

The Department brings together scientific expertise in the context of Mechanical Engineering, Management, and Mathematics. The mission of Department is to pursue excellence in research and teaching in the following fields: Biomimetics and tribology of surfaces; Collective Intelligence; Complex Flow Simulation; Dynamics and control of vibrations; Energy Efficiency and Renewable Energy; Nonlinear differential equations; Combinatorial Geometry and Applications; Innovation management; Sustainable Management; Innovation in Industrial Plant Engineering; Contact friction mechanics; Micromachining, Additive Manufacturing and Reverse Engineering, Sustainable Production; Mathematical models in material science and quantum systems; Mechanical design for materials and structures; Industrial Augmented Reality; Robotics; Digital Enterprise Strategy and Models; Innovative Materials and Technologies; Innovative mechanical transmissions; Unità di Ricerca INDAM; Welding and Laser Manufacturing. The research topics are carried out by the 21 research groups of the Department in more than 30 Laboratories, including four networks of laboratories (EMILIA, MICROTRONIC, TISMA, and Trasforma). The DMMM has been selected by the Italian Ministry of Education, University and Research as a Department of Excellence and has been awarded special ministerial funding for the five years 2018-2022. The department provides 1 Ph.D. course, three bachelor degrees (Mechanical Engineering, Management Engineering, and Aerospace Engineering Systems), three Master Degrees (Mechanical Engineering, Management Engineering, and Aerospace Engineering), and several Double Degrees.