



# Luca Mantelli

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## Current Role

Luca Mantelli is a research fellow of the Thermochemical Power Group (TPG) of the University of Genoa. He joined TPG as a PhD student in 2017. He is active in the field of energy systems, and his main areas of research are modelling, dynamic simulation and control of innovative power systems, including fuel cells, hybrid systems, turbomachinery, combined cycles and supercritical CO<sub>2</sub> plants. He is also topic chair of “Digital Twin and Cyber-Physical Systems” for the Power division of ASME and member of the same committee since 2023.

## Education

- PhD in Engineering of Machines and Energy Systems, Environment and Transportation with Specialization in Mathematical Engineering and Simulation.
- MS in Mechanical Engineering with specialization in Energy and Aeronautics.
- BS in Mechanical Engineering.

## Teaching and Lectures

- Lecturer of “Advanced Methods of Monitoring and Design of Systems” for the Master’s degree in Engineering Technology for Strategy and Security.
- Lecturer of “Systems for hydrogen and sustainable energy” for the Master’s degree in Mechanical Engineering.
- Invited speaker at National Energy Technology Laboratory (WV, USA) events in 2022 and 2021.
- Invited speaker at the Massachusetts Institute of Technology (MIT) Gas Turbine Laboratory Symposium on Sustainable Aviation and Power Generation in 2022.

## Research Activities and Results

- More than 40 scientific papers, most of them published at international conferences and journals, with over 200 citations.
- Active role in 6 EU funded projects (Bio-Hypp, PUMP-HEAT, SOLARSCO2OL, FlyECO, SCO2OP-TES, eLITHE) and various national projects, including PNRR-MOST.
- Research in collaboration with Rolls-Royce within the University Technology Center of the University of Genoa since 2021.
- Visiting researcher at Mälardalen University (SE) in 2019 and at the National Energy Technology Laboratory (WV, USA) in 2018.
- Awarded with the best paper award of the Cycle Innovations track at ASME Turbo Expo 2022 and 2024, the AIMSEA best PhD thesis of 2021 about energy systems, power generation and fluid machinery in 2022 and the ASME Young Engineer Turbo Expo Participant Award in 2020.