



## PhD Day: Le ricerche dei Ph.D candidates di Ingegneria e Economia

14 febbraio 2025 ore 9.00 • Dipartimento di Economia "Marco Biagi"

### PROGRAMMA COMPLETO

#### 8.00 – 9.00, Affissione poster

#### Aula Magna EST

#### 9.00 – 9.20, SALUTI ISTITUZIONALI

**Carlo Adolfo Porro**, Rettore dell'Università di Modena e Reggio Emilia

**Giacomo Cabri**, Delegato del Rettore per la Didattica

#### 9.20 – 10.00, SESSIONE PLENARIA: Il Dottorato e gli stakeholders del territorio: le possibili connessioni

##### Intervengono

**Davide Bezzecchi**, Responsabile Ricerca & Innovazione - Unindustria Reggio Emilia;

**Eleonora Costantini**, Ricercatrice - Fondazione Marco Biagi;

**Silvia Gaiani**, Amministratore Delegato - V-System;

**Gabriele Marzano**, Direzione Generale Conoscenza, Ricerca, Lavoro, Imprese - Regione Emilia Romagna;

**Marco Moscatti**, Presidente Giovani Imprenditori Confindustria Emilia;

**Davide Borghi**, Manager of Advanced Analytics for Equipment development & Technology - Tetra Pak® Italy;

**Roberto Tonelli**, Responsabile Powertrain Fluid Dynamics Simulation - Ferrari SpA.

##### Coordina

**Paolo Veronesi**, Direttore della Scuola di dottorato E4E

#### 10.30 – 11.30, SESSIONI PARALLELE 1

#### Aula Magna EST

#### Graph Neural Networks and Structured Data Analysis

**chair: ANGELO PORRELLO**, Assistant Professor, "Enzo Ferrari" Department of Engineering

Capitani Giacomo Development of deep learning techniques based on Graph Neural Networks for the integration of heterogeneous and multiscale data

Benaglia Riccardo Graph neural networks for structured data support and analysis

D'Ecclesiis Enrico Climate-change preferences and attitudes, and related policy and voting choices. Empirical "data and theory driven" analyses in the European context

Menabue Martin AI techniques for time series analysis and prediction exploiting structured information

Frascaroli Emanuele Graph neural networks for structured time series prediction in industrial application

#### Sustainability, Innovation, and Risk: Shaping the Future of Business and Society

#### Aula Magna OVEST

**chair: DAVIDE BASCHIERI**, GRAF Industries Spa

Correggi Cecilia Moving the Horizon Forward: How Vertical Farming Merges Technological Capabilities and Ancient Agronomical Knowledge to Change the World - *(Videopillola)*

Castrogiovanni Antonino Country Image and Willingness to buy: The Mediating Role of Green Product Image in Consumers Perceptions *(Videopillola)*

Malagoli Federico Business model innovation in family businesses: Factors, dynamics and strategic implications

Contiero Nicolò The challenge of sustainability: regulatory enforcement vs market logic. An even match?

Fratantonio Federico Labor relations in craftsmanship and small and medium enterprises (Smes)

Bellinva Adriano The Influence of Climate Risk on Bank Credit Risk: Evidence from the European Banking Sector - *(Videopillola)*

#### Advances in AI Models and Learning Paradigms

#### Aula 4 EST

**chair: VITTORIO CUCULO**, Assistant Professor, "Enzo Ferrari" Department of Engineering

Sarto Sara Advances in (Self-attentive and semi-supervised) AI Architectures for large scale, explainable Image Retrieval - *(Videopillola)*

Bonicelli Lorenzo Few shot and zero shot continual learning

Cocchi Federico	Exploring Multimodal Challenges in Generative AI
Amoroso Roberto	Trustworthy self-attentive models for visual-semantic understanding - ( <i>Videopillola</i> )
Niyati Rawal	Integration of vision and language for human-robot interaction

## Corporate and Welfare in Transition: Innovation and Social Protection

**chair: VALERIA MARTINELLI, Gruppo Hera Spa**

<b>Aula 7 EST</b>	Nizzoli Federica	The digital and green future of active and passive public welfare policies: the case of the Emilia-Romagna Region ( <i>Videopillola</i> )
	Molinari Giuseppe	Substitution or complementarity? The impact of artificial intelligence on employment in 25 European countries Smart Working in Tetra Pak® Italy: Building an Operational Model that Boosts Productivity and Enables Work-life Balance - ( <i>Videopillola</i> )
	Ombelli Elisa	
	Muratori Elena	Again on the financial treatment of medical residents: the united sections exclude any reassessment, even partial
	Nannetti Francesca	Employees' attitudes and Work-Related Stress in the Digital Workplace: an empirical investigation

## Biomedical Engineering and Sensing Technologies

**chair: CARLO AUGUSTO GRAZIA, Assistant Professor in tenure track, "Enzo Ferrari" Department of Engineering**

<b>Aula 3 OVEST</b>	Vignoli Elia	Detection and Tracking of the Small Movements of Extended Targets through Mmwave Multiple-Input Multiple-Output Radar Systems
	Furnari Gabriele	Machine Learning and Robotics for Surgical operations
	Martelli Andrea	From Production to Application: Novel Biomaterials for Tissue Engineering
	Carotenuto Carlo	Exploring The Effects Of Operating Temperature And Pressure On Aeration In Gear Pumps Designed For Dialysis Machines
	Di Pinto Valentina	Optoelectronic sensors for biomedical instrumentation: theoretical and experimental studies

## Low-Power Electronics and Computing

**chair: PIERPAOLO PALESTRI, Full Professor "Enzo Ferrari" Department of Engineering**

<b>Aula 2 OVEST</b>	Benatti Lorenzo	Neuromorphic Computing Hardware for Low-Power Edge-A
	Tondelli Lisa	Nanosecond timescale self-heating effects in advanced FinFET and FDSOI nanoscale MOSFETs - ( <i>Videopillola</i> )
	Ferretti Corradi Riccardo	Antennas, ElectroMagnetic Compatibility (EMC) and electromagnetic simulations-
	Giorgino Giovanni	Caratterizzazione e simulazioni TCAD di dispositivi di potenza in nitruro di gallio

## Sustainable Electric Mobility and Green Transportation

**chair: RICCARDO LANCELLOTTI, Associate Professor "Enzo Ferrari" Department of Engineering**

<b>Aula 5 EST</b>	Petrelli Gaia	High Performance rare earth free Electric Motors for a sustainable and greener transportation - ( <i>Videopillola</i> )
	Sasseti Riccardo	Design of more-electric tractors for a more sustainable agriculture Addressing Grand Societal Challenges through Data Sharing: Essays on Data Ecosystems in the Context of Integrated Mobility in Europe
	Renzi Giulia	
	Giannotta Nicola	High Performance rare earth free Electric Motors for a sustainable and greener agriculture
	Guiducci Alessandro	High reliability and High efficiency electric motor drives for green transportation applications
	Cutuli Gregorio	High reliable and sustainable Electrical machines for vehicle electrification-

## Advanced Modeling and Complex Dynamics

**chair: SILVIO SORRENTINO, Associate Professor, "Enzo Ferrari" Department of Engineering**

<b>Aula Seminari OVEST</b>	Boga Gabriele	Multiscale phenomena in turbulent boundary layers
	Totaro Giuseppe	Simulation of an External Gear Pump Using a 0D Model
	Mazzeo Francesco	Modeling and simulation of a small-scale side-by-side helicopter for Urban Air Mobility
	Molaie Emamzadeh Moslem	Spiral Bevel Gear: Nonlinear Dynamics and Chaos Analyses

**11.30 – 12.00, PAUSA e PRESENTAZIONE POSTER**

**12.00 – 13.00, SESSIONI PARALLELE 2**

## Computer Vision and Image Processing

**Aula Magna EST** chair: VITTORIO CUCULO, Assistant Professor, "Enzo Ferrari" Department of Engineering

Barsellotti Luca	Open World and Few-Shot Object Detection and Semantic Segmentation
Di Nucci Davide	Computer Vision technologies for 3D Vehicle digitization and understanding
Pippi Vittorio	Handwritten Text Generation for Recognition: From Visual Archetypes to Auto Regressive Models
Quattrini Fabio	Computer Vision Solutions for Cultural and Historical Multimodal Sources - ( <i>Videopillola</i> )
Fincato Matteo	3D Human pose estimation in industrial environments
Mancusi Gianluca	Deep learning for Multiple Object Tracking and 3D

## Technology and Work: Legal and Social Implications of the Digital Revolution

**Aula Magna OVEST** chair: ILARIA PURIFICATO, Postdoctoral Research Fellow, Department of Economics - Marco Biagi Foundation

Luccisano Matteo	The regulation of employment relationships in the platform economy: the digital productive unit and the revision of traditional frameworks
Pasqualicchio Pierluca	
Baldassarre	Professional classifications after the 2019/2021 national collective agreements
Verzulli Veronica	Corporate welfare on the path of universal social protection: the redistributive purpose between collective bargaining and tax leverage
Gagliardi Francesca	Control power and disciplinary power of the remote working in the Public Administrations: from the discipline to its implementation in the National Labor Inspectorate
Frisella Giovanna	The impact of new technologies on employer guarantee positions
Barone Valeria	The missing principle. Algorithmic non-discrimination and the legal protection of the person in the age of AI

## AI for Scientific Research and Emerging Applications

chair: LORENZO BARALDI, Associate Professor "Enzo Ferrari" Department of Engineering

<b>Aula 4 EST</b>	Panariello Aniello	AI techniques for time series analysis and prediction exploiting structured information
	Bonisoli Giovanni	Deep learning for Event Extraction from Web Data Streams
	Ferrari Benedetta	Maximizing Quality in Mars Observation Scheduling: Challenges and Uncertainty
	Vezzali Enrico	Fast super-resolution of 1D and 2D barcodes for real-time Industrial Applications
	Di Piano Ambra	Deep learning in real-time on the astrophysical data obtained from the Cerenkov CTA Observatory

## Innovations in Electrical Machines and Sensing Technologies

chair: PASQUALE DI VIESTI, Assistant Professor, "Enzo Ferrari" Department of Engineering

<b>Aula 7 EST</b>	Vogni Mattia	Wide-bandgap based Power converters for improved efficiency and reliability- Multi-physics optimization of permanent magnet electric machines: comparison of parametric and topological approaches and implementation of a hybrid methodology
	Puglisi Francesco	
	Sala Giada	Novel high performance electric motors by means of additive manufacturing and innovative materials
	Lorenzo Nicolini	Development of a piezoelectric elastomer for sensing applications
	Notari Riccardo	Design of High efficiency and sustainability oriented electrical machines - ( <i>Videopillola</i> )

## Healthcare Systems and AI Innovations

**Aula 3 OVEST** chair: FEDERICO BOLELLI, Assistant Professor in tenure track, "Enzo Ferrari" Department of Engineering

Piombini Edoardo	
Renato	Effects of chain ownership on competition and delivery in the Emilia-Romagna (Italy) Care homes sector
Perliti Scorzoni Paolo	Digital Transformation and Machine Learning applied to Public Healthcare
Lumetti Luca	Healthcare applications of Artificial Intelligence, Computer Vision and Medical Imaging
Goldoni Daniele	Advanced integrated electronic biosensors for nanoscale entity detection
Guida Francesca	Sustainable finance and financing of biomedical research

## Materials and Surface Engineering

**Aula 2 OVEST** chair: MARIA FRANCESCA BONILAURI, Postdoctoral Research Fellow - "Enzo Ferrari" Department of Engineering

Bortolotti Luca	Developing sustainable Wear and Corrosion-Resistant Coatings
Reza	
Moghimifared	Hexagonal tessellations exhibiting negative Poisson's ratio
Franciosi Mattia	Shot-Earth: A Material for Structural Engineering

Siciliani Vincenzina	Adaptive optics solution to improve laser surface structuring
Ferrari Elisa	Surface modification of titanium components for motorsport industry by diffusion treatments
Cardu Marco	Fatigue behavior of components manufactured through additive manufacturing

### Advanced Technologies and Diagnostics in E-Mobility

**chair: CARLO AUGUSTO GRAZIA, Assistant Professor in tenure track, "Enzo Ferrari" Department of Engineering**

#### Aula 5 EST

Galstyan Vardan	Smart Sensors based on Nanomaterials for Advanced Monitoring and Diagnostics: Development, Fundamentals and Multifunctionalities
Benatti Dario	Single-Stage CSI with Discharge Path: a novel topology for motor drive applications
Righi Stefano	Comprehensive EMI Filter design in EV On-Board Chargers: Modelling, Simulation, and Compliance with Automotive Standards
Flori Elisa	Evaluation of the pandemic impact on global automotive supply chain through network analysis
Mirabella Michele	Vehicle-to-everything (V2X) Communications for Green and Reliable Intelligent Transportation Systems

### Energy Solutions and Environmental Models

**chair: LUCA LUSVARGHI, Associate Professor, "Enzo Ferrari" Department of Engineering - Coordinator ICAM**

#### Aula Seminari OVEST

Sfriso Stefano	Hydrogen thermo-diffusive instability effects in internal combustion engines: a modelling approach
Pavan Anna	Direct Numerical Simulation of a paradigmatic Urban Heat Island
Francesco Orlandi	Numerical modeling of high coupling multiphase-energy systems for efficiency improvement and detailed investigation of physical phenomena
Kaya Elif	Investigating the Impact of Varied C-Rates on Lithium-Ion Batteries: A 1D Simulation Study
Zuccarini Ermanno	Urban Heat Island - LSTM neural networks for modeling and fab city approach for mitigation

**13.00 - 14.30, LUNCH e PRESENTAZIONE DEI POSTER**

**14.30 – 15.30, SESSIONI PARALLELE 3**

### AI for Finance, Healthcare, and Industrial Applications

**chair: DANIELA PENNETTA, Postdoctoral Research Fellow, Department of Economics - University of Modena and Reggio Emilia**

#### Aula Magna EST

Garuti Fabrizio	AI in Fintech: Semi-supervised Learning for Transactional Time Series and Financial Data
Poppi Samuele	Responsible AI in Vision and Language: Ensuring Safety, Ethics, and Transparency in Modern Models
Mozzillo Angelo	High Performance Data-Integration for AI-
Millunzi Monica	Novel deep Learning techniques under weakly and uncertain annotation in continuous and batch regime

### Bridging Gaps: Gender Equality, Inclusion, and Human Wellbeing

**chair: FEDERICA PALMIROTTA, Postdoctoral Research Fellow, Law Department - University of Modena and Reggio Emilia**

#### Aula Magna OVEST

Barra Carlotta	Gender inequalities and gender wage gap in Academia. The case of an Italian university
Nepoti Francesca	What does inclusion look like for the most vulnerable? Narratives of exclusion for migrant working mothers in Modena
Pagani Maria Beatrice	Tools for promoting female and gender inclusion
Scarpa Antonella	The aspiration for the future of the young generations of Modena and the school as a space of possibilities
Negri Isabella	Teachers' wellbeing: occupational violence, social relationships and individual coping strategies. A qualitative study.
Fusari Carlo	Navigating the in-betweenness: collaborative and youth spaces in Emilia-Romagna, Italy

### Big Data, AI and sectoral applications: justice, health, energy, industry

**chair: FEDERICA ROLLO, Assistant Professor, "Enzo Ferrari" Department of Engineering**

#### Aula 4 EST

Guiduzzi Giacomo	Data analysis of the criminal and civil trial in order to structure a predictive system of the times of the trial-
Livaldi Andrea	Big Data per processi industriali sostenibili
Trigiane Lisa	Privacy-Preserving Record Linkage for E-Health
Baraldi Andrea	Intelligent Techniques and Natural Language Processing for (Explainable) Data Integration
Aslam Adeel	Big Data and Artificial Intelligence for Energetic Virtuosity in Local Energy Communities

## Sustainable Solutions and Green Mobility

**chair: LUCA LUSVARGHI, Associate Professor, "Enzo Ferrari" Department of Engineering - Coordinator ICAM**

<b>Aula 7 EST</b>	Altimari Fabiana	Volcano-sedimentary rocks for green transition: valorization and recovery for the design of sustainable materials
	Campanelli Ludovico	Thermal management of new sustainable vehicle powertrains
	Kaya Ahmet Fatih	Fuel consumption of diesel, natural gas, hybrid, full electric and hydrogen fuel cells based buses: a simulated comparison using standard road cycles and gradeability tests
	Poppi Giulia	Surface Treatments for green hydrogen production
	Ebrahimnejad Razieh	Nonlinear Dynamics of Coupled Electro-mechanical Transmission Systems

## Optimizing the Ceramic Tile Industry

**chair: DINO BOCCACCINI, Assistant Professor, "Enzo Ferrari" Department of Engineering**

<b>Aula 3 OVEST</b>	Taccini Marco	A Hybrid Approach for Pallet Loading in Ceramic Tile Industry
	Contini Giuditta	Integrating Extended Reality technologies and Digital Twin for Sustainable Human-Centric system design: application to Ceramics industry
	Magnani Matteo	SolvingThe Pallet Loading Problem with Layering
	Dotti Giulia	Decision Support Systems for Internal Logistics Optimization in the Ceramic Tile Industry
	Andrei Ungureanu	Ceramic Pigments: Advances in Sustainable Production

## Energy, Sustainability, and Industrial Innovation

**chair: SARA MANTOVANI, Associate Professor, "Enzo Ferrari" Department of Engineering**

<b>Aula 2 OVEST</b>	Oldoini Davide	Vibroacoustic analysis of an electric motor with reduced rare earth content
	Catellani Mattia	Coordination of UAVs with Limited Sensing Capabilities in Communication-denied Areas
	Leopardi Luigi	Development of digital twin model for industrial machinery
	Orlandi Francesco	Numerical modeling of high coupling multiphase-energy systems for efficiency improvement and detailed investigation of physical phenomena
	Cavecchia Mirko	An Optimization-based Decision Support System for Pharmaceutical Distribution

## Smart Robotics and Social Navigation

**chair: GIADA COLELLA, BMW AG**

<b>Aula 5 EST</b>	Ruo Andrea	Social navigation of robots moving in crowded environment - ( <i>Videopillola</i> )
	Braglia Giovanni	Methods for a novel collaborative robotics: from programming to human skills transfer - ( <i>Videopillola</i> )
	Nini Matteo	Safety-Oriented Robot Control in Industrial Applications
	Onfiani Dario	Extending Robotic Manipulation capabilities by Cooperative Mobile and Flexible Multi-Robot Systems - ( <i>Videopillola</i> )
	Ferrarini Sergio	Accuracy Assessment and Compensation with Integrated Design Tools for Efficient Robotic Production Systems
	Barnabei Filippo	A constraint based control architecture for Urban Autonomous Vehicles - ( <i>Videopillola</i> )

## Water Flow, Liquid Metals, and Resilient Infrastructure

**chair: STEFANO ORLANDINI, Full Professor, "Enzo Ferrari" Department of Engineering**

<b>Aula Seminari OVEST</b>	Serviceability assessment of footbridges under flexural and torsional vertical vibrations: simplified crowd modelling and vision-based	
	Eslami Varzaneh Ghita	monitoring
	Pizzileo Simone	Flood Plain Inundation Modeling With Explicit Description of Land Surface Macrostructures
	Trane Danila	Comparison between experimental and DNS data of liquid metal flow in a triangular rod bundle
	Soni Rachit	Monte Carlo Analysis of levees affected by mammal bioerosion.
	Gasperoni Riccardo	Two-Dimensional River Flow Modeling With Explicit Description of Woody Vegetation

**15.30 – 16.00, PAUSA**

**16.00 – 17.00, SESSIONI PARALLELE 4**

## Natural Language Processing and Multimodal Learning

**chair: ANGELO PORRELLO, Assistant Professor, "Enzo Ferrari" Department of Engineering**

<b>Aula Magna EST</b>	Cartella Giuseppe	Multimedia Learning for Automatic Metadata Extraction from Cultural and Historical Archives
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Moratelli Nicholas	Document Understanding e Natural Language Processing
Monturano Gianluca	Predicting Delays in Cohesion Infrastructure
De Grandis Luca	Deep Learning for Natural Language Processing and Document Understanding
Granata Francesco Ma	Multimodal Retrieval Augmented Generation for Question Answering and Information Extraction

## Industrial Evolution and Digital Innovation: Media, Business and Management

**Aula Magna OVEST** chair: **DANIELE MAGNALDI, Risk Management Intesa SanPaolo**

Lorenzetti Marco	Cable Television in Italy: notes on an economic and industrial history
Macaluso Matteo	Cable Television in Italy: notes on an economic and industrial history (part 2)
De Vivo Luigi	Certification and business networks: an opportunity for a “legally assisted” development of industrial projects
Aurelio Giulio Mario	The Entrepreneur's Responsibility in Productive Outsourcing: Models for Managing Joint Liability
Melis Erika	Analytics for people: Concepts and tools for the data-driven transformation of Human Resource Management - ( <i>Videopillola</i> )

## Advanced data management and AI in complex environments

**Aula 4 EST** chair: **LAURA PO, Associate Professor, "Enzo Ferrari" Department of Engineering**

Casari Martina	Artificial intelligence techniques to tackle urban air pollution
Sala Luca	Data Management, analytics and intelligent AI-based knowledge extraction for multilingual and multi-alphabetic heritages
Sania Aftar	Data Management, analytics and intelligent AI-based knowledge extraction for multilingual and multi-alphabetic heritages
De Sabbata Giulio	Data-centric AI, Big Data, Data Integration, Energy data, Process optimization

*Consegna dei premi alle migliori tesi - ICT*

## Energy Storage and Efficiency

**Aula 7 EST** chair: **SIMONE PEDRAZZI, Associate Professor, "Enzo Ferrari" Department of Engineering**

Ermini Matteo	Data-driven estimation of Battery Capacity
Girimonte Aldo	Materials synthesis for advanced energy storage systems
Mucciarini Mirko	On incorporating variable consumption functions within energy-efficient parallel machine scheduling
Magnani Mauro	HYENAS/HYdrogen as ENergy carrier for industrial ApplicationS
Cossu Michele	Evaporative cooling and Maisotsenko cycle: stand-alone and hybrid applications

## Biomaterials, Preclinical Studies and Optimization

**Aula 3 OVEST** chair: **ELENA COLOMBINI, Associate Professor, "Enzo Ferrari" Department of Engineering**

Mecca Francesco	
Gerardo	Novel ion-enriched Bioactive Glass compositions for scaffold manufacturing: bone tissue and wound healing.
Baridi Ghassem	Optoelectronic methods and instrumentation for biomedical smart sensors
Pianfetti Elena	Studying host-pathogen interaction via microscopy and Deep Learning: application to antimicrobial resistant bacteria and monoclonal antibodies discovery
Salvatori Roberta	Bioactive glasses and preclinical evaluation for tissue repair and regeneration
Rubino Claudia	Functionalization of abutment surface for dental prosthesis

## Innovations in Industry 5.0 and Sustainable Solutions

**Aula 2 OVEST** chair: **ALBERTO VERGNANO, Associate Professor, "Enzo Ferrari" Department of Engineering**

Khamaisi Riccardo	
Karim	A UX-driven digital framework to design human-centric solution in industry
Alessandro Neri	Sustainable energy transition: Leveraging end-of-life electric vehicle batteries for stationary storage systems
Borghi Simone	Investigating Stress Patterns in Industry 5.0

## AI and Robotics for Complex Systems

**Aula 5 EST** chair: **ROBERTO VEZZANI, Associate Professor, "Enzo Ferrari" Department of Engineering**

Jabbar Abdul	Bearing Fault Classification for Independent Cart Systems
Coniglione Casimiro	Autonomous and intelligent weapons: between side effects and lack of rules of engagement
Bertoli Annalisa	An IoT Software Architecture for User-Friendly Fault Diagnosis and Identification

**Aula  
Seminari  
OVEST**

## Innovation and Applied Technology

**chair: GIOVANNI BOLELLI, Associate Professor, "Enzo Ferrari" Department of Engineering**

Oliva Maniva	Towards Ecological Polycarbonate: Strategies for Reuse and Waste Reduction in a Circular Economy Perspective
Modena Marco	Modeling and simulation of a vibrating membrane for the acquisition of lung sounds
Valentini Lorenzo	Human Factors as Key Drivers for Machine Design Optimization
Hugo Vidigal Corrêa Victor	A simulation based metaheuristic for the multi-period team orienteering problem with time windows and stochastic demands

### 17.00, SESSIONE PLENARIA: Lo sguardo dell'Università sul futuro del dottorato

#### TAVOLA ROTONDA

**Paolo Pavan**, Delegato del Rettore per la Ricerca;

**Tindara Addabbo**, Referente della sede UNIMORE del D.I.N. in Gender Studies, Università di Bari;

**Alessandro Capra**, Delegato del Rettore per l'Internazionalizzazione;

**Rita Cucchiara**, Referente della sede UNIMORE del D.I.N. in AI per la società, Università di Pisa;

**Grazia Ghermandi**, Referente UNIMORE per il D.I.N. in Sviluppo Sostenibile e Cambiamenti Climatici, IUSS Scuola Universitaria Superiore Pavia.

**Modera: Tommaso Fabbri**, Vice-Direttore della Scuola E4E

## PRESENTAZIONI POSTER

1	Almirante Italo	<i>Self-Learning Robotic Platforms: a "lazy" approach for multi-robot task solving</i>
2	Andreani Mattia	<i>Vehicular Communications in 6G</i>
3	Benassi Riccardo	<i>Development, implementation and testing of techniques based on time series and data mining to environmental, hydrological and hydraulic data</i>
4	Bernardelli Giacomo	<i>Vapor deposition coatings for hard chrome replacement in internal diameters of mechanical components</i>
5	Bernardi Mattia	<i>Supervised and self supervised AI and deep learning for animal analysis</i>
6	Besi Giulio	<i>Medical Robotics for Upper Limb Rehabilitation</i>
7	Betti Alice	<i>Analysis of the dynamic behavior of electro-hydraulic systems: simulation approach applied to a mini excavator</i>
8	Bodini Alberto	<i>Active car suspensions with multiple actuation: a method for simultaneous camber and toe control</i>
9	Buzzega Pietro	<i>Continual Knowledge transfer across different deep learning architectural paradigms</i>
10	Binoy Aneena	<i>Urban CO<sub>2</sub> Measurements Using the Eddy Covariance Technique</i>
11	Caffagni Davide	<i>Computer Vision and Natural Language Processing Technologies for Analysis and Understanding of Cultural and Historical Archives</i>
12	Cagossi Laura	<i>The employment relationship of honorary judges: features and guarantees in the Italian and EU legal system</i>
13	Caiani Angelo	<i>Components' dynamic optimization using lattice structures</i>
14	Canovi Chiara	<i>Evaluating the impact of TiO<sub>2</sub> Microstructures on the Photocatalytic Oxidation of Nanoplastics</i>
15	Capitanio Alessandro	<i>Diagnosis and Control of IPM Motors based on quantum sensors</i>
16	Cescon Margherita	<i>Thermal Barrier Coatings deposited by Hybrid Suspension+Solution Precursor Plasma Spray: Gadolinium's Role in CMAS and Thermal Cycling Fatigue Resistance</i>
17	Chirico Francesco	<i>Success and Tecnostress in the digital transition of judicial offices</i>
18	Claps Marco	<i>A Re-optimization Heuristic for a Dial-a-Ride Problem in the Transportation of Patients</i>
19	Cogliani Francesco Contalbo Michele	<i>Numerical modeling of a tire for structural and dynamic analysis in vehicle applications</i>
20	Luca	<i>Integrating NLP and Data-driven Techniques for Intelligent text analytics</i>
21	Corda Giuseppe	<i>Three-Dimensional CFD Modelling of PEM Electrolyzers</i>
22	Dallari Veronica	<i>Multi-temporal DInSAR based approach for foundation settlement estimation</i>
23	Dalseno Luca	<i>Hydrogen and eFuels as innovative energy sources for internal combustion engines supported by a 3D/0D-CFD modeling approach</i>
24	Davi Giovanni	<i>Let it snow</i>
25	De MiccoSimone	<i>Bioceramic materials in dental applications: state of the art and future perspectives</i>
26	Di Mauro Filippo	<i>Democracy and cooperative models in regional governance of ecological transition: the experience of energy communities</i>
27	Fava Alessandra	<i>Leveraging Physiological Signals for Enhanced Human-Robot Interaction</i>

28	Favali Filippo	<i>Toward AI agents embodiment in robotics</i>
29	Ferrari Elisa	<i>Titanium: how to improve wear behavior</i>
30	Fidone Giovanni Luca	<i>Current Source Inverters in Motor Drive Applications</i>
31	Filippini Gianluca	<i>Deep Learning for the localization of audio-visual sources</i>
32	Finistrella Salvo	<i>Multi-Agent Reinforcement Learning in Cybersecurity</i>
33	Fiorini Cosimo	<i>Resilient continual learning with attention based architectures</i>
34	Gabbi Marta	<i>Prediction of human motion trajectories for heterogeneous human-robot interaction</i>
35	Gallerani Alessia	<i>Innovative sensor development for biomedical applications</i>
	Gambigliani Zoccoli	
36	Giovanni	<i>Cybersecurity for Cyber-Physical systems</i>
37	Genzardi Dario	<i>AI-IoT monitoring system based on collaborative sensor platform for quality monitoring along the food production chain</i>
38	Giovanelli Giulia	<i>Soft X-Ray Spectroscopies for the Investigation of Nanostructured Materials</i>
39	Gozzi Marica	<i>Additive manufacturing and conventional machining</i>
40	Greco Laura	<i>Workplace safety in the framework of Environmental Sustainability</i>
41	Grespan Mattia	<i>Multiscale modeling of thermofluid systems</i>
42	Gualdi Daniele	<i>Self-excited Vibrations in Nonlinear Multibody Models of Automotive Drivelines</i>
43	Iotti Simone	<i>Shot-Earth - Continuation of the durability assessment</i>
	Kontchou Tenda	<i>Thermal optimization of additively manufactured heat exchangers and, the effect of geometry and surface roughness on</i>
44	Arnaud	<i>performance</i>
45	Lucchese Adriana	<i>Exploiting Non-Gaussian distributions in Hidden Markov Model for bearing prognostics</i>
46	Manghi Ilaria	<i>Liver tumor segmentation and classification for HCC diagnosis</i>
47	Mantovani Mattia	<i>Distributed Ergodic Coverage Control of Unknown Spatial Processes</i>
48	Marchesini Kevin	<i>Deep Learning techniques and multimodal learning in Biomedical Sciences and Medical Robotics</i>
49	Martini Pierpaolo	<i>1D - 3D air cooling model for stack of hydrogen fuel cells: application to a light aircraft as a case study</i>
50	Martocchia Lorenzo	<i>HyPoST - Development of a Simulink model for Fuel Cell electric vehicles</i>
51	Mengozzi Alessandro	<i>Stresses and Deformations induced by Curing in Epoxy Matrix CFRPs Composite Laminates</i>
52	Mercogliano Nicola	<i>Simulation-Driven Design of Automated Manufacturing and Assembly Lines: Enhancing Efficiency and Performance</i>
53	Messina Simone	<i>Finite Element Methodology for structural analysis in electric motor gears</i>
54	Miccolis Francesca	<i>Multimodal integration for molecular and imaging data</i>
55	Miconi Lorenzo	<i>Development of high entropy hardmetal coatings for tungsten carbide substitution.</i>
56	Modica Lorenzo	<i>Wide-bandgap based devices for efficient power conversion</i>
	Montagneretto	
57	Alessandro	<i>A Comprehensive Numerical Approach for the Simulation of the Pneumatic System of a Ceramic Dryer</i>
58	Morandi Riccardo	<i>Engineering Digital Twin LifeCycle &amp; Augmentation Function</i>
59	Moroni Filippo	<i>Drag reduction in temporal turbulent boundary layers through wall oscillations</i>
60	Mosconi Matteo	<i>Continual Supervised and self supervised Learning applied to image and video analysis</i>
61	Napolitano Martina	<i>Sustainable Practices in Environmental Remediation and Fertilizer Production: A Dual Approach</i>
	Nicolini	<i>Development of hardware platforms and simulation tools for label free biosensing based on micro- and nano-electronic</i>
62	Nicolini Jacopo	<i>devices and circuits</i>
63	Paganelli Michele	<i>The relationship between competitiveness and environmental sustainability in EU regions</i>
64	Paggetti Simone	<i>Additive manufacturing and food contact</i>
	Parascandolo	
65	Fiorenzo	<i>Causal Graphical Models for Vision-Language Compositional Understanding</i>
66	Parmeggiani Davide	<i>Downscaling of global datasets to study UHI and UPI interactions</i>
67	Pasquinucci Federico	<i>Next Generation of Connected Vehicles</i>
68	Pioli Andrea	<i>Optimizing energy flows: enhancing efficiency in robotic systems</i>
69	Pitardi Marco	<i>Soil Flux and Atmospheric Dispersion of VOC emitted from Contaminated Soils: Modelization and Field Measurements</i>
70	Poppi Tobia	<i>Responsible and Safe AI for Multimodal Models in the GenAI Era</i>
71	Quattromini Federico	<i>More-electric tractors for a more sustainable agriculture</i>
72	Rago Evan	<i>Reasonable adjustments and workplace inclusion: the progressive development of protective frameworks in legislation and case law</i>
73	Restaino Enza	<i>The phenomenon of Data Breaches in healthcare sector</i>



74	Rezvanpour Hamed	<i>Integrated and robust design methods for parts and foundry equipment to improve aluminum alloy recycling in EU</i>
75	Ricci Cosimo	<i>Thermal spray coatings for hard chrome replacement in aerospace components</i>
	Roberto Sedoni	
76	Roberto	<i>SedoniStudy and development of innovative solutions for heating, ventilation, and air conditioning for near-zero energy building</i>
77	Rossi Daniel	<i>Computer Vision and IoT for Human Robot Interaction</i>
78	Rossini Enrico	<i>Data Engineering for Smart City Applications</i>
79	Salami Riccardo	<i>Continual Federated Learning for industry</i>
	Sanchez Justine Ann	
80	Lemon	<i>Adherence between innovative construction materials</i>
81	Sanguigni Fulvio	<i>Multimodal image editing for fashion design</i>
82	Sciurti Gianmarco	<i>Energy regeneration in buildings with intermittent use</i>
83	Simeone Filippo	<i>Accelerating the Future: The Rise of Electric Vehicles in Italy</i>
84	Soldati Luca	<i>PostBuckling stability analysis of shear deformable beam</i>
		<i>Exploring the Potential of Large Language Models for Multilingual Historical Document Analysis and Semantic Cataloguing in Digital Libraries</i>
85	Sullutrone Giovanni	
86	Tessier Yves	<i>A new formalism improving RANS eddy viscosity models</i>
87	Tomassetti Valeria	<i>Measuring gender equality to drive transformative processes in companies</i>
		<i>Hydrogen High-Specific-Power Internal Combustion Engine: how to increase specific power and improve efficiency while respecting NOx emission limits</i>
88	Tonelli Roberto	
89	Torri Federico	<i>Innovative High-Performance Additively Manufactured Heat Exchangers</i>
90	Turazza Fabio	<i>Federated Learning for Distributed Cyber-Physical Systems</i>
91	Vaccari Laura	<i>Indoor Positioning Systems in Logistics</i>
92	Vega Parra Stephanie	<i>Temporal Analysis and the impact of Urban Heat Islands in the Po Valley: Insights from Remote Sensing</i>
93	Verasani Mattia	<i>Efficient training of Deep Learning architecture for industry</i>
94	Vjerdha Jonid	<i>Experimental insight on hyperelasticity</i>
95	Zannini Luca	<i>Fabrication of Fuel Cell and Electrolyzers: Deposition of Catalytic Inks for PEM</i>