Call for Abstracts: **BUILD-IT Workshop 2023**

"BUILding a DIgital Twin: requirements, methods, and applications"

Digital Twins (DT) are virtual representations of physical systems or processes that are used for modeling, simulating, and controlling them. With the increasing availability of data and computational resources, digital twins are becoming more powerful and versatile, and are transforming our societies.

This workshop aims to bring together researchers and practitioners working on digital twins to share their ideas, experiences, and challenges. We invite abstracts on DT requirements, methods, and applications, such as: ***product design and manufacturing, product and process life cycles, health monitoring, predictive maintenance and fault diagnosis, product and process energy efficiency, urban planning and management, citizen-centered service design and optimization, connected and automated mobility (ground, air, and water), smart industries and infrastructure, communication network management, cultural heritage, healthcare and biomedicine, environment, biology, ecology, and ecosystems***, including also discussions on DT challenges and limitations. Relevant topics and methods are included in (but not limited to) the list below:

- Computational design
- Data fusion and assimilation
- Geometric modeling and semantic annotation
- Inverse problems, statistical analysis, and uncertainty quantification
- IT platforms and data management
- Machine learning and artificial intelligence
- Modeling and simulation
- Optimization and advanced control
- Sensors and communication systems
- Virtual and augmented reality

We welcome contributions from research institutes, academia, and industry, and from all fields related to DT. We particularly encourage submissions that demonstrate the use of DT in real-world applications, or that present novel approaches or techniques.

Abstracts should not exceed 3 pages, and should clearly state the motivation, the problem addressed, the methodology, the results, and the contribution to the field. Abstracts will be reviewed by the Scientific Committee, and the accepted abstracts will be both presented as oral presentations and collected in a book of abstracts.

Important dates:

- Abstract submission deadline: **1 June 2023**
- Notification of acceptance: **3 July 2023**
- Author registration deadline: **17 July 2023**
- General registration deadline: **4 September 2023**
- Workshop date and place: **19-20 October 2023, Rome**

Please submit your abstracts through the workshop website www.inm.cnr.it/buildit2023. Details on the abstract format can be found here. For any questions or concerns, please contact the Organizing Committee.

We look forward to having your contributions for an engaging workshop on Digital Twins!