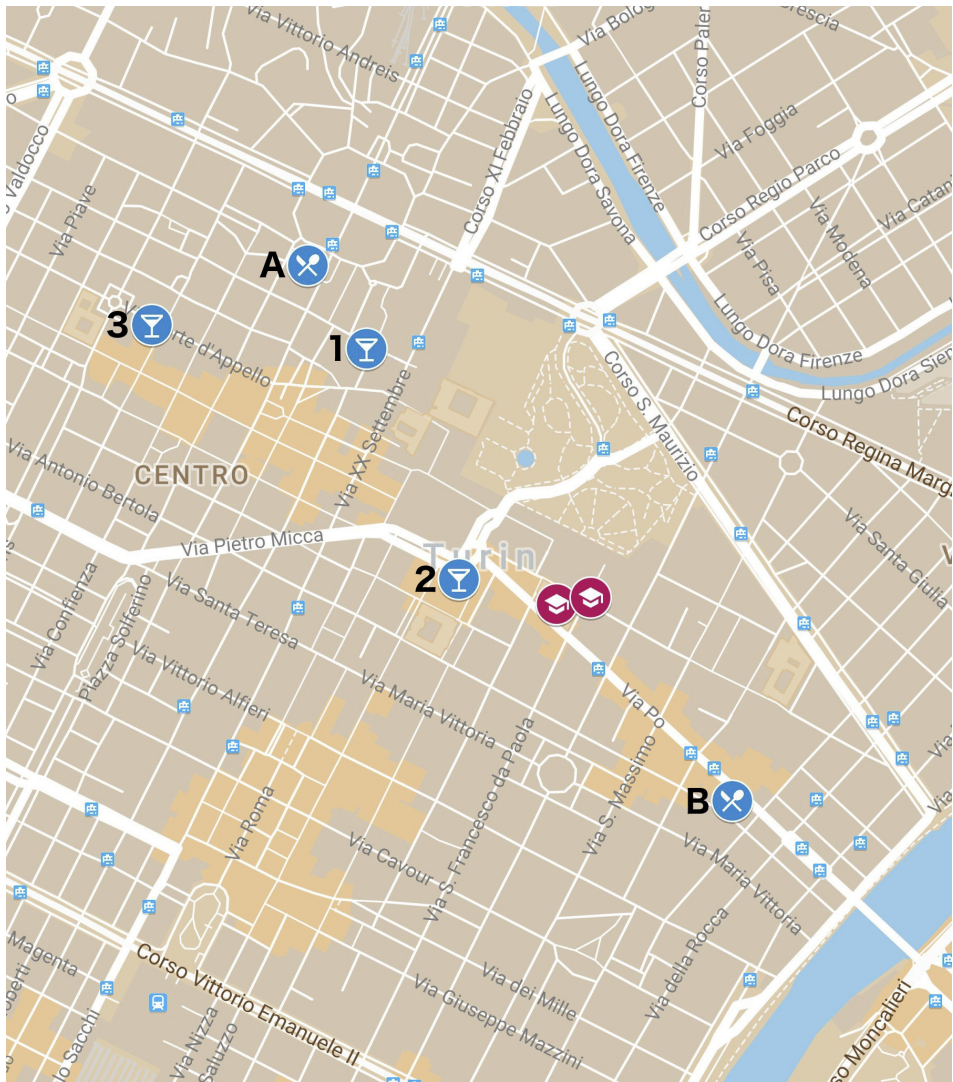# iFM 2017

13th International Conference on integrated Formal Methods

Torino, September 18th - 22nd, 2017

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🔴 university

🍸 receptions (1: *FMICS-AVoCS*; 2: *iFM*) and wine tasting (3)

❌ social dinners (A: *ARVI,ALP4IoT,WAO*; B: *FMICS-AVoCS*)

Contents

Search *iFM integrated Formal Methods Conference* in the Play Store or scan this QR-Code to download the **official iFM 2017 android app**: `https://play.google.com/store/apps/details?id=ifm2017.com.ifm2017project`

1 General Information

Conference and Registration

The **registration desk** is at the entrance of the *Cavallerizza Reale* university building, via Verdi 9, and (during the conference) is open every day from 08:15 to 17:30. If you need **help**, please ask to the *PCO Stilema srl* people at the registration desk or to one of the people with badge "LOCAL ORGANIZER".

Coffee breaks and lunches will be served in the first floor of the *Rettorato* university building, via Verdi 8.

Internet access can be obtained through *eduroam* (if your home institution is part of the eduroam consortium). Otherwise, please ask at the registration desk.

In the **lecture halls** there are almost no electrical sockets. From Monday afternoon, the room "Sala Allara" (in via Verdi 8, fist floor), with 40 desks equipped with electrical sockets, will be available to the conference participants.

Chairs are invited to be in the lecture hall at least 10 minutes prior to their session: it is vital that all speakers observe their time allotment and sessions stay on schedule.

Speakers are asked to contact their session chair before the beginning of the sessions.

Participants are requested to wear their **personal badge** throughout the meeting, as it is the "entrance ticket" to all sessions. It is forbidden to bring food and beverages in the lecture halls and in the "Sala Allara".

Social Events

Almost all the social events take place within walking distance from the conference venue, except for the iFM social dinner.

FMICS-AVoCS Reception
Monday 19:00-22:00—*NH Hotel "Torino Santo Stefano", Via Porta Palatina, 19.*

ARVI, ALP4IoT, WAO Social Dinner (separate registration)
Monday 19:30—*Pizzeria "Le Rondini", Piazza della Repubblica, 1bis/C.*

Wine Tasting Event (separate registration, limited availability)
Tuesday 18:30—*Enoteca "Vinolento Cantina & Cucina", Via Corte d'Appello, 13.*

FMICS-AVoCS Social Dinner
Tuesday 20:00—*Restaurant "Porto di Savona", Piazza Vittorio Veneto, 2.*

iFM Reception
Wednesday 18:30-20:30—*Caffè "Baratti & Milano", Piazza Castello, 27/29.*

iFM Social Dinner
Thursday 19:30—*Restaurant "Al Gufo Bianco", Corso Dante, 129.*
Getting there: walk (40 min from the conference venue) or take the metro from the *Porta Nuova* stop (in front of the railway station) to *Dante* stop (700m from the restaurant).

Useful Informations about Torino

The only accepted **currency** in Italy is euro, but you can find few exchange offices (one is located inside the Porta Nuova railway station). Credit cards are not always accepted, especially for smaller amounts, but POSs are widely available throughout the city. In restaurants and bars it is better to ask in advance for separate bills.

Electrical sockets in Italy are mostly Type L/10 or Type L/16. However, Type F sockets are not uncommon (which are also compatible with Type C and E plugs).

Public transport in Torino is provided by the GTT company, which manages several bus lines and one metro line. Daily passes for 1 to 3 days cost 5.00€, 7.50€, 10.00€; 1-, 5-, 15-ride tickets cost 1.50€, 6.50€, 17.50€. Tickets must be validated when you get on a Bus/Tram and have a validity of 90 minutes (you can change vehicle)—the same ticket is also valid for one metro ride. Real-time information on buses is available on the Telegram bot `@gttorari_bot`. *When traveling by public transport beware of pickpockets.*

Torino is in general **safe**. In suburban areas it is not advisable to walk alone at night; but in central areas it is fine.

The best-known **attractions** in Torino are the Egyptian Museum and the Cinema Museum which is located in the iconic Mole Antonelliana. Don't miss the squares, parks, streets and churches while walking in the city center. Take your time to try the *Piedmont cuisine*. Here we recommend some places for *Bicerin, Bignole (Bignè), Chocolate* and *Ice Cream (for restaurants see the Website or the Android App)*.
Bicerin: Caffè Al Bicerin. Piazza della Consolata 5 [walking distance to iFM venue—just in front of an impressive church, the Santuario della Consolata]
Bignole (Bignè): Pasticceria Ghigo. Via Po 52/b [very close to the conference venue]
    Riccardo Cravero. Strada Comunale Del Cimitero Di Sassi 6/A [take tram 15 in Via Po, direction Coriolano Cap. and get off there—close to the Sassi - Superga Rack Tramway station]
Chocolate: Guido Castagna. Via Maria Vittoria, 27/C [close to iFM venue]
    Guido Gobino. Via Lagrange 1 [close to iFM venue]
Ice Cream: Alberto Marchetti. Via Po 35 bis [very close to iFM venue]
    Mara dei boschi. Via Berthollet 30 H [in the San Salvario district, famous for its nightlife—beware of pickpockets]

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2   Program Overview

Event	Room	Building
Registration	*Entrance*	*Cavallerizza Reale*
Lunches, coffee breaks	*Coffee break area*	*Rettorato (first floor)*
Opening Plenary (Monday, 8:45-9:00) *Paola Pisano* Deputy Mayor for Innovation and Smart City at the City of Turin	*Sala Multifunzione 1*	*Cavallerizza Reale*
iFM	*Aula Magna della Cavallerizza*	*Cavallerizza Reale*
FMICS-AVoCS	*Sala Multifunzione 1*	*Cavallerizza Reale*
ARVI **[participation is by invitation only]**	*Aula Magna del Rettorato*	*Rettorato (first floor)*
ALP4IoT and WAO	*Aula Magna del Rettorato (09:00-10:00)* *Sala Principe d'Acaja (10:30-17:30)*	*Rettorato (first floor)* *Rettorato (ground floor)*
FVAV	*Aula Magna del Rettorato*	*Rettorato (first floor)*
PrePost	*Sala Principe d'Acaja*	*Rettorato (ground floor)*
PhD-iFM	*Sala Biblioteca Arturo Graf*	*Rettorato (first floor)*
TLT **[separate registration]**	*Sala Multifunzione 1*	*Cavallerizza Reale*

See Section 7 for building maps.

	Monday September 18	Tuesday September 19	Wednesday September 20	Thursday September 21	Friday September 22
08:15 - 08:45	r e g i s t r a t i o n				
08:45 - 09:00	Opening Plenary		iFM Opening		
09:00 - 10:00	FMICS-AVoCS, ARVI, ALP4IoT	FMICS-AVoCS, FVAV, PrePost, PhD-iFM	iFM Keynote I: *André Platzer*	iFM Keynote II: *Jane Hillston*	iFM Keynote III: *Martin Vechev*
10:00 - 10:30	c o f f e e b r e a k				
10:30 - 12:10	FMICS-AVoCS, ARVI, ALP4IoT	FMICS-AVoCS, FVAV, PrePost, PhD-iFM	iFM Session I: *Cyber-physical systems*	iFM Session IV: *Concurrency and distributed systems*	iFM Session VII: *Verified Software* iFM Closing (12:10-12:20)
12:10 - 13:40	l u n c h				
13:40 - 15:20	FMICS-AVoCS, ARVI, ALP4IoT	FMICS-AVoCS, FVAV, PrePost, PhD-iFM	iFM Session II: *Software Verification Tools*	iFM Session V: *Program Verification Techniques*	**TLT** Colloquium in honor of Mariangiola Dezani-Ciancaglini, Simona Ronchi Della Rocca and Mario Coppo (`tlt2017.di.unito.it`) **[Separate Registration]**
15:20 - 15:50	c o f f e e b r e a k				
15:50 - 17:30	ARVI, WAO	FVAV, PrePost, PhD-iFM	iFM Session III: *Safety-critical systems*	iFM Session VI: *Formal Modeling*	
	FMICS-AVoCS Reception (*NH Torino Santo Stefano*, 19:00-22:00)	Wine Tasting Event (*Vinolento Cantina & Cucina*, 18:30-20:30)	iFM Reception (*Baratti & Milano*, 18:30-20:30)		
	ARVI, ALP4IoT, WAO Social dinner *Le Rondini*, 19:30	FMICS-AVoCS Social dinner, award of **best paper** (*Porto di Savona*, 20:00)		iFM Social dinner, award of **best paper** and **best tool paper** *Al Gufo Bianco*, 19:30	

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3   iFM Program

Wednesday, September 20th

08:45-09:00   Opening

09:00-10:00   Keynote I (chair: Ana Cavalcanti)

Logic & Proofs for Cyber-Physical Systems with KeYmaera X
André Platzer

_____   10:00 Coffee Break

10:30-12:10   Session I: Cyber-Physical Systems (chair: Einar Broch Johnsen)

An Active Learning Approach to the Falsification of Black Box Cyber-Physical Systems
Simone Silvetti, Alberto Policriti, Luca Bortolussi

Modelling and Verification of Timed Robotic Controllers
Pedro Ribeiro, Alvaro Miyazawa, Wei Li, Ana Cavalcanti, Jon Timmis

Spatial Reasoning about Motorway Traffic Safety with Isabelle/HOL
Sven Linker

Formalising Traffic Rules for Autonomous Vehicles Involving Multiple Lanes in Isabelle/HOL
Albert Rizaldi, Jonas Keinholz, Jochen Feldle, Fabian Immler, Matthias Althoff, Eric Hilgendorf, Tobias Nipkow

_____   12:10 Lunch

13:40-15:20   Session II: Software Verification Tools (chair: Carlo Furia)

Making Whiley Boogie!
Mark Utting, David Pearce, Lindsay Groves

Complexity Analysis for Java with AProVE
Florian Frohn, Jürgen Giesl

The VerCors Tool Set: Verification of Parallel and Concurrent Software
Stefan Blom, Saeed Darabi, Marieke Huisman, Wytse Oortwijn

An Extension of the ABS Toolchain with a Mechanism for Type Checking SPLs
Ferruccio Damiani, Michael Lienhardt, Radu Muschevici, Ina Schaefer

_____   15:20 Coffee Break

15:50-17:30   Session III: Safety-Critical Systems (chair: Olaf Owe)

Generalised Test Tables - a Practical Specification Language for Reactive Systems
Bernhard Beckert, Suhyun Cha, Mattias Ulbrich, Birgit Vogel-Heuser, Alexander Weigl

Formal Verification of CNL Health Recommendations
Fahrurrozi Rahman, Juliana Küster Filipe Bowles

Algebraic Compilation of Safety-Critical Java Bytecode
James Baxter, Ana Cavalcanti

Task-Node Mapping in an Arbitrary Computer Network using SMT Solver
Andrii Kovalov, Elisabeth Lobe, Andreas Gerndt and Daniel Lüdtke

Thursday, September 21th

09:00-10:00   Keynote II (chair: Steve Schneider)

Integrating Inference with Stochastic Process Algebra Models
Jane Hillston

10:00 Coffee Break

10:30-12:10   Session IV: Concurrency and distributed systems (chair: Marieke Huisman)

BTS: A Tool for Formal Component-based Development
Dalay Israel de Almeida Pereira, Marcel Vinicius Medeiros Oliveira, Madiel Conserva Filho, Sarah Raquel Da Rocha Silva

Testing and Verifying Chain Repair Methods for CORFU Using Stateless Model Checking
Stavros Aronis, Scott Fritchie, Kostis Sagonas

Synthesizing Coalitions for Multi-Agent Games
Wei Ji, Farn Wang, Peng Wu

Analysis of synchronisation patterns in stateful active objects
Ludovic Henrio, Cosimo Laneve and Vincenzo Mastandrea

12:10 Lunch

13:40-15:20   Session V: Program Verification Techniques (chair: Heike Wehrheim)

Hoare-style Reasoning from Multiple Contracts
Olaf Owe, Toktam Ramezanifarkhani, Elahe Fazeldehkordi

A New Invariant Rule for the Analysis of Loops with Non-standard Control Flows
Dominic Steinhöfel, Nathan Wasser

Triggerless Happy: Intermediate Verification with a First-Order Prover
Yuting Chen, Carlo A. Furia

SemSlice: Exploiting Relational Verification for Automatic Program Slicing
Bernhard Beckert, Thorsten Bormer, Stephan Gocht, Mihai Herda, Daniel Lentzsch, Mattias Ulbrich

15:50-17:30   Session VI: Formal Modeling (chair: Juliana Bowles)

VBPMN: Automated Verification of BPMN Processes
Ajay Krishna, Pascal Poizat, Gwen Salaün

How well can I secure my system?
Barbara Kordy, Wojciech Widel

MaxUSE: A Tool for Finding Achievable Constraints and Conflicts for Inconsistent UML Class Diagrams
Hao Wu

Transient and Steady-State Statistical Analysis for Discrete Event Simulators
Stephen Gilmore, Daniel Reijsbergen, Andrea Vandin

Friday, September 22th

09:00-10:00   Keynote III (chair: Reiner Hahnle)

Machine Learning for Programming
Martin Vechev

10:30-12:10   Session VII: Verified Software (chair: Mark Utting)

Modular Verification of Order-Preserving Write-Back Caches
Jörg Pfähler, Gidon Ernst, Stefan Bodenmüller, Gerhard Schellhorn, Wolfgang Reif

Formal verification of ARP (Address Resolution Protocol) through SMT-based model checking - A case study
Danilo Bruschi, Andrea Di Pasquale, Silvio Ghilardi, Andrea Lanzi, Elena Pagani

Certified Password Quality - A Case Study Using Coq and Linux Pluggable Authentication Modules
Joao F. Ferreira, Saul A. Johnson, Alexandra Mendes, Phillip J. Brooke

Verification of STAR-Vote and Evaluation of FDR and ProVerif
Murat Moran, Dan Wallach

12:10-12:20   Closing

4   FMICS-AVoCS Program

Monday, September 18th

09:00-09:10   FMICS-AVoCS Opening (Laure Petrucci, Cristina Seceleanu)

09:10-10:00   Keynote I (chair: Cristina Seceleanu)

Replacing Store Buffers by Load Buffers in Total Store Ordering
Parosh Abdulla

10:00 Coffee Break

10:30-11:45   Session I: Automated Verification Techniques (chair: Cristina Seceleanu)

10:30-10:55 **Deductive Functional Verification of Safety-Critical Embedded C-Code: An Experience Report**
Dilian Gurov, Christian Lidström, Mattias Nyberg, Jonas Westman

10:55-11:20 **Verifying Event-Based Timing Constraints by Translation Into Presburger Formulae**
Björn Lisper

11:20-11:45 **Query Checking for Linear Temporal Logic**
Samuel Huang, Rance Cleaveland

12:10 Lunch

13:40-15:20   Session II: Testing and Scheduling (chair: Alessandro Fantechi)

13:40-14:05 **Automatic Conformance Testing of Safety Instrumented Systems for Offshore Oil Platforms**
Hallan W. Veiga, Max H. Queiroz, Jean-Marie Farines, Marcelo L. Lima

14:05-14:30 **Model-Based Testing for Asynchronous Systems**
Alexander Graf-Brill, Holger Hermanns

14:30-14:55 **Information Leakage as a Scheduling Resource**
Fabrizio Biondi, Mounir Chadli, Thomas Given-Wilson, Axel Legay

14:55-15:20 **A unified formalism for monoprocessor schedulability analysis under uncertainty**
Étienne André

15:20 Coffee Break

Tuesday, September 19th

09:10-10:00   Keynote II (chair: Ana Cavalcanti)

Towards Formal Apps: Turning formal methods into verification techniques that make a difference in practice
Kerstin Eder

10:00 Coffee Break

10:30-12:10   Session III, SPECIAL TRACK: Formal Methods for Mobile and Autonomous Robots (chair: Ana Cavalcanti)

10:30-10:55 **CRutoN: Automatic Verification of a Robotic Assistant's Behaviours**
Paul Gainer, Clare Dixon, Kerstin Dautenhahn, Michael Fisher, Ullrich Hustadt, Joe Saunders, Matt Webster

10:55-11:20 **Sampling-based Reactive Motion Planning with Temporal Logic Constraints and Imperfect State Information**
Felipe J. Montana, Jun Liu, Tony J. Dodd

11:20-11:45 **Sampling-based Path Planning for Multi-robot Systems with Co-safe Linear Temporal Logic Specifications**
Felipe J. Montana, Jun Liu, Tony J. Dodd

11:45-12:10 **Certified Gathering of Oblivious Mobile Robots: survey of recent results and open problems**
Thibaut Balabonski, Pierre Courtieu, Lionel Rieg, Sébastien Tixeuil, Xavier Urbain

12:10 Lunch

13:40-15:55   Session IV: Modeling and Analysis Techniques (chair: Laure Petrucci)

13:40-14:05 **Learning Register Automata with Sequence Numbers and Windows of TCP Implementations**
Paul Fiterau-Brostean, Falk Howar

14:05-14:30 **Optimizing Feature Interaction Detection**
Alessandro Fantechi, Stefania Gnesi, Laura Semini

14:30-14:55 **Formalising the Dezyne Modelling Language in mCRL2**
Rutger van Beusekom, Jan Friso Groote, Paul Hoogendijk, Rob Howe, Wieger Wesselink, Rob Wieringa, Tim Willemse

15:20 Coffee Break

Wednesday, September 20th

09:00-12:10   Tutorial. DIME: Model-based Generation of Running Web applications (tutors: Tiziana Margaria, Philip Zweihoff)

08:15-10:00: Tutorial first part

10:00 Coffee Break

10:30-12:15: Tutorial second part

12:10 Lunch

5 Satellite Events Program

ARVI (Monday, September 18th)

09:00-10:00   Session I (joint with ALP4IoT)

Asynchronous Software Evolution: Obtaining Type Safety by Combining Type Checking and Runtime Constraints
Einar Broch Johnsen

10:00 Coffee Break

10:30-12:10   Session II

Interactive Runtime Verification – when Interactive Debugging meets Runtime Verification
Raphaël Jakse

Towards Automated Workload Selection and Benchmark Synthesis from Open-source Code Repositories
Walter Binder

Monitoring Decentralized Specifications
Antoine El-Hokayem

12:10 Lunch

13:40-14:40   Session III

Exploring the Adoption of Specification Inference Technologies in Industry
Luke Chircop

Timed Shield Synthesis
Florian Lorber

Runtime Verification of Hard Real-time Systems Properties
Andre Pedro

14:40-15:20   Management Committee Meeting (1st part)

15:20 Coffee Break

15:50-17:30   Management Committee Meeting (2nd part)

ALP4IoT & WAO (Monday, September 18th)

09:00-10:00   Keynote I (ALP4IoT)
located with ARVI in room "Aula Magna del Rettorato"

Asynchronous Software Evolution: Obtaining Type Safety by Combining Type Checking and Runtime Constraints
Einar Broch Johnsen

————————————————————————— 10:00 Coffee Break

10:30-12:10   Session I (ALP4IoT)

IoT Architectural Framework: A review of Connection and Integration Framework for IoT systems
Onoriode Uviase, Gerald Kotonya

Towards Runtime Monitoring of Node.js and Its Application to the Internet of Things
Davide Ancona, Luca Franceschini, Giorgio Delzanno, Maurizio Leotta, Marina Ribaudo, Filippo Ricca

Formalising Sensor Topologies for Target Counting
Sven Linker, Michele Sevegnani

————————————————————————— 12:10 Lunch

13:40-15:20   Session II (ALP4IoT)

Invited Industrial Talk: **IoT Opportunities and Solutions**
Cristina Chesta

Aggregate Graph Statistics
Giorgio Audrito, Ferruccio Damiani, Mirko Viroli

Resilient Blocks for Summarising Distributed Data
Giorgio Audrito, Sergio Bergamini

————————————————————————— 15:20 Coffee Break

15:50-17:30   Session III (WAO)

Keynote II: **Testing Shared Resources**
Lars-Åke Fredlund

Prototyping Formal System Models with Active Objects
Eduard Kamburjan, Reiner Hähnle

Types for Progress in Actor Programs
Minas Charalambides, Karl Palmskog, Gul Agha

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FVAV (Tuesday, September 19th)

09:00-10:00   Keynote

Traffic Sequence Charts - A Formal Visual Specification Language for Requirement Capture and Specification Development of Highly Autonomous Cars
Werner Damm

10:00 Coffee Break

10:30-11:20   Session I: Machine Learning and Probabilistic Systems

Causality-Aided Falsification
Takumi Akazaki, Yoshihiro Kumazawa, Ichiro Hasuo

Towards Proving the Adversarial Robustness of Deep Neural Networks
Guy Katz, Clark Barrett, David Dill, Kyle Julian, Mykel Kochenderfer

11:20-12:10   Session II: Agent based Modelling

Game Theory Models for the Verification of the Collective Behaviour of Autonomous Cars
László Zsolt Varga

A Rational Agent Controlling an Autonomous Vehicle: Implementation and Formal Verification
Lucas Fernandes, Vinicius Custodio, Gleifer Alves, Michael Fisher

12:10 Lunch

13:40-15:20   Session III: Logical Specification and Reasoning

Monitoring of Traffic Manoeuvres with Imprecise Information
Heinrich Ody

Imperfect Knowledge in Autonomous Urban Traffic Manoeuvres
Maike Schwammberger

Formal Verification of Autonomous Vehicles: An Isabelle Perspective
Albert Rizaldi

15:20 Coffee Break

15:50-17:30   Session IV: Modelling and Case Studies

Run-Time Risk Mitigation in Automated Vehicles: A Model for Studying Preparatory Steps
Mario Gleirscher

Formal Verification of Station Keeping Maneuvers for a Planar Autonomous Hybrid System
Benjamin Martin, Khalil Ghorbal, Eric Goubault, Sylvie Putot

Lightning talk: use of Formal Models of a Partitioning Hypervisor for Automotive System Level Properties
Sergey Tverdyshev, Holger Blasum

PrePost (Tuesday, September 19th)

09:00-10:00   Keynote I

Hybrid Protocol Conformance Verification for Binary Sessions
Luca Padovani

10:00 Coffee Break

10:30-12:00   Session I

A Story of Parametric Trace Slicing, Garbage and Static Analysis
Giles Reger

A Survey of Runtime Monitoring Instrumentation Techniques
Ian Cassar, Adrian Francalanza, Luca Aceto, Anna Ingolfsdottir

Control-Flow Residual Analysis for Symbolic Automata
Shaun Azzopardi, Christian Colombo, Gordon J. Pace

12:10 Lunch

13:50-14:50   Keynote II

OPE: The Journey to Open Payments, Safely
Aldrin Seychell

14:50-15:20   Session III

Exploring the Link Between Test Suite Quality and Automatic Specification Inference
Luke Chircop, Christian Colombo, Mark Micallef

15:20 Coffee Break

15:50-16:50   Session IV

Fragmented Monitoring
Oscar Cornejo, Daniela Briola, Daniela Micucci, Leonardo Mariani

Reliability and Fault-Tolerance by Choreographic Design
Ian Cassar, Adrian Francalanza, Claudio Antares Mezzina, Emilio Tuosto

16:50-17:00   Closing

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PhD-iFM (Tuesday, September 19th)

09:00-10:00   Keynote

Automatic Reasoning for Novel Engineering Designs
Mike Nicolai

10:00 Coffee Break

10:30-12:10   Session I

Formal Verification of CNL Health Recommendations
Fahrurrozi Rahman, Juliana Küster Filipe Bowles

Modular Heap Shape Analysis for Java Programs
Florian Frohn, Jürgen Giesl

Abstraction-Based Model Checking of POMDPs in Motion Planning
Leonore Winterer, Sebastian Junges, Ralf Wimmer, Nils Jansen, Ufuk Topcu, Jost-Pieter Katoen, Bernd Becker

Using Coloured Petri Nets for Resource-Aware Program Analysis
Anastasia Gkolfi, Einar Broch Johnsen, Ingrid Chieh Yu

Co-Simulation and Formal Verification of Logic-Based Specifications of Components in CPSs
Maurizio Palmieri, Cinzia Bernardeschi, Andrea Domenici

12:10 Lunch

13:40-15:20   Session II

Security Functionality of IoT Devices
Elahe Fazeldehkordi, Olaf Owe, Toktam Ramezanifarkhani

Assessing the Coverage of Formal Specifications
Dominic Steinhöfel

Versioned Simulation Testing for Concurrent and Distributed Models
Lars Tveito, Einar Broch Johnsen, Rudolf Schlatte

An Abstraction Technique for Describing Concurrent Program Behaviour
Wytse Oortwijn

An Operational Semantics for a Weak Memory Model with Buffered Writes, Message Passing, and Goroutines
Daniel Fava, Martin Steffen, Volker Stolz and Stian Valle

15:20 Coffee Break

15:50-17:10   Session III

On the Synthesis of Guaranteed-Quality Plans for Robot Fleets in Logistics Scenarios via Optimization Modulo Theory
Francesco Leofante

On the Community Structure of SAT-BMC Problems
Xavier Gillard, Charles Pecheur

Virtually Timed Ambients: Formalisation and Analysis
Johanna Beate Stumpf, Einar Broch Johnsen, Martin Steffen

Towards a Contract-Based Unified Design Process
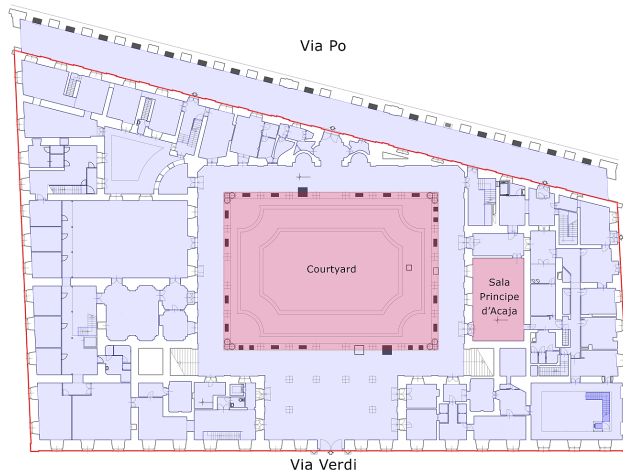*Cesar Santos, Mike Nicolai, Tom Schrijvers*

17:10-17:30   Best Presentation Award

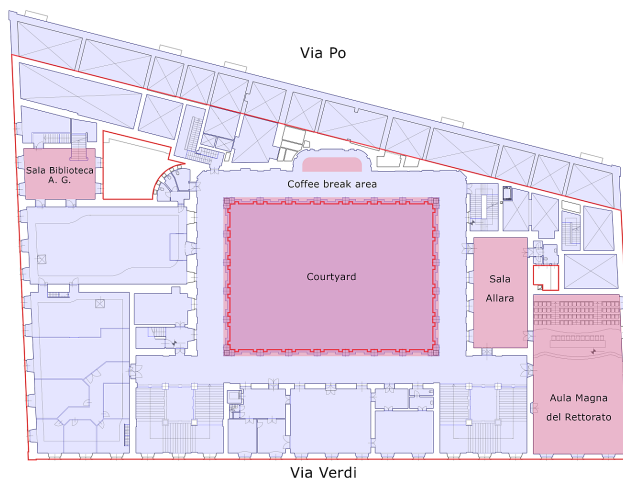# 6 TLT (Friday, 22th September, 14:30-...) [Separate Registration]

The **Types and Logic in Torino** (http://tlt2017.di.unito.it) colloquium is a gathering for colleagues and friends who want to celebrate Mariangiola Dezani-Ciancaglini, Simona Ronchi Della Rocca and Mario Coppo, whose 70th birthdays take place between 2016 and 2017. Mariangiola, Simona and Mario are outstanding researchers in the community of theoretical computer science for their seminal contributions to the fields of λ-calculus, type theory and foundations of programming languages. They have been students of Corrado Böhm in the early 70's and spent most of their career at the Computer Science Department of the University of Torino, leading one of the largest research groups on formal methods for four decades. During this period they have been enthusiastic mentors for many young researchers now employed in prestigious institutions all over the world.

7 Maps

"Rettorato", Via Verdi 8

ground floor

first floor

"Cavallerizza Reale", Via Verdi 9

Via Fratelli Vasco

Entrance

Via Verdi

Sala Multifunzione 1

Aula Magna
della Cavallerizza

Via Rossini

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