



IASI Day – April 9th, 2025

9:15 Opening and introduction to the IASI Day

9:45 OPTIMA - Optimization, discrete mathematics and applications

- Sara Mattia, *Presentation of the research group*
 - Davide Donato Russo, *Digital twin for mobility: a SimOpt framework for urban traffic evaluation*
 - Alessio Salvatore, *Optimizing constrained paths in urban networks: a scalable heuristic approach*
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10:15 SAKS - Software and knowledge-based systems

- Francesco Taglino, *Presentation of the research group*
 - Anna Formica, *Semantic similarity of words in a taxonomy: a fuzzy and multiple-context approach*
 - Maurizio Proietti, *Computational argumentation for explainable AI*
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10:45 Coffee break

11:00 Keynote Speech

Fabrizio Dabbene, CNR-IEIT Torino, *Control and optimization in uncertain systems: from engineering applications to trustworthy AI and healthcare*

11:45 FISIOMAT - Mathematical modeling in pathophysiology

- Antonella Farsetti and Simona Panunzi, *Presentation of the research group*
 - Daniela Palacios Garcia, *MicroRNA-based therapies for muscle diseases*
 - Marcello Pompa, *Parameter estimation of an agent-based model for the representation of cancer-on-chip experiment*
 - Chiara Cencioni, *Metabolic-epigenetic crosstalk in cancer onset and progression*
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12:30 BIOSYS - Optimization, models, and algorithms for bioinformatics and systems biology

- Daniele Santoni, *Presentation of the research group*
 - Eleonora Ottaviani, *Towards multi-omics computational biology: integration (along with attention) is all you need*
 - Cinzia Volonté, *To be "up", or to be "down", this is the question in ALS disease*
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13:00 MCISCO - Modeling, control and identification of complex systems

- Francesco Carravetta, *Presentation of the research group*
 - Giovanni Palombo, *Physics informed neural network and filtering theory*
 - Francesco Carravetta, *New results on the linear-equivalence problem for nonlinear delay systems*
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13:30 Lunch