

## **Digital Manufacturing: Technologies and Management**

### **Monday 14<sup>th</sup> March 2022 (morning) – Introduction to Digital Manufacturing**

08.30 – 09.00 Gathering at the meeting point (Piazza Università 1) and registration of participants  
09.00 – 09.30 Welcome  
09.30 – 10.15 Industry 4.0: what's next - a glimpse into the future (D. Matt – unibz)  
10:15 – 11:00 Main technologies of I4.0 (E. Rauch – unibz)  
11.00 – 11:30 Break  
11.30 – 12.30 Introduction to the group work  
12.30 – 13:45 Lunch

### **Monday 14<sup>th</sup> March 2022 (afternoon) – Managing digital manufacturing technologies**

13.45 – 15.15 Implementation of I.40 technology from a management/organizational point of view (G. Orzes - unibz)  
15.15 – 15.30 Break  
15.30 – 17.00 Impact of Industry 4.0 on production systems (R. de Castro and A. Bikfalvi - UdG)  
17.30 – 19.00 Welcome Aperitiv

### **Tuesday 15<sup>th</sup> March 2022 – (Collaborative) Robotics and digital twins**

09.00 – 09.45 (Industrial) Robotics: evolution and trends (Gasparetto – uniud)  
09.45 – 10.30 Introduction to collaborative robots and safety standards – part A (E. Smet, – UAntwerp)  
10.30 – 11.00 Break  
11.00 – 11.45 Introduction to collaborative robots and safety standards – part B (E. Smet, – UAntwerp)  
11.45 – 12.30 Collaborative Robotics: examples and applications (R. Vidoni – unibz)  
12.30 – 13:45 Lunch  
13.45 – 15.15 (online) Industrial Digital Twins (Marquez-Barja, UAntwerp & IMEC)  
15.15 – 15.45 Break  
15.45 – 17.30 Smart Mini Factory Lab Demos: collaborative robotics and digital twin (E. Rauch / R. Vidoni - unibz)

### **Wednesday 16<sup>th</sup> March 2022 (at NOI Techpark) Assistance and Vision Systems**

09.00 – 09.45 (online) Worker assistance systems in production (B. Mark, unibz)  
09.45 – 10.30 Worker assistance systems in construction (P. Dallasega/A. Revolti, unibz)  
10.30 – 11.00 Break  
11.00 – 12.30 Safety control in robotic manipulator visual servoing system (C. Copot, UAntwerp)  
12.30 – 14:00 Lunch  
14.00 – 17.00 NOI Techpark Lab Tour and Demos

### **Thursday 17<sup>th</sup> March 2022 – Additive Manufacturing**

09.00 – 10.30 Introduction to Additive Manufacturing (C. Cappellini and Y. Borgianni - unibz)  
10.30 – 11.00 Break  
11.00 – 12.30 Digital Modelling and Additive Manufacturing with Polymeric Materials (N. Blanco and I. Ferrer - UdG)  
12.30 – 13:45 Lunch  
13.45 – 14.45 (online) Modeling technologies for Industry 4.0 (J. M. Lopez-Guede, UPV/EHU)  
14.45 – 17.00 Group work

**Friday 18<sup>th</sup> March 2022 – Optimization**

09.00 – 10.30 Introduction to Optimization Concepts and Algorithms (N. Van Oosterwyck, UAntwerp)

10.30 – 11.00 Break

11.00 – 12.30 FEA, optimize your design towards strength (P. Arras, KU Leuven)

**Friday 25<sup>th</sup> March 2022**

14.00-15.30 (online) Group work

**Friday 1<sup>st</sup> April 2022**

14.00-15.30 (online) Group work

**Tuesday 19<sup>th</sup> April 2022**

16.00-17.30 (online) Group work

**Friday 22<sup>nd</sup> April 2022**

09.00-11.00 (online) Group work presentations