

PRACTICAL INFORMATION



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SHUTTLE TIMES :

A daily shuttle service is organized from Grenoble Station (Bus Station) to Inria Montbonnot.

TUESDAY JUNE 2 :

Outward trip : Departure from Grenoble Station at 07:30
Return trip : Departures from Inria at 17:45 and 18:00.

WEDNESDAY JUNE 3 :

Outward trip : Departure from Grenoble Station at 08:15
Return trip : Departure from Inria at 17:45 and 18:00.
A first stop will be done at the Grenoble Cable Car, followed by a final stop at Grenoble Station.

THURSDAY JUNE 4 :

Outward trip : Departure from Grenoble Station at 08:15
Return trip : Departures from Inria at 14:45 and 18:15.

FRIDAY JUNE 5 :

Outward trip : Departure from Grenoble Station at 08:15
Return trip : Departure from Inria at 18:15.

Grenoble Tourist Information Office :

14, rue de la République - +33 (0)4 76 42 41 41

DisCoTec

Distributed Computing Techniques 2015

THE 10TH INTERNATIONAL FEDERATED
CONFERENCE ON DISTRIBUTED
COMPUTING TECHNIQUES

JUNE 2-5 2015 - INRIA MONTBONNOT, FRANCE



- **COORDINATION -**
Coordination Models and Languages
- **DAIS -** Distributed Applications and Interoperable Systems
- **FORTE -** Formal Techniques for Distributed Objects,
Components and Systems

Organized By :



Sponsored By :



CONFERENCE PROGRAM

DISCOTEC 2015 PROGRAM OVERVIEW

DAY	DAY 1 TUESDAY, JUNE 2	DAY 2 WEDNESDAY, JUNE 3
09:00 10:30	PLENARY Keynote: Alois Ferscha	PLENARY Keynote: Willy Zwaenepoel
BREAK 10:30 - 11:00		
11:00 12:30	PLENARY Joint Session (COORDINATION, DAIS, FORTE)	<ul style="list-style-type: none"> - COORDINATION, Session 3 - DAIS, Session 3 - FORTE, Session 3
LUNCH 12:30 - 14:00		
14:00 15:30	<ul style="list-style-type: none"> - COORDINATION, Session 1 - DAIS, Session 1 - FORTE, Session 1 	PLENARY DisCoTec 10th Anniversary Panel
BREAK 15:30 - 16:00		
16:00 17:30	<ul style="list-style-type: none"> - COORDINATION, Session 2 - FORTE, Session 2 - DAIS, Session 2 	<ul style="list-style-type: none"> - COORDINATION, Session 4 - FORTE, Session 4 - DAIS, Session 4
GALA DINNER (20:00)		

DAY	DAY 3 TUESDAY, JUNE 4	DAY 4 FRIDAY, JUNE 5
09h00 10h30	PLENARY Keynote: Leslie Lamport	<ul style="list-style-type: none"> - ICE WORKSHOP 8th Interaction and Concurrency Experience - FRIDA WORKSHOP Formal Reasoning in Distributed Algorithms - MEMO WORKSHOP 2nd International Workshop on Meta Models for Process Languages
BREAK 10:30 - 11:00		
11h00 12h30	<ul style="list-style-type: none"> - COORDINATION, Session 5 - DAIS, Session 5 - FORTE, Session 5 13:00 - 13:30 : Closing (Plenary) 	
LUNCH 13:30 -14:30		LUNCH 12:30 - 14:00
Afternoon	14:30 - 18:00 ICE WORKSHOP 8th Interaction and Concurrency Experience	14:00 - 18:00 <ul style="list-style-type: none"> - ICE WORKSHOP 8th Interaction and Concurrency Experience - FRIDA WORKSHOP Formal Reasoning in Distributed Algorithms - MEMO WORKSHOP 2nd International Workshop on Meta Models for Process Languages

8:00 - 8:50 — **PLENARY**
Registration

8:50 - 9:00 — **Opening** (*Alain Girault, General Chair*)

9:00 - 10:30 — **PLENARY Keynote #1: Alois Ferscha - Awareness as a Mechanism of Coordination in Planetary Scale Distributed Systems**

10:30 - 11:00 — **Break**

11:00 - 12:30 — **Joint Session (COORDINATION, DAIS, FORTE)**

- "A Fixpoint-based Calculus for Graph-shaped Computational Fields" **Alberto Lluch Lafuente, Michele Loreti and Ugo Montanari**
- "Fully Distributed Privacy Preserving Mini-Batch Gradient Descent Learning" **Gábor Danner and Mark Jelasity.**
- "Automatic Verification of Stabilization for Some Distributed Algorithms" **Ritwika Ghosh and Sayan Mitra**

12:30 - 14:00 — **Lunch**

14:00 - 15:30 — **COORDINATION Session 1 - Tuple-based coordination**

- "Replica-based High-Performance Tuple Space Computing" **Marina Andric, Rocco De Nicola and Alberto Lluch Lafuente**
- "Investigating Fluid-flow Semantics of Asynchronous Tuple-based Process Languages for Collective Adaptive Systems" **Diego Latella, Michele Loreti and Mieke Massink**
- "Logic Fragments: a coordination model based on logic inference" **Francesco Luca De Angelis and Giovanna Di Marzo Serugendo**

14:00 - 15:30 — **DAIS Session 1 - Datastores**

- "X-Ray: Monitoring and analysis of distributed database queries" **Pedro Guimarães and Jose Pereira**
- "Leader Election with a NewSQL Database" **Salman Niazi, Mahmoud Ismail, Gautier Berthou and Jim Dowling**
- "Concise Server-Wide Causality Management for Eventually Consistent Data Stores" **Ricardo Gonçalves, Paulo Sérgio Almeida, Carlos Baquero and Victor Fonte**

14:00 - 15:30 — **FORTE Session 1 - Ensuring Properties of Distributed Systems**

- "Timely Dataflow: A Model" **Martin Abadi and Michael Isard**
- "On partial order semantics for SAT/SMT-based symbolic encodings of weak memory concurrency" **Alex Horn and Daniel Kroening**
- "Types for Deadlock-Free Higher-Order Programs" **Luca Padovani and Luca Novara**

15:30 - 16:00 — **Break**

16:00 - 17:00 — **COORDINATION Session 2 - Constraints**

- "Take Command of Your Constraints!" **Sung-Shik T.Q. Jongmans and Farhad Arbab**
- "A Labelled Semantics for Soft Concurrent Constraint Programming" **Fabio Gadducci, Francesco Santini, Luis Pino and Frank Valencia**

16:00 - 17:30 — **DAIS Session 2 - Cloud**

- "Fluidify: Decentralized Overlay Deployment in a Multi-Cloud World" **Resmi Ariyattu and Francois Taiani**
- "LiveCloudInspector: Towards Integrated IaaS Forensics in the Cloud" **Julian Zach and Hans P. Reiser**
- "Incentivising Resource Sharing in Federated Clouds (short)" **Eduardo de Lucena Falcão, Francisco Brasileiro, Andrey Brito and Jose Luis Vivas.**
- "Replication of Recovery Log --- an Approach to Enhance SOA Reliability (short)" **Anna Kobusinska**

16:00 - 17:00 — **FORTE Session 2 - Efficient Verification Techniques**

- "Sliced Path Prefixes - An Effective Method to Enable Refinement Selection" **Dirk Beyer, Stefan Löwe and Philipp Wendler**
- "Extending Testing Automata to All LTL" **Ala Eddine Ben Salem**

9:00 - 10:30 — **PLENARY - Keynote #2: Willy Zwaenepoel**
Analytics on Graphs with a Trillion Edges

10:30 - 11:00 — **Break**

11:00 - 12:30 — **COORDINATION Session 3 - Coordinating ensembles**

- "Dynamic Choreographies: Safe Runtime Updates of Distributed Applications" **Mila Dalla Preda, Maurizio Gabbrielli, Saverio Giallorenzo, Ivan Lanese and Jacopo Mauro**

- "Comingle: Distributed Logic Programming for Decentralized Mobile Ensembles" **Edmund Soon Lee Lam, Iliano Cervesato and Nabeeha Fatima**

- "Type Reconstruction Algorithms for Deadlock-Free and Lock-Free Linear π - Calculi" **Luca Padovani, Tzu-Chun Chen and Andrea Tosatto**

11:00 - 12:30 — **DAIS Session 3 - Scalability**

- "Dynamic Message Processing and Transactional Memory in the Actor Model" **Yaroslav Hayduk, Anita Sobe and Pascal Felber**

- "Cheap and Cheerful: Trading Speed and Quality for Scalable Social-Recommendations" **Anne-Marie Kermarrec, Francois Taiani and Juan M. Tirado**

- "Similitude: Decentralised Adaptation in Large-Scale P2P Recommenders" **Davide Frey, Anne-Marie Kermarrec, Christopher Maddock, Andreas Mauthe, Pierre-Louis Roman and François Taiani**

11:00 - 12:30 — **FORTE Session 3 - Formal Models for concurrency and distribution**

- "Dynamic Causality in Event Structures" **Youssef Arbach, David S. Karcher, Kirstin Peters and Uwe Nestmann**

- "Code Mobility Meets Self-organisation: a Higher-order Calculus of Computational Fields" **Ferruccio Damiani, Mirko Viroli, Danilo Pianini and Jacob Beal**

- "Loop Freedom in AODVv2" **Kedar Namjoshi and Richard Trefler**

12:30 - 14:00 — **Lunch**

14:00 - 15:30 — **PLENARY - DisCoTec 10th Anniversary Panel : DisCotec Science, the Next 10 Years**
Panelists: Erika Abraham, Ahmed Bouajjani, Frank de Boer, Rocco de Nicola, Kurt Geihs, Willy Zwaenepoel

15:30 - 16:00 — **Break**

16:00 - 17:30 — **COORDINATION Session 4 - Agent-oriented techniques**

- "Parallelisation and application of AD3 as a method for solving large scale combinatorial auctions" **Francisco Cruz-Mencia, Antonio Espinosa, Juan Carlos Moure, Jesus Cerquides and Juan Antonio Rodriguez-Aguilar**

- "Handling agent perception in heterogeneous distributed systems: a policy-based approach" **Stephen Cranefield and Surangika Ranathunga**

- "Blending Event-Based and Multi-Agent Systems around Coordination Abstractions" **Andrea Omicini, Giancarlo Fortino and Stefano Mariani**

16:00 - 17:30 — **DAIS Session 4 - Consistency and Performance**

- "A CRDT Supporting Selective Undo for Collaborative Text Editing" **Weihai Yu, Luc André and Claudia-Lavinia Ignat**

- "Practical Evaluation of Large Scale Applications" **Tiago Jorge, Francisco Maia, Miguel Matos, Jose Pereira and Rui Oliveira.**

- "The Impact of Consistency on System Latency in Fault Tolerant Internet Computing" **Olga Tarasyuk, Alexander Romanovsky, Anatoliy Gorbenko, Vyacheslav Kharchenko and Vitalii Ruban.**

16:00 - 17:00 — **FORTE Session 4 - Security**

- "Safe and simple isolation for an actor abstract machine" **Benoit Claudel, Quentin Sabah and Jean-Bernard Stefani**

- "Type checking privacy policies in the pi-calculus" **Dimitrios Kouzapas and Anna Philippou**

9:00 - 10:30 ___ **PLENARY - Keynote #3** : Leslie Lamport
What Should Math Have to do with Building Complex Distributed Systems?

10:30 - 11:00 ___ **Break**

11:00 - 12:30 ___ **COORDINATION Session 5 - Shared spaces**
- "Klaim-DB: A Modeling Language for Distributed Database Applications" **Xi Wu, Ximeng Li, Alberto Lluch Lafuente, Flemming Nielson and Hanne Riis Nielson**

- "Open transactions on shared memory"
Marino Miculan, Marco Peressotti and Andrea Toneguzzo

- "VISIRI - Distributed complex event processing system for handling large number of queries" **Malinda Kumarasinghe, Geeth Tharanga, Lasitha Weerasinghe, Ujitha Wickramaratna and Surangika Ranathunga**

11:00 - 12:30 ___ **DAIS Session 5 - Resource Management**
"Heterogeneous Resource Selection for Arbitrary HPC Applications in the Cloud" **Anca Iordache, Eliya Buyukkaya and Guillaume Pierre.**

- "MERCi-MIS: Should I turn off my servers?" **Mar Callau-Zori, Luciana Arantes, Julien Sopena and Pierre Sens**

- "Distributed Monitoring and Management of Exascale Systems in the Argo Project (short)" **Swann Perarnau, Rajeev Thakur, Kamil Iskra, Ken Raffanetti, Franck Cappello, Rinku Gupta, Pete Beckman, Marc Snir, Henry Hoffmann, Martin Schulz and Barry Rountree**

11:00 - 12:00 ___ **FORTE Session 5 - Ensuring Properties of Distributed Systems**
- "Translation Validation for Synchronous Data-flow Specification in the SIGNAL Compiler" **Van-Chan Ngo, Jean-Pierre Talpin and Thierry Gautier**

- "Faster linearizability checking via P-compositionality"
Alex Horn and Daniel Kroening

11:00 - 12:00 ___ **FORTE Session 6 - Real Time Systems**
- "Compliance and subtyping in timed session types"
Massimo Bartoletti, Tiziana Cimoli, Maurizio Murgia, Alessandro Sebastian Podda and Livio Pompianu

- "Difference Bound Constraint Abstraction for Timed Automata Reachability Checking"
Weifeng Wang and Li Jiao

13:00 - 13:30 ___ **PLENARY - Closing**

13:30 - 14:30 ___ **Lunch**



GALA DINNER

**WEDNESDAY JUNE 3, 2015
FROM 20 : 00.**

Restaurant « Chez le Père'Gras" »
90 Chemin de la Bastille, 38700 La Tronche
Phone : +33 (0)4 76 42 09 47

Departure from the Bastille Cable car: Quai Stéphane Jay - 38000 Grenoble
Arrival at the Cable Car between 18:00 and 19:30.
Please do not forget to bring the ticket delivered in your conference attendee bag.



In the heart of Grenoble, welcome to La Bastille, a small fortified mountain located at the crossroad of three valleys, served by the first urban cable-car in the world. In a few minutes, day and night, the famous "bubbles" of Grenoble take you in the air from the center of the town up to the Bastille fortress. From the hilltop, you will discover the flattest town in France in its mountain setting! When the sun sets and the lights go down in the city, the view is outstanding.

Entertainment :
Magic Show,
by Claude Brun

