

3-Day Workshop on Digital Twins for multiscale built environment management

-  **When:** September 3–5, 2025
-  **Location:** University of Ljubljana, Faculty of Civil and Geodetic engineering (FGG), Jamova c. 2, Ljubljana
-  **Format:** Hybrid event - Join us on-site (FGG, Room J-III/2) or via <https://uni-lj-si.zoom.us/j/95759640982>
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The workshop aims to strengthen capacities in sustainable spatial and infrastructure planning through advanced digital tools, engaging research and teaching staff as well as PhD students. Digital twins are dynamic simulations that mirror and interact with the physical world. By integrating live data and predictive analytics, they enable monitoring, scenario testing, and adaptive planning—crucial for addressing environmental complexity and climate risks. As virtual replicas, they support decision-making across scales, from smart homes to sustainable landscapes. Advancing EU priorities in energy efficiency, resource use, and climate adaptation, digital twins foster transparent, data-driven governance and, when co-designed with stakeholders, inclusive innovation and a just transition.

Day 1 – September 3, 2025: Digital Twins for construction and built environment

- ❖ 8:30 – 9:00 Coffee & Opening
- 09:00 – 09:15 Welcome address
- 09:15 – 10:15 Dr. Robert Klinec (UL, FGG): **Digital Transformation in Construction: Tracing the Evolution of BIM and the Emergence of Digital Twins** (CONFIRMED)
- 10:30 – 11:30 Dr. Matevž Dolenc (UL, FGG): **Environmental and Economic Aspects of BIM Applications** (CONFIRMED)
- ❖ 12:00 – 13:00 Lunch break
- 13:00 – 14:00 Dr. Žiga Turk (UL, FGG): **Challenges and Risks of AI in Architecture and Engineering** (CONFIRMED)
- 14:30 – 16:30 **Site Visit – Demonstration** (TO BE CONFIRMED)

Day 2 – September 4, 2025: Digital Twins at city and landscape scales

- ❖ 8:30 – 9:00 Coffee & Opening
- 09:15 – 10:15 Dr. Claudia Hedwig van der Laag (OSLOMET): **City Digital Twins for Sustainable Mobility and Emissions Evaluations** (CONFIRMED)
- 10:30 – 11:30 Dr. Carlo Sessa (EMEA): **Participatory design of Digital Twin applications for Territorial Regenerative Ecosystems** (CONFIRMED)
- ❖ 12:00 – 13:00 Lunch break
- 13:15 – 14:15 Dr. Maria Chatziathanasiou (CERTH): **Digital twins for sustainable mobility: CERTH/HIT's 4-step model for evidence-based decision making in Thessaloniki** (CONFIRMED)
- 14:30 – 15:30 Dr. John Östh (OSLOMET): **Digital Elevation Models for Watershed Analysis: Linking Geospatial Data with Environmental Applications** (CONFIRMED)

Day 3 – September 5, 2025: Digital twins for environmental solutions and future pathways

- ❖ 8:30 – 9:00 Coffee & Opening
- 09:00 – 10:00 Dr. Joanna Badach (Gdańsk University of Technology) (TO BE CONFIRMED)
- 10:15 – 11:15 Dr. Luma Fonseca Alvez (University of Turku): **Co-Designing Urban Nature-Based Solutions: Leveraging digital participatory tools for supporting stakeholders collaboration** (CONFIRMED)
- ❖ 12:30 – 13:30 Lunch break
- 13:30 – 15:30 Roundtable – **Next Steps in Digital Twin Research and Collaboration**