

### DOCTORAL PROGRAM IN CIVIL AND ENVIRONMENTAL ENGINEERING

# XXXIX Cycle Flash Presentations and 5<sup>th</sup> Final Year Meeting

### CEEPhD DAY

Location Campus of Engineering, University of Perugia

Latitude: 43.118177 Longitude: 12.357942

(Teams platform for international members of the Faculty

Board)

Timetable February 1<sup>st</sup> 2024 – 9:30 a.m. (CET)

#### **Program**

9:30 Welcome address

SESSION 1 – Aula Magna

09:30 Flash Presentations (XXXIXCycle, 5 min + 2 min questions) – Chair Filippo Ubertini

09:30 - 09:37 Claudia Cerbai

Study for the definition of an Information System with BIM procedures for Real Estate and OO.PP.

9:37-9:44 Jessica Di Mario

Utilization of by-products from agri-food chains for the production of bioactive molecules, biomaterials, and biofertilizers in a third-generation biorefinery

9:44-9:51 Eleonora Dottorini

Integrated digital methodologies and technologies for the understanding, documentation, interpretation, and communication of historical cultural heritage. Application to a case study in the Umbrian territory: the monumental cemetery of Perugia.

9:51-9:58 Livia Fabbretti

Study and implementation of innovative methods for seismic monitoring and damage detection in strategic buildings 9:58-10:05 Debora Falocci

Modeling Transients Response in Complex Pressurized Networks

10:05-10:12 Gregorio Gazzetta

Water availability evaluation by reanalysis and ground measurements.

10:12-10:19 Pasquale Guarino

AMUSED - Advanced Methods for aUtomated Survey and gEneration of Digital twins of civil engineering structures









## DOCTORAL PROGRAM ENGINEERING

10:19-10:26 Francesco Leopardi

Global scale hydrological runoff data using satellite observations

10:26-10:33 Francesco Mariani

Handling uncertainties in Safety Assessment of Existing Bridges - SAFER

10:33-10:40 Michele Mattiacci

Advanced strategies for strain-based health monitoring of masonry structures

10:40-10:47 Ahsin Mehmood (online)

Innovative technological solutions for multi-storey prefabricated reinforced concrete buildings subject to seismic action

10:47-10:54 Carlos Eugenio Moreira De Sousa

Use of digital twins for predictive maintenance and detection of anomalies in existing and monumental buildings

10:54-11:01 Martina Natali

Modelling vegetation optical depth in Mediterrean agro-forestry systems by integrating machine learning and satellite radar observations into a land surface model

#### 11:00-11:10 Break

11:10-11:17 Yariv Portnoy

Advanced manufacturing of solid rocket motors nozzles

10:17-11:24 Sara Prapotnich

Digital twin and artificial intelligence for the management of a District Metered Area of Padua water distribution network.

10:24-11:31 Waqas Qayyum (online)

Dynamic analysis of complex historic constructions and definition of effective strategies for their structural monitoring – (DESMOS)

10:31-11:38 Arash Rahimi

Structural Health Monitoring and intelligent damage diagnosis of railway bridges using machine learning approaches

10:38-11:45 Mehran Shahpari

Green Composite Materials for Structural Strengthening (REPAIRS)

10:45-11:52 Asad Ullah (online)

Advanced analysis methods for Arch Gravity Dams (AGD) subjected to coupled seismic, hydraulic, static stresses.

10:52-11:59 Israel Sousa

3D\_IMPULSE-3D innovative materials for printed multifunctional sustainable engineering structures

**SESSION 2 - Aula Magna** 

#### 12:00 Second Year Presentations (XXXVI Cycle, 30 min + 10 min questions) - Chair Marco Filippucci

12:00-12:40 Giulia Santantonio

Models and examples of sustainable living. The role of collective proximity spaces.





