ME8: MACHINE TOOLS ENGINEERING

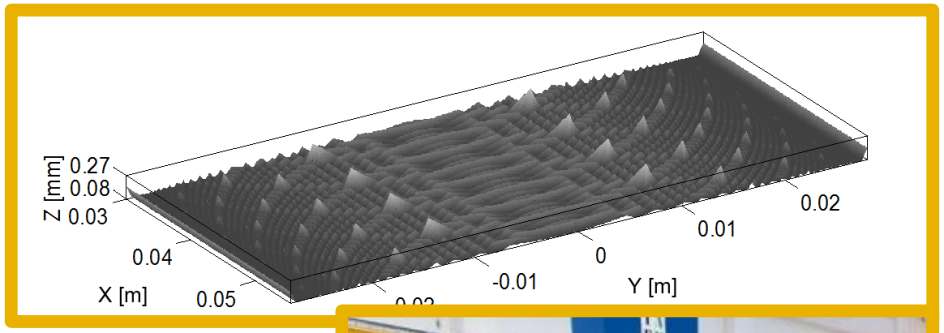
Track 8 (Milan + Piacenza)

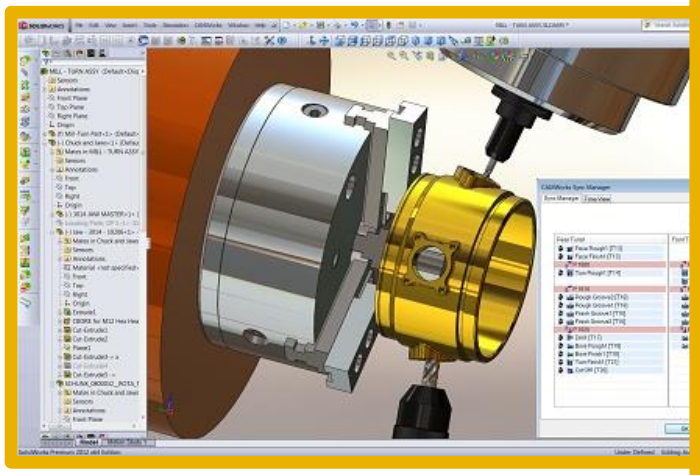
Contacts:
Prof. Michele Monno **michele.monno@polimi.it**

ME8: Skills you will acquire…

After graduating, you will have developed numerous **advanced technical skills**. For example, you will be able to:

- **Design, monitor and control mechanical systems;**
- **Design, monitor and control machine tools and components;**
- **Carry out energy efficiency evaluation;**
- **Use simulation techniques for flexible manufacturing systems;**
- **Employ simulation techniques for flexible manufacturing systems;**
- **Industry 4.0;**
- **Cyber physical Systems & Digital Twins development;**
- **Virtual Commissioning.**

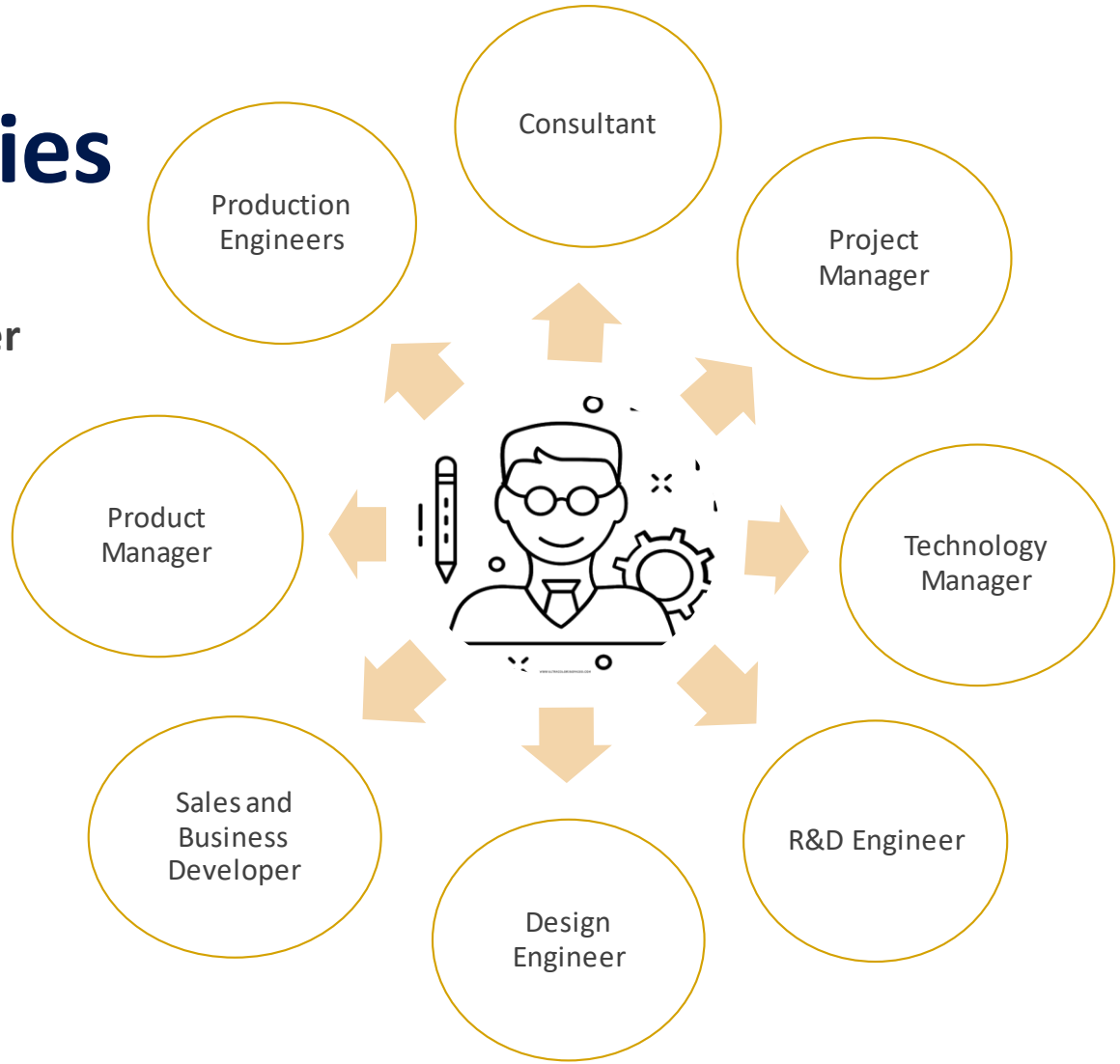




ME8: Career Opportunities

After graduating, you will be able to **pursue your career** (not only, but also) in:

- **R&D;**
- **Mechanics and Installation;**
- **Robotics;**
- **Manufacturing;**
- **Metallurgy and Metalworking;**
- **Business Services;**
- **Consulting.**



ME8: Track Mandatory and Elective Courses

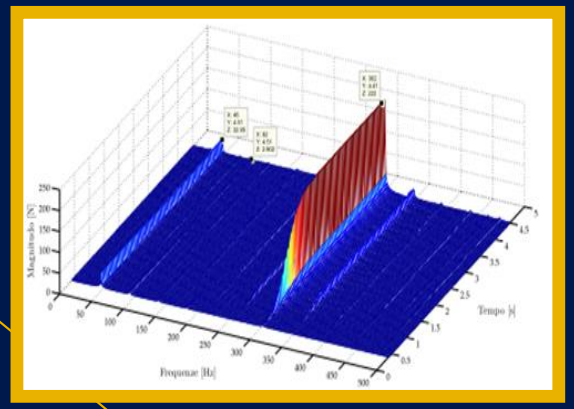
38 ECTS

- Track Mandatory Courses — 22 ECTS
- Track Elective Courses — 12 ECTS
- Project Works — 4 ECTS

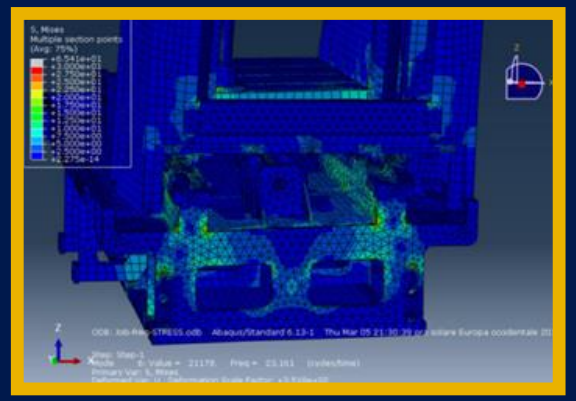
COURSE TITLE	SEM	ECTS
Machine Tools and Manufacturing Systems LM B	1	8
Automatic Control C	1	8
Machine Tools Digital Lab (by Simens at DEX – Piacenza) https://new.siemens.com/it/it/azienda/temi-chiave/futuro-del-manufacturing/tac.html	2	6
Track Elective Courses I		**8**
Mechatronic Systems and Laboratory B + Project Work I	1	8
Robotic Systems Design + Project Work I	1	8
Noise and Vibration Engineering + Project Work I	1	8
Advanced Measurements Techniques + Project Work I	1	8
Track Elective Courses II		**8**
Optimal Mechanical Design and Finite Element Method + Project Work II	1	8
Mechanical Systems Reliability + Project Work II	1	8
Methods for Virtual Prototyping + Project Work II	1	8

For further information click here:
https://www8.ceda.polimi.it/manifesti/manifesti/controller/extra/RegolamentoPublic.do?jaf_currentWFID=main&EVN_DEFAULT=evento&aa=2020&k_corso_la=483&lang=EN

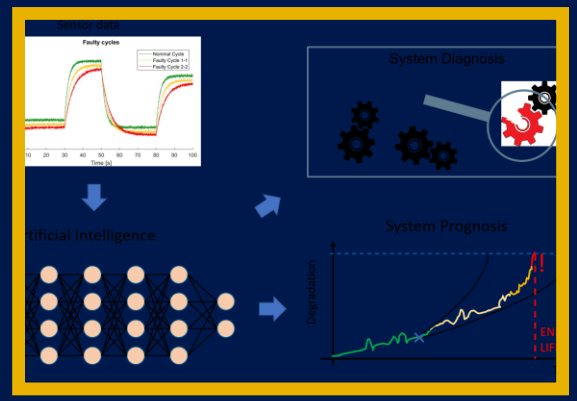
ME8: Examples of Master's Thesis



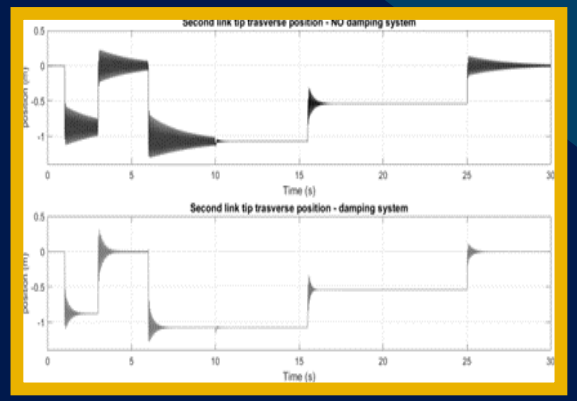
Control strategies for vibration suppression in milling



Complete FEM modelling of a machine tool (with damping)



Predictive Maintenance and Prognostics in Machine Tools



Modeling of flexible manipulators for vibration control

ME8: Partners

Companies & Organisations

SIEMENS

capellini ELECTROSPINDLES

JOBS

MCM

SANDVIK

mandelli

PAMA

UCIMU

UCIMU-SISTEMI PER PRODURRE

Italian Society of Machine Tool Builders

UCIMU honours - with a 3000 € award - skilled graduated with Master's thesis on machine tools and production systems

Scholarships available: Polipiacenza scholarships: deadline September 14th - Polo territoriale di Piacenza (polimi.it)