**ASE**

Positions MD 117/2023 under PNRR:12

**PhD scholarships bound to specific research topics/areas:**

12 scholarships bound to a specific research topic with a minimum 6-month study period abroad requirement pursuant to DM 117/2023 funded by PNRR:

1. Cobot - assisted assembling (in collaboration with *Durst Group spa*, supervisors Prof. Angelika Peer/Oliver Kutz)
2. Design of adaptive human-robot collaborative workplaces in industrial settings (in collaboration with *Autotest Suedtirol srl*, supervisors Prof. Erwin Rauch/Renato Vidoni)
3. Automation of defect control in aluminum die-casting processes (in collaboration with *Alupress spa*, supervisors Prof. Renato Vidoni/Erwin Rauch)
4. Study and optimization of main bearing lubrication system of a direct-drive Leitwind wind turbine (in collaboration with *Leitner spa*, supervisor Prof. Franco Concli)
5. Development of technology-based methodologies to improve the occupational health and safety training process for workers in the Engineer-to-Order manufacturing industry (in collaboration with *Leitner spa*, supervisors Prof. Patrick Dallasega/Luca Gualtieri)
6. Smart Surfaces for the Automotive (in collaboration with *Tratter Egnineering srl*, supervisor Prof. Michael Haller)
7. Machine learning for Three-dimensional Wood Cutting Pattern Generation and Optimization in Sawmills (in collaboration with *Microtec srl*, supervisors Prof. Angelika Peer/Mohsen Hosseini)
8. Intelligent systems for cyber risk mitigation in industry (in collaboration with *Wuerth Phoenix srl,* supervisor Prof. Barbara Russo)
9. Unobtrusive physiological sensor for cognitive car seat (in collaboration with *BMW Group spa*, supervisors Prof. Michael Haller/Niko Münzenrieder)
10. Twin Planning – Virtual Factory Planning and Digital Twin Technologies for Improving Factory Planning and Factory Operation (in collaboration with *Alpitronic srl*, supervisors Prof. Erwin Rauch/Patrick Dallasega)
11. Raman and photoluminescence spectroscopy of advanced nanostructured materials for sensor devices (in collaboration with *Fondazione Bruno Kessler – FBK*, supervisor Prof. Luisa Petti)

Development and implementation of 4.0 solutions for operator training and process automation - Automazione del processo del frantumazione meccanica del monocristallo di Silicio per riutilizzo a grado elettronico nei processi CZ (in collaboration with MEMC Electronic Material spa - a GlobalWafers Company, supervisors Prof. Patrick Dallasega/Renato Vidoni)

1 scholarship bound to specific research topic:

1. Engineered control of horticulture parameters for increased crop productivity (in collaboration with the Istituto Italiano di Tecnologia – Genova supervisors Prof. Luisa Petti/Athanassia Athanassiou)