



Schedule:

Day 1 – 2025, June 16th: Welcome and Keynote

5:00 pm - Welcome speech

“Welcome and presentation of the summer school program” (Alessandro Carbonari)

5:30 pm - Keynote speech

“Digital transformation by construction robotics enabling Construction 5.0” (Thomas Bock)

7:00 pm – Remarks from IAARC

“IAARC summer schools and events for graduate and PhD students”(Shabtai Isaac)

*7:30 pm - Buffet **Dinner***

Day 2 – 2025, June 17th: Simulation and modelling

9:30 am – Lecture no. 1

“Digital solutions for design, prefabrication and robotic construction” (Kepa Iturralde, Institut für Baubetriebslehre, Stuttgart, Germany)

*11:15 am - **Coffee break***

11:30 am - Lecture no. 2

“Deep-learning -based semantics extraction of secondary and MEP components of buildings” (Frédéric Bosché, University of Edinburgh, UK)

*1:15 pm - **Light Lunch***

2:30 pm - Lecture no. 3

“Digital Twin for Construction Safety: Prevention through Design and Planning, Run-time Monitoring and Control, and Active Personalized Feedback and Learning” (Jochen Teizer, Technical University of Denmark, DTU)

*4:15 pm - **Coffee break***

4:30 pm - First Laboratory Session (BS&T Lab, UNIVPM)

“Emergency management including users' behaviors: wayfinding systems and virtual reality training strategies under different risk conditions” (Gabriele Bernardini, Enrico Quagliarini, Università Politecnica delle Marche, Ancona, Italy)

Sessions of day 2 close at 6:00 pm

Day 3 – 2025, June 18th: Digital twin development and applications

9:30 am - Lecture no. 4

“Automating the inspection of safety measures in buildings and construction sites through AI and robotics” (Borja Garcia de Soto, NYU at Abu Dabi)

11:15 am - **Coffee break**

11:30 am - Lecture no. 5

“Development of AI applications in construction and regulatory issues” (Žiga Turk, University of Ljubljana, Slovenia)

1:00 pm - **Light lunch**

2:15 pm – Lecture no. 6

“A framework architecture for the development of digital twins in construction” (Berardo Naticchia, Francesco Spegni, Università Politecnica delle Marche, Ancona, Italy)

3:15 pm – Second Laboratory Session (DC3 Lab, UNIVPM)

“Applications of Digital Twins for lifecycle management of Infrastructures” (Leonardo Binni, Rocco Davide D’Aparo, Università Politecnica delle Marche, Ancona, Italy)

4:15 pm - **Coffee break**

4:30 pm - Third Laboratory Session (DC3 Lab, UNIVPM)

“Applications of Digital Twins for Safety Management” (Alessandra Corneli, Alessandro Carbonari, Università Politecnica delle Marche, Ancona, Italy)

5:30 pm - Fourth Laboratory Session (DC3 Lab, UNIVPM)

“Applications of Digital Twins for city asset management” (Massimo Vaccarini, Leonardo Messi, Università Politecnica delle Marche, Ancona, Italy)

6:30 pm – Masterclass: one-to-one meetings between instructors and participants

7:30 pm: **bus departing to the summer school dinner**

8:00 pm - **Summer school dinner and goodbye.**

Summer School Committee

Alessandro Carbonari (Polytechnic University of Marche, DICEA, Italy)
Alessandra Corneli (Polytechnic University of Marche, DICEA, Italy)
Shabtai Isaac (Ben-Gurion University of the Negev, Israel) – IAARC Vice-President for Education, Workshops and Summer Schools

Local Organizing Committee

Leonardo Messi (Polytechnic University of Marche, DICEA, Italy)
Leonardo Binni (Polytechnic University of Marche, DICEA, Italy)
Dilan Durmus (Polytechnic University of Marche, DICEA, Italy)
Tommaso Pieroni (Polytechnic University of Marche, DICEA, Italy)
Francesco Spegni (Polytechnic University of Marche, DICEA, Italy)

Limited seats available.

More information to be published soon.