



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

PHD IN TECHNOLOGIES FOR FUNDAMENTAL RESEARCH IN PHYSICS AND ASTROPHYSICS

Curriculum: MECHANICS

- Advanced scientific programming in Matlab
- Thermo-fluid dynamics in 3D printed channels
- Coupled electrical-thermal-structural Finite Element Analyses
- Metal Additive Manufacturing
- Fundamentals of system engineering and project management for large scientific projects
- Generative Design for smart Additive Manufacturing
- Random Excitation and Response of Structures
- Statistical process monitoring of complex engineering data
- 3D printed materials and their functional properties
- Advanced numerical modeling for systems engineering: theory and applications
- Structural simulation techniques in the dynamic and non-linear field
- Lattice Structures via Additive Manufacturing for Multifunctional Aerospace Components
- Analysis and Modeling of the Additive Manufacturing