



Politecnico
di Bari



DIPARTIMENTO DI
INGEGNERIA ELETTRICA
E DELL'INFORMAZIONE



IFAC Workshop

on Smart Energy Systems for Efficient and Sustainable Smart Grids and Smart Cities

June 18-20, 2025 | Politecnico di Bari | ITALY

Welcome Message

Dear Participants,

It is our great pleasure to welcome you to the 2025 IFAC Workshop on Smart Energy Systems for Efficient and Sustainable Smart Grids and Smart Cities (SENSYS 2025), hosted at the Politecnico di Bari, Italy. This workshop brings together leading researchers, industry professionals, and policymakers to exchange ideas on the transformation of modern energy systems through advanced control, systems engineering, and automation.

SENSYS 2025 is sponsored by the International Federation of Automatic Control (IFAC), with the main support of TC 6.3 on Power and Energy Systems and co-sponsorship from TC 8.3 on Environmental Systems and TC 9.3 on Smart Cities. The workshop program includes high-level plenary sessions, invited and contributed papers, and several social events designed to encourage informal networking in the historic city of Bari.

We hope you enjoy the workshop and your stay in our beautiful region of Apulia.

National Organizing Committee (NOC)

Chair: Raffaele Carli (Politecnico di Bari, Italy)

Co-Chair: Mariagrazia Dotoli (Politecnico di Bari, Italy)

Vice-Chair from Industry: Francesco Cupertino (Politecnico di Bari, Italy)

Editor: Marialuisa Volta (University of Brescia, Italy, Chair of TC 8.3)

Co-Editor: Xiaoyu Cao (Xi'an Jiaotong University, China, Chair of TC 9.3)

Local Arrangements Chair: Paolo Scarabaggio (Politecnico di Bari, Italy)

Diversity and Inclusion Chair: Silvia Proia (University of Modena and Reggio Emilia, Italy)

International Program Committee (IPC)

Chair: Carlos Ocampo-Martínez (Universitat Politècnica de Catalunya, Spain)

Vice-Chair: Michela Robba (University of Genova, Italy, Chair of TC 6.3)

Vice-Chair from Industry: Riccardo Amirante (Politecnico di Bari, Italy)

sen^sys
2025

Technical Sponsorship and Patronage

Main Sponsor: IFAC – International Federation of Automatic Control

Technical Sponsor: Politecnico di Bari

Gold Sponsor:

Network for Energy – Sustainable Transition

Patronages:

- DEI – Department of Electrical and Information Engineering
- Apulia region
- City of Bari
- SIDRA – Italian Society of Professors and Researchers in Automatic Control
- ATI – Italian Thermotechnical Association
- Legambiente Puglia
- Distretto La Nuova Energia
- Ordine degli Ingegneri della Provincia di Bari

Program Overview

The SENSYS 2025 program lasts three days and features plenary lectures, technical sessions, special sessions, and social events.

All session details are published and continuously updated in the IFAC Conference App and the PaperCept platform.

Use the official **IFAC Conference App** to browse the full program, abstracts, and download paper PDFs and to build your personalized schedule. Full access is granted with the email address used during registration. For help accessing the app, contact paolo.scarabaggio@poliba.it

Social Program

Welcome Reception

June 18 | 19:00 | Museo della Fotografia, Politecnico di Bari
Join us for an informal aperitif to kick off the conference in a relaxed setting.

Classical Music Concert

June 18 | 20:00 | Politecnico di Bari
Following the reception, the Symphony Orchestra of the Metropolitan City of Bari will perform a curated selection of classical pieces. Admission is free for all participants.

Gala Dinner

June 19 | 20:00 | Lido Il Trampolino
The conference registration includes the Gala Dinner, which is set along the stunning Adriatic coastline. Shuttle services (€20) are available from key city points, or you can reach the venue via public transport or taxi.

Empowering Women in Science

June 20, 2025 | Politecnico di Bari

A special session dedicated to strategies for closing the gender gap in control and systems engineering. Free and open to all registrants.

Open to all conference registrants. Includes lunch and a networking aperitif.

More info: <http://dclab.poliba.it/wis>

Wednesday June 18

Track 1	Track 2
09:00-14:40 WePUV Atrium Cherubini	
Technical Visit	
14:40-15:00 WeWS Room Alto	
Welcome Session	
15:00-16:20 WeIND Room Alto	
Industrial Session	
16:20-16:40 WePM_BR	
Coffee Break	
16:40-19:00 WeA1 Room C	16:40-19:00 WeA2 Room Orabona
Distributed and Decentralized Control of Energy Systems	Fault Detection, Supervision, and Safety
19:00-20:00 WeRE Museo della fotografia	
Welcome Reception	
20:00-22:00 WeRCE Room Alto	
Concert of the Symphony Orchestra of the City of Bari	

Thursday June 19

Track T1	Track T2
09:00-10:40 ThATI Room C	
Renewable Energy	09:00-10:40 ThAT2 Room Orabona
	Smart Mobility & Transportation Electrification
10:40-11:00 ThAM_BR Coffee Break	
11:00-12:00 ThPL Room Alto	
Plenary Session 1: Florian Dörfler ETH Zurich, Switzerland	
Online Feedback Optimization for Power Systems Operation	
12:00-13:20 ThWT1 Room C	12:00-13:20 ThWT2 Room Orabona
IFAC SENSYS Young Author Award	IFAC SENSYS Best Paper Award
13:20-14:40 ThTM Lunch	13:20-14:40 ThTM TBD
	TC 6.3 Lunch
14:40-16:20 ThBT1 Room C	14:40-16:20 ThBT2 Room Orabona
Artificial Intelligence and Control for Energy Systems	Advanced Design, Retrofit, Operation and Maintenance Strategies for Energy Systems
16:20-16:40 ThPM_BR Coffee Break	
16:40-18:20 ThCT1 Room C	16:40-18:20 ThCT2 Room Orabona
Optimization and Control Strategies for Energy Systems	Resources
20:30-22:30 ThGD Lido Il Trampolino	
Gala Dinner	

Friday June 20

Track T1	Track T2
09:00-10:40 FrATI Room C	
Smart Districts and Buildings	09:00-10:40 FrAT2 Room Orabona
	Advanced Methods for Sustainable Energy and Mobility Integration
10:40-11:00 FrAM_BR Coffee Break	
11:00-12:00 FrPL Room Alto	
Plenary Session 2: Michela Robba, University of Genova, Italy	
Optimization and Control for Integrated Energy and Transportation Systems	
12:00-13:20 FrBT1 Room C	12:00-13:20 FrBT2 Room Orabona
Interoperable and Efficient Solutions for the Control and Operation of Distributed Renewable Energy Systems	Energy Systems, Natural Resource and Environmental Management
12:20-19:00 Room Oplà	
Empowering Women in Science (http://dclab.poliba.it/wis)	

Technical Program

Wednesday June 18

WeA1	Room C
Distributed and Decentralized Control of Energy Systems (Regular Session)	

16:40-17:00	WeA1.1
<i>Distributed Virtual Power Plant Optimization Via Scenario Approach</i>	
Del Duca, Alessandro; Ruiz, Fredy	
17:00-17:20	WeA1.2
<i>A Cooperative Distributed Algorithm for Handling Reactive Power Saturation in Active Distribution Networks</i>	
Casolino, Giovanni Mercurio; Fusco, Giuseppe; Russo, Mario	
17:20-17:40	WeA1.3
<i>Semi-Decentralized Game Solution for Charging Schedule of Electric Vehicles</i>	
Ghavami, Mahsa; Vasca, Francesco; Iannelli, Luigi; Liuzza, Davide; Mostacciuolo, Elisa	
17:40-18:00	WeA1.4
<i>A Distributed MILP-ADMM Framework for Italian Energy Communities: Shared Energy Incentives, Renewables, and Shiftable Loads</i>	
Messilem, Mohamed Abdelmouamin; Brumali, Riccardo; Carnevale, Guido; Notarstefano, Giuseppe; Carli, Ruggero	
18:00-18:20	WeA1.5
<i>A DCOP-Based Framework for Macro Energy System Planning</i>	
Amato, Valeria; Amigoni, Francesco; Restelli, Marcello; Castelletti, Andrea	
18:20-18:40	WeA1.6
<i>An Effective Energy Management System to Assess the Convenience of Participating in Electricity Markets</i>	
Martino, Maria; Invernizzi, Marco	
18:40-19:00	WeA1.7
<i>Hosting Capacity Evaluation in Radial and Weakly Meshed Medium Voltage Networks</i>	
Martino, Maria	
WeA2 Room Orabona	
Fault Detection, Supervision, and Safety (Regular Session)	
16:40-17:00	WeA2.1
<i>Photo-Set: A Dataset for Physics-Based Cybersecurity Monitoring in Photovoltaic Systems</i>	
Mokarim, Afroz; Gaggero, Giovanni Battista; Ferro, Giulio; Robba, Michela; Marchese, Mario	
17:00-17:20	WeA2.2
<i>Learning-Based Detection of Fault Type and Location in Electrical Distribution Networks</i>	
Miralizadeh Jalalat, Sajjad; Cavallo, Alberto; Russo, Antonio; Tucci, Francesco	
17:20-17:40	WeA2.3
<i>Online Current Signature Analysis Approach for Cavitation Assessment in Hydraulic Pumps</i>	
Cruz, David; Perurena-Landache, Naroa; De La Fuente-Azpeitia, Naiara; Ocampo-Martinez, Carlos; Diaz-Rozo, Javier	
17:40-18:00	WeA2.4
<i>Estimating the Impacts of Topological Changes in Sub-Transmission Areas Using Hybrid Observers</i>	
Dos Santos Heerd, Artur Henrique; Iovine, Alessio; Ganet--Lepage, Guillaume; Olaru, Sorin; Girard, Antoine	
18:00-18:20	WeA2.5
<i>Novel Model-Based Framework for Multi-Fault Analysis in Ball Bearings</i>	
Arenas-Angulo, Vanessa; Ocampo-Martinez, Carlos; Diaz-Rozo, Javier	
18:20-18:40	WeA2.6
<i>Smart Residential Energy Management: Evaluating Seasonal and Tariff Impacts on Battery Aging</i>	
Tayenne, Lima; Faria, Pedro; Vale, Zita	
18:40-19:00	WeA2.7

Automated Thermal Fault Detection in Ultra-High Voltage Substation Equipment

Kardaris, Nikos; Mermigkas, Panagiotis; Moustris, George; Tzafestas, Costas; Maragos, Petros

Thursday June 19

ThATI Room C	
Renewable Energy (Regular Session)	
09:00-09:20	ThATI.1
<i>Green Hydrogen Microgrids for Remote Areas: Design, Assessment, and Feasibility</i>	
Cusva-García, Andrea; Jiménez-Estévez, Guillermo; Quijano, Nicanor	
09:20-09:40	ThATI.2
<i>Impact of Dust Accumulation on Solar Panel Performance: A Predictive Approach Using Regression Models</i>	
Abdessadak, Abdelali; Ghennioui, Hicham; Nadège, Thirion-Moreau; Abraim, Mounir	
09:40-10:00	ThATI.3
<i>Nonlinear Dynamic Modeling and Control of Ethanol Steam Reforming for Hydrogen Production</i>	
Arcila-Osorio, Mateo; Destro, Francesco; Ocampo-Martinez, Carlos; Llorca Pique, Jordi; Braatz, Richard D.	
10:00-10:20	ThATI.4
<i>Decarbonizing Steel Production: Economic and Environmental Implications of Green Hydrogen-Based Direct Reduction</i>	
Iodice, Marco; Ardito, Lorenzo; Lisi, Stefano; Digregorio, Giuseppe; Garavelli, Achille Claudio	
10:20-10:40	ThATI.5
<i>Optimal Control of Solar-Driven Methanol Decomposition for Hydrogen Production</i>	
Zhang, Peiye; Swevers, Jan; Gillis, Joris; Liu, Ming; Yan, Junjie	
ThAT2 Room Orabona	
Smart Mobility & Transportation Electrification (Regular Session)	
09:00-09:20	ThAT2.1
<i>Energy Management for EV Owners in V2H: Case Study in Colombia</i>	
Gelvez, Diego; Diaz-Londono, Cesar; Agundis Tinajero, Gibran David; Vuelvas, José; Guerrero, Josep.M	
09:20-09:40	ThAT2.2
<i>Optimal Co-Design of a Hybrid Energy Storage System for Truck Charging</i>	
Bertucci, Juan Pablo; Sudarshan, Raghuraman; Hofman, Theo; Salazar, Mauro	
09:40-10:00	ThAT2.3
<i>Electrochemical-Model-Based Estimation of Li-Ion Battery SoC: Performance and Limitations of EKF Method in an Electromobility Use Case</i>	
Ali, Shahbaz; Bratcu, Antoneta Iuliana; Thivel, Pierre-Xavier; Munteanu, Iulian	
10:00-10:20	ThAT2.4
<i>PSO-Based Energy Management Strategy for Electric Vehicles Integrating Batteries and Supercapacitors</i>	
Asnai, Fatimazahra; Ouadi, Hamid; Yazidi, Amine; Rafia, Hassan; El Bakali, Saida	
10:20-10:40	ThAT2.5
<i>Model Identification Frameworks for V2G Available Aggregated Capacity Prediction: Transferability and Explainability</i>	
Sapuppo, Francesca; Patané, Luca; Xibilia, M. Gabriella	
ThWTI Room C	
IFAC SENSYS Young Author Award (Regular Session)	
12:00-12:20	ThWTI.1

<i>Operational Management of Multiple Energy Communities in the Energy Market: A Bilevel Optimization-Based Approach (I)</i>	
Casella, Virginia; Farina, Lorenzo; Ferro, Giulio; Parodi, Luca; Robba, Michela	
12:20-12:40	ThWT1.2
<i>Grid Decarbonization: Examination of Data-Driven Methods for Emission Factor Estimation</i>	
Choi, Jonghyun; Park, Byungkwon	
12:40-13:00	ThWT1.3
<i>Accelerated Kriging Interpolation for Real-Time Grid Frequency Forecasting</i>	
Moreno Blázquez, Carlos; Fele, Filiberto; Alamo, Teodoro	
13:00-13:20	ThWT1.4
<i>Improving Self-Sufficiency of a Net-Zero Multi-Energy System through CHP Fuel Cell and Hydrogen Storage</i>	
Lorusso, Francesco; Fiorotti, Rodrigo; Valenti, Maria; Bruno, Sergio	
ThWT2	Room Orabona
IFAC SENSYS Best Paper Award (Regular Session)	
12:00-12:20	ThWT2.1
<i>Optimizing Collective Pitch Control in Wind Turbines Using Deep Reinforcement Learning and OpenFAST Simulation</i>	
Espinoza, Victor Jeremy; Ormaza, Carolina; Vidal, Yolanda; Tutivén, Christian Javier	
12:20-12:40	ThWT2.2
<i>Experimental Validation and Design of Nonlinear Predictive Control and Moving Horizon Estimation for District Heating</i>	
Nigro, Lorenzo; Polimeni, Simone; Anderis, Claudio; Muro, Marcelo; La Bella, Alessio	
12:40-13:00	ThWT2.3
<i>A Cohort-Based Optimization Model for Electric Vehicles Charging</i>	
Calafiore, Giuseppe; Ambrosino, Luca	
13:00-13:20	ThWT2.4
<i>Advanced Fault Detection in Steam Turbines Using Welch's Method and Probabilistic Modeling</i>	
Puerto-Santana, Cristian; Lizarraga-Odriozola, Nagore Lei; Diaz-Rozo, Javier; Ocampo-Martinez, Carlos	
ThBT1	Room C
Artificial Intelligence and Control for Energy Systems (Regular Session)	
14:40-15:00	ThBT1.1
<i>AI-Based Solution for Efficient Disturbance Rejection in Mini Hydropower Plant</i>	
Motorga, Roxana Maria; Muresan, Vlad; Abrudean, Mihai; Moga, Daniel; Stroia, Nicoleta; Bondici, Cristian	
15:00-15:20	ThBT1.2
<i>Interpretability of the ML-Based State of Risk Predictions for the Electric Grid Forced Outages</i>	
Baembitov, Rashid; Karmacharya, Abinash; Kezunovic, Mladen; Saranovic, Daniel; Obradovic, Zoran	
15:20-15:40	ThBT1.3
<i>Leveraging Neural ODEs for Power System Dynamic Analysis: Parareal Algorithm and System Identification</i>	
Song, Wonjune; Pangalos, Georg; Wiese, Nils; Singer, Roland; Moon, Seungpil; Park, Byungkwon	
15:40-16:00	ThBT1.4
<i>Personalized Federated Deep Reinforcement Learning for Smart Home Energy Management</i>	
Chen, Zhiqiang; He, Jiadong; Yu, Liang; Zhao, Qianchuan	
16:00-16:20	ThBT1.5
<i>Smart Metering and Hardware Trojan Electronic Digital Twin Based on Artificial Intelligence</i>	

Massaro, Alessandro; Epicoco, Nicola; Loseto, Giuseppe; Starace, Giuseppe; Ardito, Carmelo Antonio	
ThBT2	Room Orabona
Advanced Design, Retrofit, Operation and Maintenance Strategies for Energy Systems (Invited Session)	
14:40-15:00	ThBT2.1
<i>Dynamic Modeling and Simulation of Gas Distribution Networks with Decentralized Hydrogen Injections</i>	
Sassaroli, Guido; Muro, Marcelo; Casamassima, Vincenzo	
15:00-15:20	ThBT2.2
<i>BIM-Python Synergy for Energy Analysis</i>	
Porcellini, Francesca; Enrico pasquale, Zitiello; Antonio, Salzano; Nicoletta, Maurizio	
15:20-15:40	ThBT2.3
<i>Natural and Mechanical Ventilation Management for Indoor Air Quality MPC</i>	
Pepe, Crescenzo; Zanolli, Silvia Maria	
15:40-16:00	ThBT2.4
<i>AI-Enabled Early Faults and Anomalies Detection in Electric Inverters</i>	
Mazinani, Armin; Davoli, Luca; Belli, Laura; Ferrari, Gianluigi	
16:00-16:20	ThBT2.5
<i>Thermal Environment Analysis for Energy Efficiency and Heritage Conservation Via Regression Trees and Random Forests</i>	
Smarra, Francesco; de Rubeis, Tullio; Pasqualoni, Giovanni; Franchi, Fabio; D'Innocenzo, Alessandro; Ambrosini, Dario	
ThCT1	Room C
Optimization and Control Strategies for Energy Systems (Regular Session)	
16:40-17:00	ThCT1.1
<i>Novel Strategy for Optimal Active and Reactive Power Flows Management in a Small-Scale Microgrid System under Forecasting Uncertainties</i>	
Gheouany, Saad; Ouadi, Hamid; El Bakali, Saïda; Rafia, Hassan	
17:00-17:20	ThCT1.2
<i>PSO Optimization-Based Control for Floating Offshore Wind Turbine: Maximizing Power Generation and Reducing Platform Motion</i>	
Rafia, Hassan; Ouadi, Hamid; Boulal, Anis	
17:20-17:40	ThCT1.3
<i>A Cost-Optimal Predictive Operation Scheme for Sector-Coupled Energy Plants with Start-Up Delays and Start-Up Costs</i>	
Şen, Gökçen Devlet; Machado Martinez, Juan Eduardo; Schiffer, Johannes	
17:40-18:00	ThCT1.4
<i>A Day-Ahead Scheduling of Renewable Microgrids with BESS for Price-Based Demand Response within Transactive Distribution Market</i>	
Nguyen, Ngoc-Duc; Lee, Chang dae; Shin, Jinsu; Lee, Young Il	
18:00-18:20	ThCT1.5
<i>A Model Predictive Control Framework for Integrated Thermal and Electric Systems in Multi-Energy Grids</i>	
Azzam, Abdul	
ThCT2	Room Orabona
Intelligent Control of Energy Resources (Regular Session)	
16:40-17:00	ThCT2.1
<i>Economic Reinforcement of Low Voltage Power Grids with Battery Energy Storage Systems: Combined Grid Service and Spot Market Trading</i>	
Friedrich, Daniel; Jungandreas, Carsten; Gottschalk, Benny; Bodach, Mirko; Schirmer, Matthias; Li, Pu	
17:00-17:20	ThCT2.2

<i>Game-Theoretic Incentive Design for Sustainable Groundwater Management</i>	
Lee, Joo Seung; Aswani, Anil	
17:20-17:40	ThCT2.3
<i>Adaptive Set Membership Photovoltaic Energy Generation Forecasting</i>	
Cordoba-Pacheco, Andres; Godayol, Eduard; Ruiz, Fredy	
17:40-18:00	ThCT2.4
<i>Design of a Multicasting Based Communication Architecture for Local Microgrid EMS Using OPC UA</i>	
Lee, Chang dae; Nguyen, Ngoc-Duc; Shin, Jinsu; Lee, Young Il	
18:00-18:20	ThCT2.5
<i>Output Constrained Linear Decision Trees for Optimal Energy Management Approximation of Hybrid Batteries</i>	
Weckx, Sam; Monsieur, Maxime; Singh, Taranjitsingh; Surti, Ankit	

Friday June 20

FrATI	Room C
Smart Districts and Buildings (Regular Session)	
09:00-09:20	FrATI.1
<i>Understanding Smart Sustainable Buildings Nexus to the New Smart Energy System</i>	
Capezzuto, Pasquale; Rizzi, Maria; De Scisciolo, Graziano; Guaragnella, Cataldo	
09:20-09:40	FrATI.2
<i>Optimization of Bidirectional Electric Vehicle Charging Management to Address Domestic Load Imbalance</i>	
Mounir, Nada; Ouadi, Hamid; Jrhilifa, Ismael; Lahrarti, Youssef; El Bakali, Saida; Rafia, Hassan	
09:40-10:00	FrATI.3
<i>Quarter-Hourly Day-Ahead Building Electricity Load Forecasting Using Transformer Networks</i>	
Shin, Jinsu; Lee, Young Il	
10:00-10:20	FrATI.4
<i>Indexes for Assessing Circular Economy Performance in Industry: A Systematic Literature Review</i>	
Ferrante, Mariantonia; Micaela, Vitti; Sassanelli, Claudio	
FrAT2	Room Orabona
Advanced Methods for Sustainable Energy and Mobility Integration (Invited Session)	
09:00-09:20	FrAT2.1
<i>Predictor-Based Dynamic Event-Triggered Digital Control for Islanded Microgrids</i>	
Andreotti, Amedeo; Caiazza, Bianca; Petrillo, Alberto; Santini, Stefania	
09:20-09:40	FrAT2.2
<i>Design of an Energy Management-Based Model Predictive Control for Catenary-Free Hybrid Trains</i>	
Camarda, Manuel; Incremona, Gian Paolo; La Bella, Alessio; Colaneri, Patrizio; Boje, Edward	
09:40-10:00	FrAT2.3
<i>Optimal Siting and Sizing of Electric Vehicles Charging Stations in a Logistic Network</i>	
Farina, Lorenzo; Ferro, Giulio; Jafari, Mohammad Javad; Parodi, Luca; Robba, Michela	
10:00-10:20	FrAT2.4
<i>An Analysis of Modeling Battery Storage System Ramping Effect and Their Impact on Operational Costs of Residential Houses</i>	
Faia, Ricardo; Faria, Pedro; Vale, Zita	
10:20-10:40	FrAT2.5
<i>Optimal Positioning of Electric Vehicle Chargers for Efficient Land Use in Smart Cities: Integration with Fuel Stations</i>	

Signorile, Federico; Mastromarino, Fabio; Scarabaggio, Paolo; Gialò, Valeria; Carli, Raffaele; Dotoli, Mariagrazia	
FrBT1	Room C
Interoperable and Efficient Solutions for the Control and Operation of Distributed Renewable Energy Systems (Invited Session)	
12:00-12:20	FrBT1.1
<i>A DC Microgrid As Electric Vehicle Supply Infrastructure: Energy Management Architecture and Field Implementation</i>	
Marasciuolo, Francesca; Dicorato, Maria; Forte, Giuseppe; Tricarico, Giocchino	
12:20-12:40	FrBT1.2
<i>Adaptive Inertia Controller for Grid-Forming Converters</i>	
Rigato, Diego; Biadene, Davide; Magnone, Paolo; Caldognetto, Tommaso	
12:40-13:00	FrBT1.3
<i>Ancillary Services through Coordinated Distributed Power Electronic Converters in Three-Phase Microgrids</i>	
Messilem, Mohamed Abdelmouamin; Lauri, Andrea; Carnevale, Guido; Biadene, Davide; Caldognetto, Tommaso; Carli, Ruggero	
13:00-13:20	FrBT1.4
<i>Simulation and Control of Microgrids: NEST Laboratory within the Savona Campus Smart Polygeneration Microgrid</i>	
Bonfiglio, Andrea; Rossi, Mansueto; Procopio, Renato; Robba, Michela; Brignone, Massimo; Bracco, Stefano	
FrBT2	Room Orabona
Energy Systems, Natural Resource and Environmental Management (Invited Session)	
12:00-12:20	FrBT2.1
<i>Multi-Objective Fitted Q-Iteration: Random Sampling for Enhanced Weights Simplex Exploration</i>	
Longo, Emiliano; Spinelli, Davide; Giuliani, Matteo; Castelletti, Andrea	
12:20-12:40	FrBT2.2
<i>A Multi-Objective Optimization Approach for Air Quality and Energy Plans</i>	
Zecchi, Laura; Arrighini, Michele; Marchesi, Claudio; Volta, Marialuisa	
12:40-13:00	FrBT2.3
<i>Global Carbon Cycle: Model Complexity and BIBO Stability</i>	
Canuto, Enrico; Novara, Carlo; D'Apice, Alessandro	
13:00-13:20	FrBT2.4
<i>Multi-Objective Optimization of Microgrid Sizing Integrating a Water Heating System under a Tranche Electricity Tariff</i>	
El Bakali, Saida; Ouadi, Hamid; Gheouany, Saad; Mounir, Nada; Lahrarti, Youssef; Asnai, Fatimazahra	

Workshop Venue

Established in 1990, the Politecnico di Bari is Italy's most recent polytechnic university. It is internationally recognized for its focus on innovation, sustainability, and automation and control engineering excellence.

Main Entrance: Via E. Orabona 4, 70125 Bari, Italy
Secondary Entrance: Via G. Re David, 200, 70125 Bari, Italy

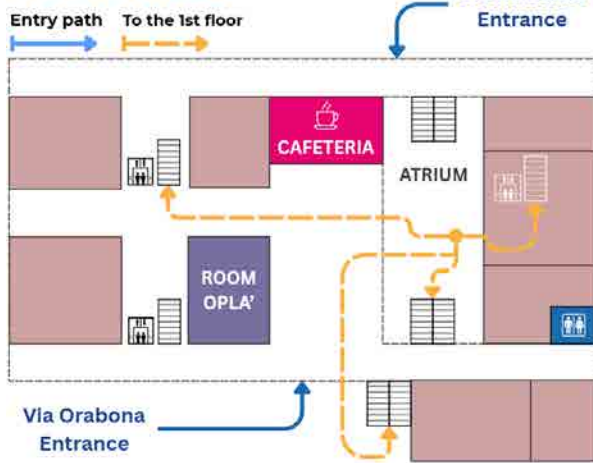
Wi-Fi Access

Network Name: Poliba-Eventi
Password: 54ytH7uG

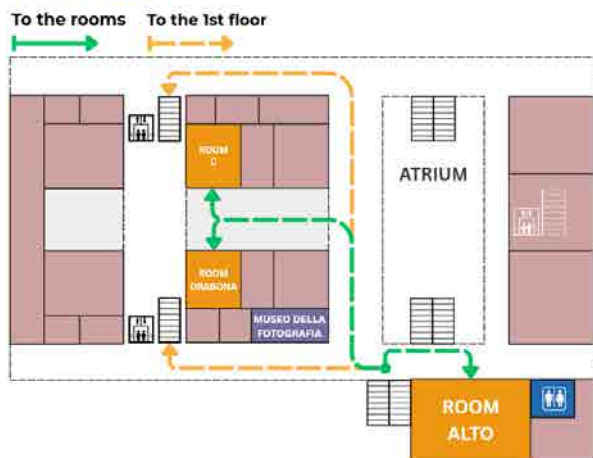
Location Map

Below is a map of the main structure of the Orabona Campus. If you get lost, don't hesitate to ask for the "Atrio Coperto" (Atrium), the central meeting point.

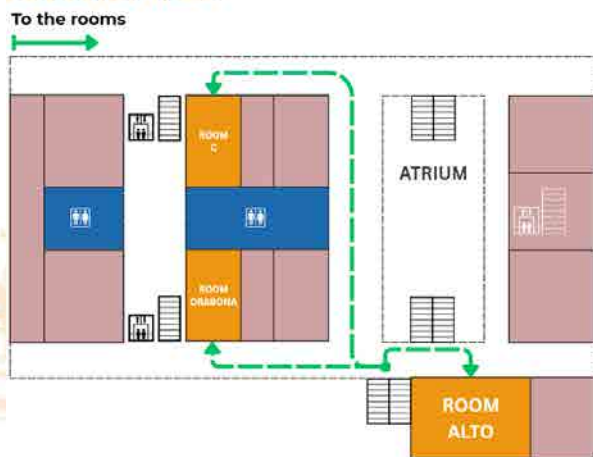
Ground floor



First floor



Second floor



Getting Around Bari

Urban Bus Service: AMTAB; tickets ~€1 or €1.50 onboard.

Mobility Apps: MUVT o Google Maps

Taxi Service: Use the itTaxi app or taxibari.it

Bike Sharing: VAIMOO app

Electric Scooters: Lime, Tier, Telepass, Bit

Electric Microcars: Piky Rent

More info: <https://conferences.ifac-control.org/sensys2025/venue/#Getting-Around-Bari>

Discover Bari and Apulia

The capital of the Apulia region, Bari is a historic seaport with a vibrant modern identity. Walking through Bari, visitors encounter a fusion of ancient Roman and Byzantine roots, Norman castles, baroque theatres, and bustling open-air markets.

Notable Sites

Basilica di San Nicola – The resting place of Saint Nicholas, a pilgrimage site for Catholics and Orthodox Christians alike.

Castello Normanno-Svevo – A majestic medieval fortress built under Frederick II.

Petruzzelli Theatre – Italy's fourth-largest opera house, restored in neoclassical grandeur.

Old Town (Bari Vecchia) – A maze of narrow alleys, churches, and trattorias, rich with southern Italian charm.

Beyond Bari: Highlights of Apulia

Alberobello – UNESCO site with iconic Trulli stone houses.

Polignano a Mare – A whitewashed cliffside town famed for its sea views and poetry-lined streets.

Lecce – The "Florence of the South," known for its elaborate baroque architecture.

Ostuni, Martina Franca, and Gallipoli – White cities amid olive groves and rolling hills.

Matera, Gravina, and Altamura – Ancient hilltop towns marked by prehistoric cave dwellings, Romanesque cathedrals, and timeless stone architecture.

Nature & Outdoors

Grotte di Castellana – An expansive cave system just inland from Bari.

Gravina di Laterza – One of Europe's deepest canyons.

Apulian Beaches – From Monopoli's sandy coasts to the Vieste cliffs, Puglia's coastline offers options for every traveler.

Apulian Cuisine

Puglia's gastronomy is rooted in local traditions and fresh ingredients.

Must-Try

Orecchiette con cime di rapa – Ear-shaped pasta with turnip tops

Panzerotti – Fried dough pockets stuffed with mozzarella and tomato

Focaccia Barese – Local focaccia with cherry tomatoes

Patate, riso e cozze – Baked potatoes, rice, and mussels

Try also the robust Primitivo and Negroamaro red wines, the elegant Castel del Monte DOC whites and rosés, and the locally pressed extra virgin olive oil, a cornerstone of Apulian cuisine and Mediterranean identity.