

# Welcome to EXE 2017

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3rd International Workshop on Executable Modeling  
September 18, 2017, Austin, Texas

Organizers:

Tanja Mayerhofer  
TU Wien, Austria

Philip Langer  
EclipseSource, Austria

Ed Seidewitz  
nMeta, USA

Jeff Gray  
University of Alabama, USA

Erwan Bousse  
TU Wien, Austria

# Context: Executable Modeling

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## Potentials of executable modeling

- Provide abstractions of complex system behavior
- Allow performance of early analyses of complex system behavior
- Provide support for design, comprehension, discovery, validation, and verification of system behavior

# Aim of the Workshop

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- Highlight potentials and challenges of executable modeling
- Assess and advance the state-of-the-art in executable modeling
- Bring together researchers and practitioners working in executable modeling
- Exchange recent results, ideas, opinions, and experiences
- Coordinate research efforts

# Topics

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- Engineering methods for executable modeling languages
- Model execution tools
  - Automation techniques for the development of model execution tools
  - Evolution in the context of executable modeling
  - Verification of semantic conformance
  - Case studies and experience reports on the successful or failed adoption of executable modeling
  - Tracing model executions and analyzing model execution traces
  - Customization of executable modeling languages and model execution tools
  - Composition, extension, and reuse of executable modeling languages and model execution tools
  - Integration of executable modeling languages and programming languages
  - Semantics-aware model transformations and code generation
  - Scalability of model execution and execution-based model analysis
  - Execution of partial and underspecified models
  - Model execution in the presence of non-determinism and concurrency
  - Surveys and benchmarks of different approaches for the development of executable modeling languages, model execution, and execution-based model analysis

# Program

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**9:15 – 10:30 Session 1: Keynote (Chair: Tanja Mayerhofer)**

**Towards an Open-Source MDE Tooling Infrastructure for the Internet of Things**

*Juergen Dingel*

**10:30 – 11:00 Coffee Break**

**11:00 – 12:30 Session 2: Paper Presentations (Chair: Jeff Gray)**

**Create and Play your Pac-Man Game with the GEMOC Studio (Tool Demonstration)**

*Dorian Leroy, Manuel Wimmer, Erwan Bousse, Benoit Combemale, Wieland Schwinger*

**Executing Models by Filmstripping: Enhancing Validation by Filmstrip Templates and Transformation Alternatives**

*Nisha Desai, Martin Gogolla, Hilken Frank*

**Executing Robot Task Models in Dynamic Environments**

*Kai Adam, Arvid Butting, Oliver Kautz, Bernhard Rumpe, Andreas Wortmann*

**Discussion**

# Program

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**12:30 – 14:00 Lunch Break**

**14:00 – 15:30 Session 3: Paper Presentations (Chair: Erwan Bousse)**

**Towards one Model Interpreter for Both Design and Deployment**

*Valentin Besnard, Matthias Brun, Philippe Dhaussy, Frédéric Jouault, David Olivier, Ciprian Teodorov*

**Simulation Framework for Executing Component and Connector Models of Self-Driving Vehicles**

*Filippo Grazioli, Evgeny Kusmenko, Alexander Roth, Bernhard Rumpe, Michael von Wenckstern*

**Consistency Recovery in Interactive Modeling**

*Juri Di Rocco, Davide Di Ruscio, Marcel Heinz, Ludovico Iovino, Ralf Lämmel, Alfonso Pierantonio*

**Discussion**

# Program

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**15:30 – 16:00 Coffee Break**

**16:00 – 17:30 Session 4: Panel Discussion (Chair: Ed Seidewitz)**

**Executable Modeling for Hardware, Software and Cyber-Physical Systems**

*Benoit Combemale, University of Toulouse*

*Taylor Riche, National Instruments*

*Cortland Starrett, One Fact Inc*

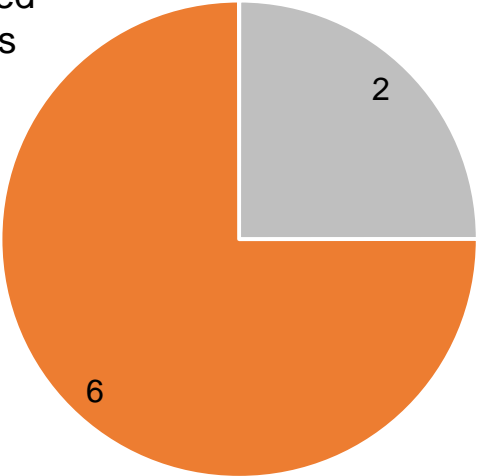
*Hans Vangheluwe, University of Antwerp and McGill University*

# Statistics about Submissions

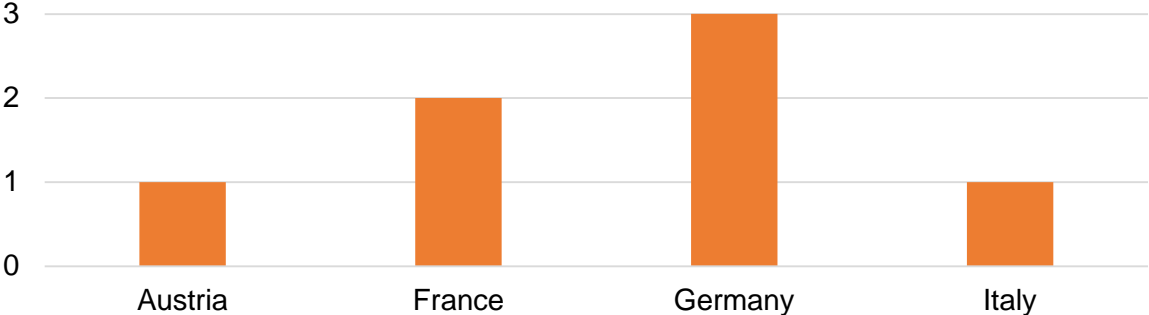
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### Acceptance Rate

75%  
accepted  
papers



### Number of Submissions per Country





# Program Committee

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Francis Bordeleau

Jonathan Corley

Juergen Dingel

Marjan Mernik

Jesús Sánchez Cuadrado

Eugene Syriani

Andreas Wortmann

Tony Clark

Juan de Lara

Martin Gogolla

Zoltan Micskei

Markus Scheidgen

Jérémie Tatibouët

Peter Clarke

Julien Deantoni

Dimitris Kolovos

Richard Paige

Bran Selic

Massimo Tisi

Benoit Combemale

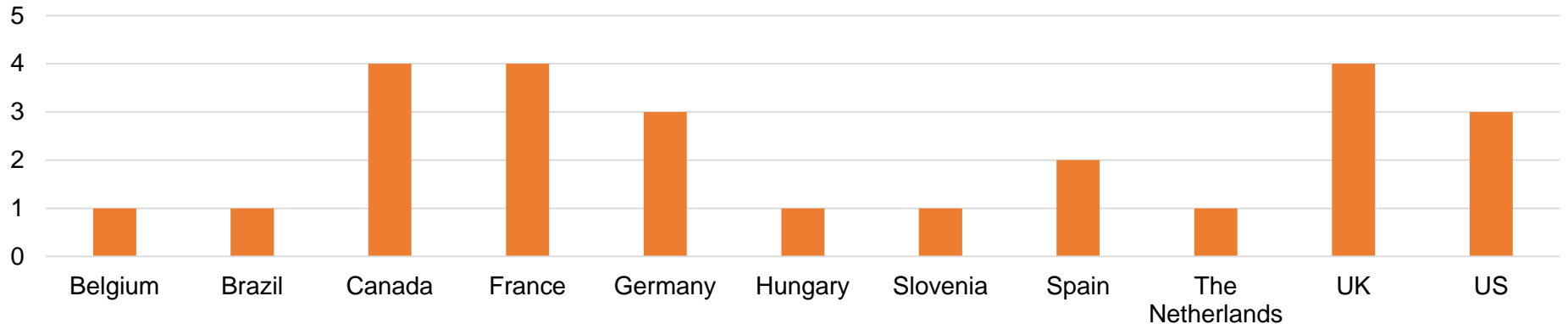
Thomas Degueule

Nicholas Matragkas

Alessandro Romero

Cortland Starrett

Simon Van Mierlo



# Publication of Resources

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## Pre-proceedings

- Pre-workshop version of papers are available at <http://www.modelexecution.org/exe2017>

## Post-proceedings

- Revised papers will be published on CEUR: <http://ceur-ws.org>
- Deadline for camera-ready versions: October 13<sup>th</sup>
- Submission system: <https://easychair.org/conferences/?conf=exe2017>

## Presentations

- Will be available at <http://www.modelexecution.org/exe2017>
- Please send a copy of your slides to [exe2017@modelexecution.org](mailto:exe2017@modelexecution.org)

# Post-Proceedings: Camera-Ready

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## Instructions for camera-ready versions

- Page limit: +1 page
  - Research papers and experience reports: 7 pages
  - Tool demonstrations: 4 pages
- IEEE format
  - Remove footer + header (page numbers, copyright notice, etc.)
  - Use emphasizing capitalized style for paper titles
  - Add at least three keywords
  - Embed all fonts
- Indicate paper type as subtitle (“(Experience Reports)” / “(Tool Demonstration)”)

# Session 1

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**9:15 – 10:30 Keynote (Chair: Tanja Mayerhofer)**

**Towards an Open-Source MDE Tooling Infrastructure for the Internet of Things**

*Juergen Dingel*

# Session 2

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## **11:00 – 12:30 Session 2: Paper Presentations (Chair: Jeff Gray)**

20 minutes per paper (15 minutes presentation + 5 minutes discussion)

### **Create and Play your Pac-Man Game with the GEMOC Studio (Tool Demonstration)**

*Dorian Leroy, Manuel Wimmer, Erwan Bousse, Benoit Combemale, Wieland Schwinger*

### **Executing Models by Filmstripping: Enhancing Validation by Filmstrip Templates and Transformation Alternatives**

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### **Executing Robot Task Models in Dynamic Environments**

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### **Discussion**

# Session 3

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**14:00 – 15:30 Session 3: Paper Presentations (Chair: Erwan Bousse)**

20 minutes per paper (15 minutes presentation + 5 minutes discussion)

**Towards one Model Interpreter for Both Design and Deployment**

*Valentin Besnard, Matthias Brun, Philippe Dhaussy, Frédéric Jouault, David Olivier, Ciprian Teodorov*

**Simulation Framework for Executing Component and Connector Models of Self-Driving Vehicles**

*Filippo Grazioli, Evgeny Kusmenko, Alexander Roth, Bernhard Rumpe, Michael von Wenckstern*

**Consistency Recovery in Interactive Modeling**

*Juri Di Rocco, Davide Di Ruscio, Marcel Heinz, Ludovico Iovino, Ralf Lämmel, Alfonso Pierantonio*

**Discussion**

# Session 4

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**16:00 – 17:30 Session 4: Panel Discussion (Chair: Ed Seidewitz)**

**Executable Modeling for Hardware, Software and Cyber-Physical Systems**

**Panelists:**

- Benoit Combemale, University of Toulouse
- Taylor Riche, National Instruments
- Darius Silingas, No Magic
- Cortland Starrett, One Fact Inc
- Hans Vangheluwe, University of Antwerp and McGill University

# Workshop Closing

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# Feedback

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## **Any Feedback on EXE 2017?**

Organization, Topics, Program, AOB?

# Thanks to All Supporters

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## **Program Committee**

Benoit Combemale

Thomas Degueule

Nicholas Matragkas

Alessandro Romero

Cortland Starrett

Simon Van Mierlo

Francis Bordeleau

Jonathan Corley

Juergen Dingel

Marjan Mernik

Jesús Sánchez Cuadrado

Eugene Syriani

Andreas Wortmann

Tony Clark

Juan de Lara

Martin Gogolla

Zoltan Micskei

Markus Scheidgen

Jérémie Tatibouët

Peter Clarke

Julien Deantoni

Dimitris Kolovos

Richard Paige

Bran Selic

Massimo Tisi

## **Authors & Presenters**

Matthias Brun

Philippe Dhaussy

Martin Gogolla

Frédéric Jouault

Dorian Leroy

Bernhard Rumpe

Manuel Wimmer

Kai Adam

Arvid Butting

Juri Di Rocco

Filippo Grazioli

Oliver Kautz

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Ciprian Teodorov

Erwan Bousse

Nisha Desai

Hilken Frank

Ludovico Iovino

Ralf Lämmel

Alexander Roth

Michael von Wenckstern

## **Keynote Speaker**

Juergen Dingel

## **MODELS Organizers**

Don Batory

Michalis Famelis

Sahar Kokaly

**Thank You!**

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