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geco
GEOMATICS
FOR ENVIRONMENT AND CONSERVATION
OF CULTURAL HERITAGE LABORATORY

**INDICEE - International Doctorate in
"Civil and Environmental Engineering"
Dottorato Internazionale
Ingegneria Civile e Ambientale**



**1st
JUNE
2022**

**Workshop
Towards Digital Twins by
embracing FAIR 3D
architecture information
Francesca Noardo**

**9,00-
13,30**
(CET Italy time)

**Aula 049 – Scuola di Ingegneria
Via S. Marta 3 – Firenze**

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**Workshop organized by GeCo Lab - Geomatics for environment and
conservation of cultural heritage laboratory**

www.geomaticaeconservazione.it

www.indicee.unifi.it – www.dicea.unifi.it

Abstract

Architectural heritage presents very rich and complex features, which witness the history of the building and its artistic value, and at the same time are relevant to the present of the building as a living organism and functional part of the city.

Technologies are ready nowadays to allow effective highly detailed 3D survey of such artifacts and an efficient representation of the resulting information, supporting the building documentation, maintenance and management.

However, the condition for this is that data are efficiently planned, stored and described, having advantage of the available Open standards, and possibly shared according to the Findable Accessible Interoperable and Reusable (FAIR) data principles.

In this seminar, an overview of the methodological issues to be considered in the complex 3D information management and integration will be given, followed by a review of the available.

Topics

- Architectural heritage information in 3D geospatial models: developing opportunities and challenges.
- The available Open standards for architecture: CityGML-CityJSON; IndoorGML; LandInfra; gbXML; INSPIRE UML model; IFC.
- Pros and cons of using Open standards (for heritage).
- Towards data integration FAIR data Systems of Systems and Digital Twins.



Francesca Noardo is Innovation Project Manager at the Open Geospatial Consortium (OGC) Europe.

Her research interests within Geomatics focus on Geographic Information Systems (GIS) and, in particular, on interoperability, by means of the proper adoption of Open standards and on the harmonisation and integration of multi-source data.

She is leading the European Network for Digital Building Permit (EUnet4DBP), currently composed of representatives of more than 50 institutions, from 20 countries. It was acknowledged and mentioned by the European Commission in its analytical report “Digitalisation in the construction sector” (2021). She is the secretary in the Working Group IV/2: Ontologies, Semantics, and Knowledge Representation for Geospatial Information of the International Society of Photogrammetry and Remote Sensing (ISPRS).

Participation is free but please send an email to register yourself to margherita.mellini@unifi.it.