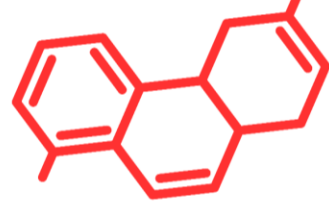


Industrial Engineering

# PhD EXPO

Researching the Future



TOR VERGATA  
UNIVERSITÀ DEGLI STUDI DI ROMA

29 Novembre 2024

Aula Leonardo, Edificio Didattica, Via Politecnico 1, Roma

09.00 – 09.10 → Welcome Remarks

09.10 – 10.00 → Presentation of Industrial Engineering courses:

- **G. Verona Rinati** - Presentation of the PhD School in Industrial Engineering
- **V. Mulone** - Presentation of Ingegneria Meccanica course structure
- **M. Vellini** - Presentation of Ingegneria per l'Energia e l'Ambiente and Ingegneria Energetica course structure
- **F. Quadrini** - Presentation of Engineering Sciences course structure
- **M. L. Di Vona** - Presentation of the Chemical Nano-Engineering course structure

10.00 – 11.00 → Session 1

- **G. Tosatti** – Thermo-fluid dynamic behaviour of a small length 3D printed lattice channel in a conjugated problem.
- **E. Cennamo** – Fuel Cell Hybrid Microcar sizing based on a Real-time Hardware-in-the-Loop test.
- **A. Raso** – Research, Development and Applications of Synthetic Diamond Detectors in Nuclear Fusion.
- **S. Yasmeeen** – Synthesis and Characterization of ZnO-Sm<sub>2</sub>O<sub>3</sub> Photocatalyst for the photocatalytic degradation of bentazon herbicide.
- **A. Zahid** – Additive Manufacturing for Nuclear Applications.

11.00 – 11.30 → Coffee-break

11.30 – 13.15 → Session 2

- **P. Mele** – A Pyrolysis-based Hybrid Energy System for flexible H<sub>2</sub> conversion and production from residual biomass.
- **M. Donnini** – Sustainable Fleet Operations: A Tool for Optimizing Electric and Fuel Cell Hybrid Vehicles in Urban Logistics.
- **V. D'Agostino** – Conceptual design of the bolometric diagnostic system for DTT: mechanic layout.
- **I. Ahmed** – Synthesis and Applications of New Non-Fluorinated Ionomers.
- **C. Kierbel** – Design of gynecologic surgical manipulator.
- **A. Palombi** – Plasma-assisted surface treatments on additively manufactured 316L austenitic stainless steel.
- **N. Rutigliano** – A data-integrated approach for experimental phenomena reconstruction and diagnostic analysis through Physics-Informed Neural Networks (PINNs).
- **S. Chandrasekaran** – Synthesis and characterization of Furan-based polymers for Anion Exchange Membrane Fuel Cells from Biomass Resources.

13.15 – 14.15 → Light Lunch

14.15 – 15.45 → Session 3

- **B. Grau** – Study and characterization of electromagnetic pulse in the radiofrequency-microwave band and particles generated by high intensity laser-matter interaction.
- **V. Anagnostopoulou** – Hunting particles in donut-shaped nuclear reactors: neutron diagnostics for fusion.
- **M. Damiano** – GENeUSIS: a novel concept of neutron test bed facility for diagnostics and critical components of ITER.
- **L. Quattrucci** – Design a robotic cell for car batteries disassembly: a new criteria for human robot-task distribution.
- **E. De Maina** – Multi-criterial evaluation of biomass energy conversion into energy carriers.
- **Y. Li** – Quantification and Classification of Fluorescent Dye-Labelled Microplastics in Water Samples.
- **G. Mastrangelo** – Integrating IMU and Video Motion Capture System: developing a protocol for real-time monitoring of ankle mobility.

15.45 – 16.00 → Closing Remarks