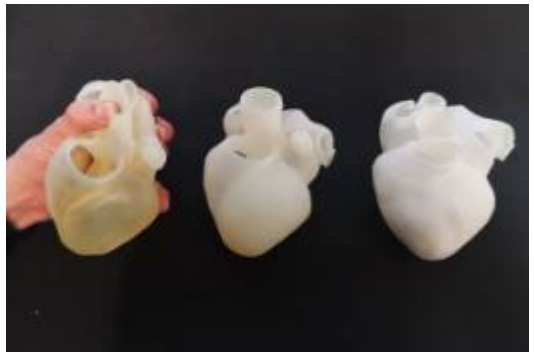
PRODUCT DEVELOPMENT IN THE INDUSTRY 5.0 ERA



Research group directors: Prof Giorgio Colombo, Prof Gaetano Cascini, Prof. Monica Bordegoni, Prof. Francesco Ferrise

Description of the subject: This research field concerns the methods and tools that support product development in the Industry 5.0 era, from idea generation to concept verification, embodiment, and detail design. The research will be developed by referring to both emerging and established methodologies/technologies: Collaborative creativity, Bio-Inspired Design, Interactive Virtual Prototyping, Augmented, eXtended and Virtual Reality, Reverse Engineering, Knowledge Based Engineering (KBE) and AI for Design, multi-objective Optimization, Design for Additive Manufacturing, Design for Sustainable Behaviour, Digital Twin.

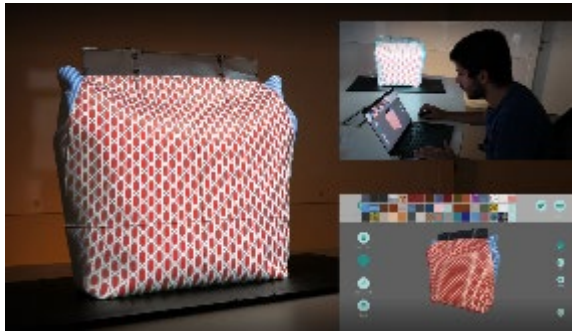
Goals: Support industries in developing cutting-edge products that can contribute to the growth of a sustainable, inclusive, and resilient society.

The candidate is strongly encouraged to spend a research period abroad

POLITECNICO MILANO 1863

mecc

DIGITAL TRANSFORMATION IN INDUSTRIAL ENGINEERING



Description of the subject: Digital technologies can be used to create smart products and processes, train operators, support, and guide maintenance activities. Topics include: Virtual, eXtended and Augmented Reality, Reverse Engineering, Artificial Intelligence, Multi-objective Optimization, Digital Twin, Digital Data Management, Human-Computer and Human-Machine Interaction

Goals: Speed up and optimize processes and exploit digital technologies as drivers toward sustainable development and innovation.

The candidate is strongly encouraged to spend a research period abroad

Research group directors: Prof Giorgio Colombo, Prof Gaetano Cascini, Prof. Monica Bordegoni, Prof. Francesco Ferrise

POLITECNICO MILANO 1863

mecc