, *Vienna University of Technology, Austria*

### SIGMA: Scala Internal Domain-Specific Languages for Model Manipulations (F)

Filip Krikava, *University Lille 1 / LIFL Inria Lille, France*

Philippe Collet, *Université Nice Sophia Antipolis, France*

Robert B. France, *Colorado State University, United States*

### A Framework to Benchmark NoSQL Data Stores for Large-Scale Model Persistence (F)

Seyyed M Shah, *The University of York, United Kingdom*

Ran Wei, *The University of York, United Kingdom*

Dimitrios S. Kolovos, *The University of York, United Kingdom*

Louis Rose, *The University of York, United Kingdom*

Richard Paige, *The University of York, United Kingdom*

Konstantinos Barmpis, *The University of York, United Kingdom*



## Session 13 - Model Transformation 2

11:00 – 12:30

**Room:** Salón de Actos – Red Cube

**Session Chair:** Tim Lethbridge

### Parsing in a Broad Sense (F)

Vadim Zaytsev, *Universiteit van Amsterdam, Netherlands*

Anya Helene Bagge, *Universitetet i Bergen, Norway*

### Classification of Model Transformation Tools: Pattern Matching Techniques (F)

Cláudio Gomes, *New University of Lisbon, Portugal*

Bruno Barroca, *New University of Lisbon, Portugal*

Vasco Amaral, *New University of Lisbon, Portugal*

### Learning Implicit and Explicit Control in Model Transformations by Example (F)

Islem Baki, *DIRO, Université de Montréal, Canada*

Houari Sahraoui, *DIRO, Université de Montréal, Canada*

Quentin Cobbaert, *Université de Namur, Belgium*

Philippe Masson, *Université de Namur, Belgium*

Martin Faunes, *DIRO, Université de Montréal, Canada*

## Session 14 - Querying

11:00 – 12:30

**Room:** Salón de Actos – Yellow Cube

**Session Chair:** Mira Balaban

### IncQuery-D: A Distributed Incremental Model Query Framework in the Cloud (F)

Gábor Szárnyas, *Budapest University of Technology and Economics, Hungary*

Benedek Izsó, *Budapest University of Technology and Economics, Hungary*

István Ráth, *Budapest University of Technology and Economics, Hungary*

Gábor Bergmann, *Budapest University of Technology and Economics, Hungary*

Dániel Varró, *Budapest University of Technology and Economics, Hungary*

### Translating OCL to Graph Patterns (F)

Gábor Bergmann, *Budapest University of Technology and Economics, Hungary*



## Demonstrations

### Wednesday – October 1

#### **Demo Madness 1 (10:20-10:30)**

**Room:** Auditorium – Blue Cube

The authors of each demonstration at Demo Session 1 will have two minutes to promote their demonstration to all the MODELS attendants.

#### **Demo Session 1 (14:00-15:30)**

**Room:** Descubre – Red Cube

#### **DPLfw: a Framework for the Product-Line-Based Generation of Variable Content Documents**

Abel Gómez, *INRIA, France*

Pau Martí, *Universitat Politècnica de València, Spain*

Ma. Carmen Penadés, *Universitat Politècnica de València, Spain*

José H. Canós, *Universitat Politècnica de València, Spain*

#### **Automatic Generation of Consistency-Preserving Edit Operations for MDE Tools**

Michaela Rindt, *University of Siegen, Germany*

Timo Kehrer, *University of Siegen, Germany*

Udo Kelter, *University of Siegen, Germany*

#### **Umple: An Open-Source Tool for Easy-To-Use Modeling, Analysis, and Code Generation**

Timothy Lethbridge, *University of Ottawa, Canada*



## Thursday – October 2

### Demo Madness 2 (10:15-10:30)

Room: Auditorium – Blue Cube

The authors of each demonstration at Demo Session 2 and 3 will have two minutes to promote their demonstration to all the MODELS attendees.

### Demo Session 2 (11:00-12:30)

Room: Descubre – Red Cube

#### Combining Textual and Web-Based Modeling

Martin Haeusler, *University of Innsbruck, Austria*  
Matthias Farwick, *University of Innsbruck, Austria*  
Thomas Trojer, *University of Innsbruck, Austria*

#### DSLFORGE: Textual Modeling on the Web

Amine Lajmi, *Software Architect, France*  
Jabier Martinez, *University of Luxembourg, Luxembourg*  
Tewfik Ziadi, *Université Pierre et Marie Curie, France*

#### Bridging Java Annotations and UML Profiles with JUMP

Alexander Bergmayr, *Vienna University of Technology, Austria*  
Michael Grossniklaus, *University of Konstanz, Germany*  
Manuel Wimmer, *Vienna University of Technology, Austria*  
Gerti Kappel, *Vienna University of Technology, Austria*

### Demo Session 3 (14:00-15:30)

Room: Descubre – Red Cube

#### Tool support for Collaborative Software Quality Management

Philipp Kaib, *Research Group Quality Engineering, Austria*  
Ruth Breu, *Research Group Quality Engineering, Austria*

#### From Pen-and-Paper Sketches to Prototypes: The Advanced Interaction Design Environment

Harald Störrle, *Danmarks Tekniske Universitet, Denmark*

#### Concern-Driven Software Development with jUCMNav and TouchRAM

Nishanth Thimmegowda, *McGill University, Canada*  
Omar Alam, *McGill University, Canada*  
Matthias Schöttle, *McGill University, Canada*  
Wisam Al Abed, *McGill University, Canada*  
Thomas Di'Meco, *Polytech Nice-Sophia, France*  
Laura Martellotto, *Polytech Nice-Sophia, France*  
Gunter Mussbacher, *McGill University, Canada*  
Jörg Kienzle, *McGill University, Canada*



## ACM Student Research Competition (Sponsored by Microsoft Research)

### Wednesday – October 1 & Thursday – October 2

**Room:** Round 1: Auditorium Hall – Blue Cube (during coffee breaks) / Round 2: Room Aprende – Red Cube

**Chairs:** Marcela Genero and Shaz Qadeer

Round 1 of the ACM Student Research Competition (poster presentations) will be held on Wednesday, October 1, during the coffee breaks (10:30-11:00 and 15:30-16:00). Round 2 will be held on Thursday, October 2 (11:00 - 12:30) in the Room Aprende, Red Cube.

The following are the students who will be participating in the MODELS 2014 ACM Student Research Competition:

### Graduate Students

#### **Model-Driven Engineering Meets the Platform-as-a-Service Model**

Adrián Juan-Verdejo, *University of Stuttgart, Germany*

#### **Model-Driven Design of Ensemble-Based Component Systems**

Ilias Gerostathopoulos, *Charles University, Czech Republic*

#### **Exploring Omniscient Debugging for Model Transformations**

Jonathan Corley, *The University of Alabama, United States*

### Undergraduate Students

#### **Towards the Automatic Resolution of Architectural Variability in Software Product Line Architectures through Model Transformations**

Jesús Benedé, *Universitat Politècnica de València, Spain*

#### **Transition from EBNF to Xtext**

Jianan Yue, *Nanjing University, China*



## Posters

### Wednesday – October 1 & Thursday – October 2

**Room:** Auditorium Hall – Blue Cube (during coffee breaks)

**Chairs:** Manuel Wimmer and Stefan Sauer

The following posters will be presented during the coffee breaks (10:30-11:00 and 15:30-16:00) at the Auditorium Hall – Blue Cube on both Wednesday, Oct. 1 and Thursday, Oct. 2:

#### **Hypersonic – Model Analysis as a Service**

Vlad Acretoae, *Technical University of Denmark, Denmark*

Harald Störrle, *Technical University of Denmark, Denmark*

#### **A Cloud Architecture for an Extensible Multi-Paradigm Modeling Environment**

Jonathan Corley, *University of Alabama, United States*

Eugene Syriani, *Université de Montréal, Canada*

#### **Scalable Model Edition, Query and Version Control Through Embedded Database Persistence**

Xabier De Carlos, *IKERLAN, Spain*

Goiuria Sagardui, *Mondragon Unibertsitatea, Spain*

Salvador Trujillo, *IKERLAN, Spain*

#### **A Generic Framework for Realizing Semantic Model Differencing Operators**

Philip Langer, *Vienna University of Technology, Austria*

Tanja Mayerhofer, *Vienna University of Technology, Austria*

Gerti Kappel, *Vienna University of Technology, Austria*

#### **Addressing Multi-Domain Integration Challenge in Robotics Using Model-Based Approach**

Arunkumar Ramaswamy, *ENSTA-ParisTech, France*

Bruno Monsuez, *ENSTA-ParisTech, France*

Adriana Tapus, *ENSTA-ParisTech, France*

#### **Modeling Requirements with RED**

Harald Störrle, *Technical University of Denmark, Denmark*

#### **On the Impact of Diagram Layout: How Are Models Actually Read?**

Harald Störrle, *Technical University of Denmark, Denmark*

Nick Baltzen, *Technical University of Denmark, Denmark*

Henrik Christoffersen, *Technical University of Denmark, Denmark*

Anja Maier, *Technical University of Denmark, Denmark*

#### **An Index for Software Engineering Models**

Harald Störrle, *Technical University of Denmark, Denmark*

Regina Hebig, *Sorbonne Universités LIP6, France*

Alexander Knapp, *University of Augsburg, Germany*



**Towards Model-Defined Cloud of Clouds**

Xiaodong Zhang, *Peking University, China*

Mauricio Tsugawa, *University of Florida, United States*

Ying Zhang, *Peking University, China*

Chun Cao, *Nanjing University, China*

Gang Huang, *Peking University, China*

Jose Fortes, *University of Florida, United States*

**Framework for Dynamic Architecture Reconfiguration of Cloud Services**

Miguel Zuñiga Prieto, *Universitat Politècnica de València, Spain*

Javier Gonzalez-Huerta, *Universitat Politècnica de València, Spain*

Silvia Abrahao, *Universitat Politècnica de València, Spain*

Emilio Insfran, *Universitat Politècnica de València, Spain*



## Social Events

### Satellite Events/SAM Conference Welcome Reception

**Auditorium – Blue Cube**

**Monday, September 29 (18:30 – 20:30)**

The reception will feature a concert of traditional Valencian music (*dolçaina*) and a welcome cocktail.

The *dolçaina* is a woodwind instrument of the oboe family, traditional in Valencia (although similar instruments are found across Spain and around the world). It is played together with the *tabalet*, a percussion instrument, interpreted in different melodies from traditional Valencian villages and cities. The repertoire of these instruments is made up of traditional dances, folk music parades, and *albaes* (a type of traditional song accompanied by these instruments). In the 70's of the 20<sup>th</sup> century these instruments were on the verge of disappearing as a result of the lack of specialized musicians. However, the art of playing these instruments is currently being revitalized due to their increased popularity.



### Conference Welcome Reception at Real Colegio del Patriarca

**Wednesday, October 1 (19:40 – 21:40)**

Built in the 16th century and comprises the Royal College, the seminary and the church (also known as “The Valencian Sixtine Chapel”). The different buildings and rooms are set around a large Renaissance cloister. It is an important building architected for reflecting the importance the Italian Renaissance had in Spain. But perhaps this seminary's most important architectural feature is the cloistered patio, considered one of the most beautiful within the Spanish Renaissance. The building also hosts the Patriarca museum with a collection of paintings from the 16th and 17th centuries, including works by El Greco, Caravaggio, Juan de Juanes among other painters.

The reception of the MODELS 2014 conference will include a cocktail in the Renaissance cloister, a visit to the collection paintings of the Patriarca museum and an Organ concert in the church (the Valencian Sixtine Chapel). The Patriarca is located in old town Valencia:

Real Colegio del Patriarca

Nave 1, Valencia 46002





## Conference Banquet at the City of Arts and Sciences (Palau de les Arts)

**Thursday, October 2 (20:00 - )**

The City of Arts and Sciences (*Ciudad de las Artes y las Ciencias*) is an entertainment-based cultural and architectural complex in Valencia. It is the most important modern tourist destination in the city. Designed by Valencian architect Santiago Calatrava and started in July 1996, it is an impressive example of modern architecture. The "city" is made up of six buildings: *El Palau de les Arts Reina Sofía* — Opera house and performing arts centre; *L'Hemisfèric* — Imax Cinema and Planetarium; *L'Umbracle* — Walkway and garden; *El Museu de les Ciències Príncipe Felipe* — Science museum; *Ágora* —space for holding events; *Oceanografic* — Open-air aquarium (the largest aquarium in Europe).

The banquet of the MODELS 2014 conference will take place in the **main Hall of the Opera house (*Palau de Les Arts Reina Sofía*)**. The banquet opens at 20:00h with a cocktail and a performance of traditional Valencian music (*Dolçaines i percussió*) and dance.

The Valencian dances are one of the richest repertoires in terms of variety. Dances like *jotas*, *fandangos*, *malagueñas*, *danses*, *seguidillas*, etc. are part of the corpus of our traditional dances. The clothing is one of the most important items in the world of the traditional dance. Depending on the area, the dances change its clothing and the used materials to weave it. So in colder inland areas, we could find more warm knitting in order to better withstanding the low temperatures. However, in the coastal areas we could find cooler knitting. This knitting was made up with the best silks that have been produced in Valencia for centuries.

### Banquet Program

- 20:00 Palau de les Arts opens for MODELS participants
- 20:15 Welcome drink and performance (*Dolçaines i percussió & Danses*)
- 21:00 Dinner served and awards

The Palau de Les Arts is situated at the end of the former riverbed of the river Turia:

Palau de Les Arts  
Ciudad de las Artes y las Ciencias  
Av del Profesor López Piñero, 7  
46013 Valencia





## MODELS 2014 Tour

### Tour in Old Town Valencia

**Wednesday, October 1 (18:00 – 19:30)**

Experience the essence of this 2000-year-old town considered to be the hidden gem of Spain. In this guided visit especially designed for the MODELS 2014 conference, the participants will have the opportunity to discover the real Valencia with local official guides. We offer you a really rich route that will end in the atrium of the Patriarch Seminar School, the amazing national monument chosen by MODELS 2014 to host the Main Conference Welcome Reception Cocktail.

In 1,5 hours we will tell you the history of the roman city of 'Valentia', you will know about the town's Visigoth time and the Muslim city of "Balansiya". We will guide you to discover the main churches and buildings of the Christian Kingdom of Valencia, one of them the impressive building of the Silk Market, World Heritage Site by the UNESCO. You will have the opportunity to taste our typical drink and sweet specialty, "horchata and fartó", and know about our traditions and international cuisine.

You can book your place in advance and get more information in the previous days where the tour tickets will be sold at the convention.

**Organization:** Liber Tours ([info@libertours.com](mailto:info@libertours.com))

Liber Tours will be located at the Auditorium Hall of the Blue Cube, from Sun September 28 through Wed October 1 (8:30 – 18:30)

**Price:** 14 € (21% VAT included)

This is a special rate for MODELS attendees. The price includes the entrance to the Lonja (Silk Market, which is a World Heritage Site) and a free tasting of traditional Valencian "horchata and fartó".

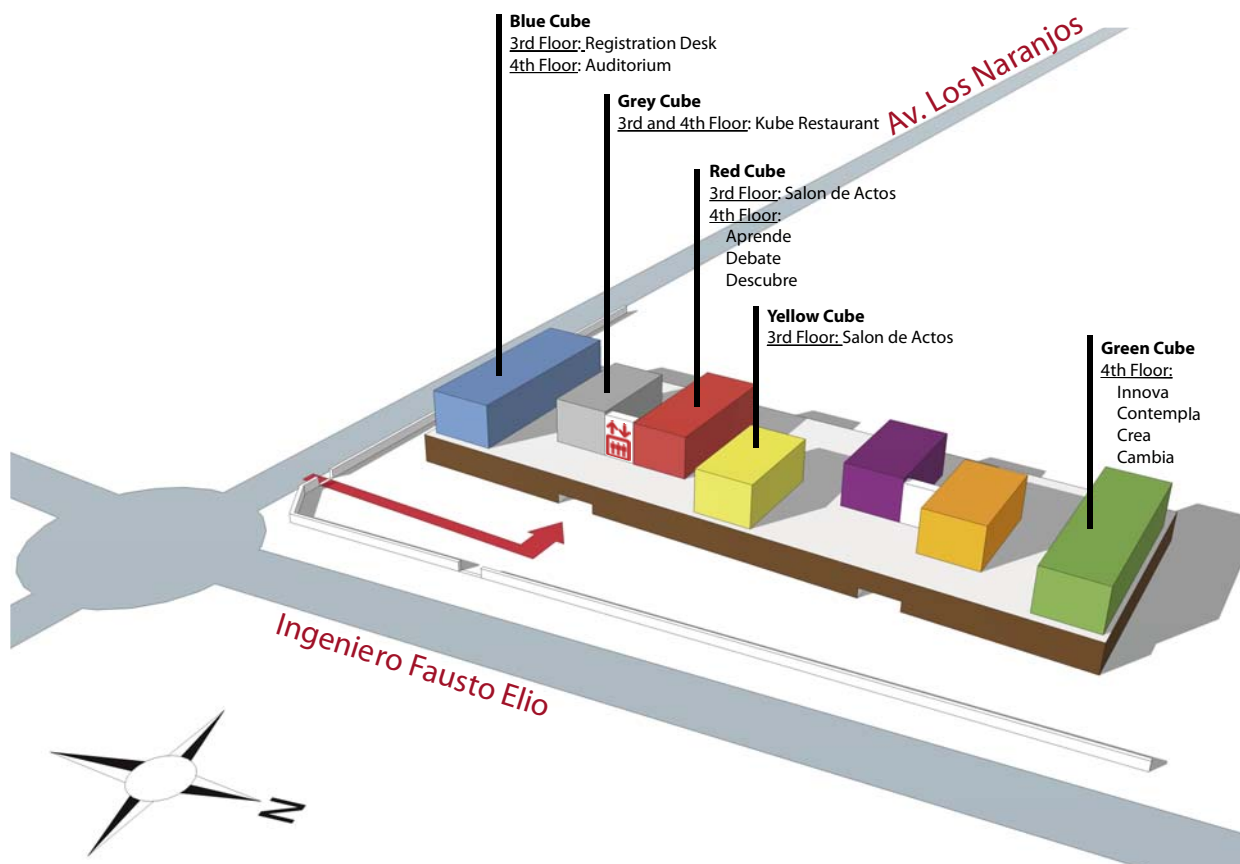
#### Route:

- Town Hall Square centre (*Plaza del Ayuntamiento*) - meeting point
- Central Market (*Mercado Central*)
- Silk Market - UNESCO World Heritage Site (*Lonja de la Seda*)
- Carmen District (*Barrio del Carmen*)
- Round Square (*Plaza Redonda*)
- St. Catherine's Church (*Iglesia de Santa Catalina*)
- Reina Square (*Plaza de la Reina*)
- Cathedral (*Catedral*)
- Basilica of the Virgin of the Helpless people (*Basilica de la Virgen de los Desamparados*)
- Generalitat Palace (*Palacio de la Generalitat*)
- Peace Street (*Calle de La Paz*)
- Palace of the Marchis of the Two Waters (*Palacio del Marqués de Dos Aguas*)
- Patriarch Square (*Plaza del Patriarca*)
- Patriarch Seminar School (*Real Colegio del Patriarca*) - end of visit (Main Conference Welcome Reception)



## Location

Universitat Politècnica de València (UPV)  
Ciudad Politécnica de la Innovación (CPI)



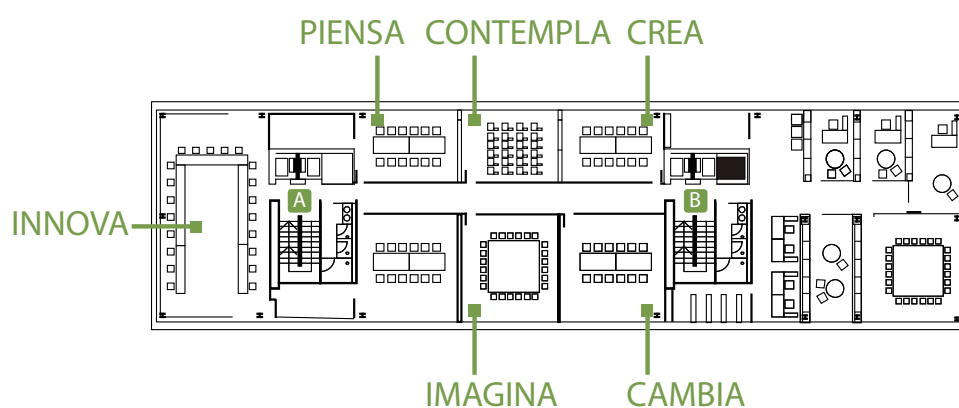
- The **Satellite Events** (September 28–30) will be held in the Blue, Red, Yellow and Green Cubes
- The **MODELS Conference** (October 1–3) will be held in the Blue, Red and Yellow Cubes
- The **SAM Conference** (September 29–30) will be held in the Auditorium of Blue Cube



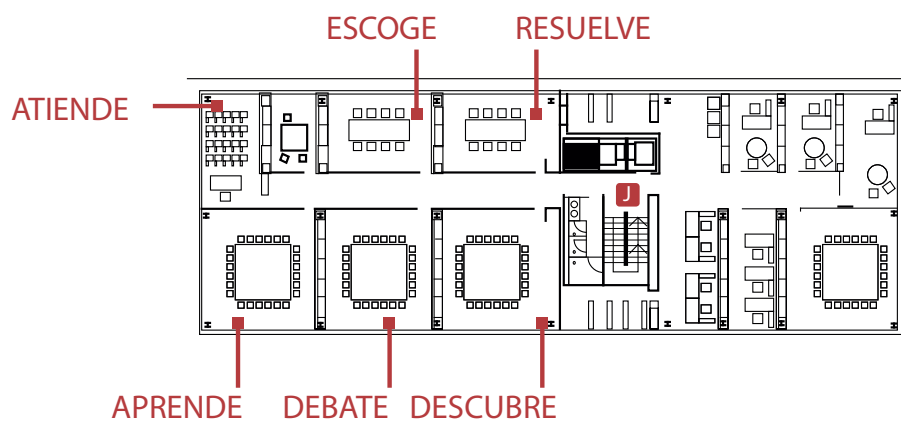
## Rooms



### Green Cube: 4th floor



### Red Cube: 4th floor





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