

# DisCoTec 2018

## Program of the main conferences

### COORDINATION, DAIS, FORTE

	Monday June 18	Tuesday June 19	Wednesday June 20
9:00-9:50	Registration	Registration	Registration
9:50-10:00	Presentation DisCoTec 2018		Presentation Discotec 2019
10:00-11:00	<b>Keynote Speaker Paolo Romano</b>	<b>Keynote Speaker Franco Zambonelli</b>	<b>Keynote Speaker Véronique Cortier</b>
11:00-11:30	Coffee break	Coffee break	Coffee break
11:30-13:00	Joint session: <b>CDF</b>	Best papers session: <b>CDF</b>	Session 5: <b>COORDINATION</b>
13:00-14:30	Lunch	Lunch	Lunch
14:30-16:00	Parallel Sessions 1: <b>CDF</b>	Parallel Sessions 3: <b>CDF</b>	
16:00-16:30	Coffee break	Coffee break	
16:30-17:30	Parallel Sessions 2: <b>CDF</b>	Parallel Sessions 4: <b>CD</b>	
17:30-19:00			
19:00-20:30	Walking tour in Madrid starting at <i>Casa de la Panadería</i>		
20:30-21:00			
21:00-	Welcome reception at <i>Colonial Norte</i>	Conference dinner at <i>Montes de Galicia</i>	

**CDF:** COORDINATION, DAIS, FORTE

**CD:** COORDINATION, DAIS

The talks corresponding to the keynote speakers, the Joint Session on Monday, the Best papers session on Tuesday and the presentations of DisCoTec 2018 and 2019 will take place at *Salón de Actos* (Ground floor).

The rest of the talks corresponding to COORDINATION will take place at *Aula 1* (Ground floor).

The rest of the talks corresponding to DAIS will take place at *Aula 2* (Ground floor).

The rest of the talks corresponding to FORTE will take place at *Aula 3* (Ground floor).

# Keynote Speakers

Monday, June 18, 10:00-11:00.

*Chair: Etienne Riviere.*

**Paolo Romano** (IST, Lisbon University & INESC-ID, Portugal).

*Self-tuning of complex computing systems: reconciling analytical modelling and machine-learning approaches.*

Tuesday, June 19, 10:00-11:00.

*Chair: Giovanna Di Marzo Serugendo.*

**Franco Zambonelli** (Università di Modena e Reggio Emilia, Italy).

*New Challenges of Coordination in the IoT and Autonomous Systems Era.*

Wednesday, June 20, 10:00-11:00.

*Chair: Christel Baier.*

**Véronique Cortier** (CNRS, Loria, France).

*Electronic voting: how logic can help.*

# COORDINATION 2018

**JOINT SESSION:** Monday, June 18, 11:30-13:00.

*Chair: Elie Najm.*

**Giorgio Audrito, Jacob Beal, Ferruccio Damiani and Mirko Viroli.**

*Space-Time Universality of Field Calculus*

**SESSION 1** (*Tools and Methodologies*): Monday, June 18, 14:30-16:00.

*Chair: Mirko Viroli.*

**Giovanni Ciatto, Stefano Mariani, Maxime Louvel, Andrea Omicini and Franco Zambonelli.**

*Twenty Years of Coordination Technologies: State-of-the-Art and Perspectives (Survey)*

**Mario Bravetti and Gianluigi Zavattaro.**

*Foundations of Coordination and Contracts and their Contribution to Session Type Theory (Survey)*

**SESSION 2** (*Coordination Abstractions*): Monday, June 18, 16:30-17:30.

*Chair: Alberto Lluch Lafuente.*

**Eva Kuhn, Sophie Therese Radschek and Nahla Elaraby.**

*Distributed Coordination Runtime Assertions for the Peer Model*

**Kasper Dokter and Farhad Arbab.**

*Rule-Based Form for Stream Constraints*

**BEST PAPERS SESSION:** Tuesday, June 19, 11:30-13:00.

*Chair: Jean-Bernard Stefani.*

**Kiko Fernandez-Reyes, Dave Clarke, Elias Castegren and Huu-Phuc Vo.**

*Forward to a Promising Future*

**SESSION 3** (*Coordination Languages*): Tuesday, June 19, 14:30-16:00.

*Chair: Gianluigi Zavattaro.*

**Rocco De Nicola, Gianluigi Ferrari, Rosario Pugliese and Francesco Tiezzi.**

*A Formal Approach to the Engineering of Domain-Specific Distributed Systems (Survey)*

**Mirko Viroli, Jacob Beal, Ferruccio Damiani, Giorgio Audrito, Roberto Casadei and Danilo Pianini.**

*From Field-Based Coordination to Aggregate Computing (Survey)*

**SESSION 4 (Applications):** Tuesday, June 19, 16:30-17:30.

*Chair: Jean Marie Jaquet.*

**Pierre Sutra, Patrick Marlier, Valerio Schiavoni and Francois Trahay.**

*Boosting Transactional Memory with Stricter Serializability*

**Pierre Leca, Ludovic Henrio, Gaétan Hains and Wijnand Suijlen.**

*Active objects for coordinating BSP computations (short paper)*

**SESSION 5 (Tuple Spaces):** Wednesday, June 20, 11:30-13:00.

*Chair: Michele Loreti.*

**Denis Darquennes, Jean-Marie Jacquet and Isabelle Linden.**

*On Multiplicities in Tuple-based Coordination Languages: the Bach Family of Languages and its Expressiveness Study (Survey)*

**Linas Kaminskas and Alberto Lluch Lafuente.**

*Aggregation policies for tuple spaces*

## **DAIS 2018**

**JOINT SESSION:** Monday, June 18, 11:30-13:00.

*Chair: Elie Najm.*

**Adrian Francalanza, Claudio Antares Mezzina and Emilio Tuosto.**

*Reversible Choreographies via Monitoring in Erlang*

**SESSION 1 (Middleware):** Monday, June 18, 14:30-16:00.

*Chair: Frank Eliassen.*

**Henner Heck, Olga Kieselmann, Nils Kopal and Arno Wacker.**

*A Decentralized Resilient Short-term Cache for Messaging*

**João Rodrigues, Eduardo R. B. Marques, Joaquim Silva, Luis Lopes and Fernando Silva.**

*Video Dissemination in Untethered Edge-Clouds: a Case Study*

**Christian Berger and Hans P. Reiser.**

*WebBFT: Byzantine fault tolerance for resilient interactive web applications*

**SESSION 2 (Adaptation):** Monday, June 18, 16:30-17:30.

*Chair: Silvia Bonomi.*

**Francisco Javier Velazquez-Garcia, Pål Halvorsen, Håkon Kvale Stensland and Frank Eliassen.**

*Autonomic adaptation of multimedia presentations adhering to application mobility*

**Fahimeh Rahemi, Ehsan Khamespanah and Ramtin Khosravi.**

*Improving the Performance of Actor-Based Programs Using a New Actor to Thread Association Technique*

**BEST PAPERS SESSION:** Tuesday, June 19, 11:30-13:00.

*Chair: Jean-Bernard Stefani.*

**Christopher Eibel, Christian Gulden, Wolfgang Schröder-Preikschat and Tobias Distler.**

*Strome: Energy-Aware Data-Stream Processing*

**SESSION 3 (Handling Malicious Behaviors):** Tuesday, June 19, 14:30-16:00.

*Chair: Francisco Maia.*

**Tetiana Yarygina and Christian Otterstad.**

*A Game of Microservices: Automated Intrusion Response (WIP paper)*

**Sophie Cerf, Sonia Ben Mokhtar, Sara Bouchenak, Nicolas Marchand and Bogdan Robu.**

*Dynamic Modeling of Location Privacy Protection Mechanisms*

**Raad Bin Tareaf, Philipp Berger, Patrick Hennig and Christoph Meinel.**

*Malicious Behavior Identification in Online Social Networks (WIP paper)*

**SESSION 4 (Large-scale decentralized systems):** Tuesday, June 19, 16:30-17:30.

*Chair: Claudio Antares Mezzina.*

**Barbara Guidi, Andrea Michienzi and Laura Ricci.**

*SONIC-MAN: A distributed protocol for dynamic community detection and management*

**José Enes, Nuno Machado, Francisco Maia and Miguel Matos.**

*Totally Ordered Replication for Massive Scale Key-Value Stores*

# FORTE 2018

**JOINT SESSION:** Monday, June 18, 11:30-13:00.

*Chair: Elie Najm.*

**Yehia Abd Alrahman, Rocco De Nicola, Michele Loreti and Giulio Garbi.**

**SESSION 1** (*Security and Authorization*): Monday, June 18, 14:30-16:00.

*Chair: Christel Baier.*

**Daniele Nantes-Sobrinho and Jorge A. Pérez.**

*Relating Process Languages for Security and Communication Correctness (Extended Abstract)*

**Alexander Sjösten, Daniel Hedin and Andrei Sabelfeld.**

*Information Flow Tracking for Side-effectful Libraries*

**Jovanka Pantovic, Ivan Prokic and Hugo Torres Vieira.**

*A Calculus for Modeling Floating Authorizations*

**SESSION 2** (*Stochastic models*): Monday, June 18, 16:30-17:30.

*Chair: Jorge A. Perez.*

**Laure Petrucci and Jaco van de Pol.**

*Parameter Synthesis Algorithms for Parametric Interval Markov Chains*

**Ruggero Lanotte, Massimo Merro and Andrei Munteanu.**

*A Modest Security Analysis of Cyber-Physical Systems: A Case Study*

**BEST PAPERS SESSION:** Tuesday, June 19, 11:30-13:00.

*Chair: Jean-Bernard Stefani.*

**Jonas Westman and Mattias Nyberg.**

*Preserving Contract Satisfiability under Non-Monotonic Composition*

**SESSION 3** (*Distributed Systems*): Tuesday, June 19, 14:30-16:00.

*Chair: Luis Caires.*

**Alain Girault, Gregor Goessler, Rachid Guerraoui, Jad Hamza and Dragos-Adrian Seredinschi.**

*Monotonic Prefix Consistency in Distributed Systems*

**Saverio Giallorenzo, Fabrizio Montesi and Maurizio Gabbrielli.**

*Applied Choreographies*

**Kim Völlinger and Samira Akili.**

*On a Verification Framework for Certifying Distributed Algorithms: Distributed Checking and Consistency*