

**PHD IN TECHNOLOGIES FOR
FUNDAMENTAL RESEARCH IN PHYSICS AND
ASTROPHYSICS**



**UNIVERSITÀ
DEGLI STUDI
DI PADOVA**

MECHANICS CURRICULUM

Students of the 41° cycle

Gregorio Nikita Bersano - *Development and Characterization of Molybdenum Alloys Produced via Laser Powder Bed Fusion for Nuclear Applications* – Newcleo s.p.a.

Gianfrancesco Grauso - *Advanced Systems for Cryogenic and Superconducting Applications in Fundamental Physics* – INFN Napoli

Educational Offer A.Y. 2025/26

- **Advanced scientific programming in Matlab** (Prof. Paolo Bardella; Prof. Stefano Scialò – Politecnico di Torino)
- **Thermo-fluid dynamic sin 3D printed channels** (Prof. Simone Mancin – University of Padua)
- **Coupled electrical-thermal-structural Finite Element Analyses** (Prof. Giovanni Meneghetti; Prof. Mattia Manzolaro; Prof. Michele Ballan – University of Padua)
- **METAL ADDITIVE MANUFACTURING** (Dott. Pietro Rebesan – INFN Padua)
- **Fundamentals of system engineering and project management for large scientific projects** (Dott. Marco Xompero; Dott. Runa Briguglio – INAF Arcetri)
- **3D printed materials and their functional properties** (Prof. Fabrizio Barberis – University of Genoa)
- **Advanced numerical modeling for systems engineering theory and applications** (Prof. Matteo Davide Lorenzo Dalla Vedova – Politecnico di Torino)
- **Analysis and Modelling of the Additive Manufacturing** (Prof. Daniele Tammaro – University of Naples)
- **Generative Design for smart Additive Manufactruing** (Prof. Antonio Gloria – University of Naples)
- **Lattice Structures via Additive Manufacturing for Multifunctional Aerospace Components** (Prof. Carlo Giovanni Ferro – Politecnico di Torino)
- **Random Excitation and response of structures** (Prof. Francesco Franco; Prof. Giuseppe Petrone – University of Naples)
- **STATISTICAL PROCESS MONITORING OF COMPLEX ENGINEERING DATA** (Prof. Antonio Lepore; Prof. Christian Capezza – University of Naples)
- **Structural simulation techniques in the dynamic and non-linear field** (Prof. Martina Scapin – Politecnico di Torino)