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# INFQ 2017

## InfQ 2017 – New Frontiers in Quantitative Methods in Informatics

December, 4 Venice – Italy

In conjunction with Valuetools 2017

The seventh Workshop of the Italian group on Quantitative Methods in Informatics (InfQ 2017) will be held in Venice, co-located with Valuetools 2017, after the past successful editions in Pisa (2010), Lipari (2011), Lucca (2012), Sorrento (2013), Torino (2014) and Taormina (2016).

InfQ is the leading Italian forum on quantitative modelling, evaluation, and verification, of computer, networks, telecommunication systems, and more general classes of man-made, social, or natural systems.

InfQ welcomes both contributions on methodology and application, and gives value to both the theoretical and practical perspectives. Conference topics include, but are not limited to:

- quantitative modelling formalisms, solution techniques, and tools for probabilistic or stochastic systems possibly combining non-determinism, queueing networks, analytical numerical or statistical solution, fluid and hybrid behavior, emergent behavior and collective systems, game theory, hierarchical or multi-formalism composition and model driven engineering, soft computing;
- applications of quantitative methods in a variety of contexts, notably including Industry 4.0, Internet of Things, Cyber-Physical Systems, smart cities, smart energy, e-healthcare and Ambient Assisted Living, social and urban computing, Bioinformatics, Software Defined Networks, quantum computing, cloud/edge/fog computing, capacity planning, load characterization, self adaptive systems.

Continuing its tradition, the InfQ Workshop welcomes not only mature results but also contributions reporting work in progress and research developed by PhD students, with the aim of making them available to a broad audience and promote the exchange and collaboration among experienced and young researchers from the different Italian Universities and Research Organizations.

## **Venue (Please notice that the location of the workshop is different from that of Valuetools)**

The workshop will be held in [Aula Baratto](#), at the Ca' Foscari University of Venice ([map](#)).

## **Program**

**9:00-9:10 Welcome message from the Workshop chairs**

**9:10-10:10 Session: Networking and mobile applications (Session chair: Salvatore Di Stefano, Università di Messina)**

9:10-9:30 Simonetta Balsamo, Dieter Fiems, Mohsin Jafri and Andrea Marin: Analysis of performance in Depth Based Routing for Underwater Wireless Sensor Networks

9:30-9:50 Giovanni Nardini, Giovanni Stea and Antonio Viridis: Geofenced broadcasts via centralized scheduling of device-to-device communications in LTE-Advanced

9:50-10:00 Lorenzo Donatiello and Gustavo Marfia: Modeling the Energy Consumption of Groups of Mobile Apps on Smartphones and IoT devices

**10:00-10:30 Session: Applications (Session chair: Gustavo Marfia, Università di Bologna)**

10:00-10:20 Mohammed A Alotaibi and Nigel Thomas: Performance Evaluation of a Secure and Scalable E-Voting Scheme Using PEPA

10:20-10:30 Enrico Barbierato, Marco Gribaudo, Mauro Iacono and Alexander Levis: Modeling Crowd Behavior in a Theater

**10:30-11:00 Coffee break**

**11:00-12:10 Session: Big data processing and IoT (Session chair: Giuseppe Serazzi, Politecnico di Milano)**

11:00-11:20 Rustem Dautov and Salvatore Distefano: Vs-driven Big Data Process Development

11:20-11:40 Riccardo Pincioli, Marco Gribaudo, Manuel Roveri and Giuseppe Serazzi: Capacity planning of fog computing infrastructures for smart monitoring.

11:40-12:00 Safia Kalwar, Eugenio Gianniti, Joas Yannick Kinouani, Youssef Ridene and Danilo Ardagna: Performance Degradation and Cost Impact Evaluation of Privacy Preserving Mechanisms in Big Data Systems

12:00-12:20 Valeria Cardellini, Francesco Lo Presti, Matteo Nardelli and Gabriele Russo Russo: Auto-scaling in Data Stream Processing Applications: A Model Based Reinforcement Learning Approach

12:20-12:40 Macarena Espinilla Estévez, Javier Medina Quero, Tommaso Papini and Enrico Vicario: A survey on techniques for Activity Recognition and AR datasets creation for Ambient Assisted Living

**12:40-14:00 Lunch break**

**14:00-15:40 Session: Theory, methods and tools for quantitative analysis (Session chair: Giuliana Franceschinis, Università del Piemonte Orientale)**

14:00-14:20 Linda Anticoli, Carla Piazza, Leonardo Tagliacarne and Paolo Zuliani: Entangle: A Translation Framework from Quipper Programs to Quantum Markov Chains

14:20-14:40 Elvio Gilberto Amparore and Susanna Donatelli: Analysis of non-Markovian systems in GreatSPN

14:40-15:00 Stefano Caselli, Gianni Conte and Mauro Diligenti: Evaluation of Iterative Methods on

Large Markov Chains Generated by GSPN Models

15:00-15:20 Davide Cerotti and Daniele Codetta-Raiteri: Meanfield analysis for Continuous Time Bayesian Networks

**15:20-16:00 Coffee Break**

**16:00-18:00 Meeting InfQ** (odg: statuto, valutazioni bibliometriche, laboratorio CINI)

**19:30 Social dinner**

## Registration

All INFQ participants must register using the [registration form](#). The registration is free and it includes the participation right to the workshop and two coffee breaks. The lunch and the dinner will be paid on site by the participants.

For the lunch, there will be a special menu with fixed price (20-25euros) at the local restaurant.

Attendees can also register to join the social dinner for a price around 40-50 euros.

## Submission process and types of contributions

Contributions must be submitted in electronic format (PDF) through Easychair (find [here](#) necessary information). Submitted papers must be unpublished and not submitted elsewhere, written in English, and formatted according to the [Springer LaTeX style](#).

Two different types of contributions are welcome:

- full conference papers, not exceeding 14 pages, reporting mature results of scientific or industrial research;
- short papers, not exceeding 6 pages, reporting experience or preliminary results from ongoing research or projects.

Each submitted paper will be reviewed by at least three referees, from a Program Committee combining together leading Italian and International scholars, on the basis of originality, scientific and practical contribution to the state-of-the-art, technical soundness, and quality of presentation.

All accepted papers will be presented at the workshop and published by Springer Verlag in conference proceedings in the CCIS (Communications in Computer and Information Science) series, included in Springer e-book packages and covered by all major indexing services, including Scopus.

<http://www.springer.com/series/7899>

Proceedings will be published after the Workshop, and electronic versions of accepted papers will

be distributed in electronic format together with Valuetools 2017 proceedings.

The workshop program will also include a PhD Defense Corner where doctoral students who have already achieved a good level of maturity in their research program can present and discuss an early version of their dissertation. Proposals of presentation, not exceeding 4 pages and including title, abstract, contact information, and affiliation, must be submitted directly to the PC Chairs.

Contributions should be submitted in electronic format (PDF) through Easychair.

Easychair submission link: <https://easychair.org/conferences/?conf=infq17>

## Important dates

Paper submission: 14 October 2017 [Extended]

Notification of acceptance: 18 November 2017

Camera ready submission: 24 November 2017

Workshop: 4 December 2017

## Organization

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