Dottorato di Ricerca di Interesse Nazionale

Defense against natural risks and ecological transition of the built environment

PhD School 2024

Catania, 6-9 May, 2024



Catania, Polo Tecnologico Room E Via Santa Sofia 102 The school is part of the activities that the National PhD programme offers to the students. The PhD aims to create experts in analysis, prevention, management of hazardous natural events, promoting innovative and effective solutions of the impact on constructions. The students must be able to understand the nature of the hazards, and to study the effects of natural phenomena at different levels. Basic formation includes elements of risk analysis, advanced methods for numerical simulations and advanced topics of mechanics.

The school aims to promote, together with advanced formation, the creation of research networks between the students, through the interchange of experiences and active discussions. To this aim, the last part of the school will be devoted to the presentation of problems and/or of preliminary results by the students themselves.

The courses are mainly directed to I year PhD students. The courses are open to students of other PhD programmes, who may ask to participate directly to the PhD coordinator.

For information

Prof. Massimo Cuomo, coordinator of the National PhD Programme Defense against natural risks and ecological transition of built environment

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Schedule of the courses

Monday, May 6

9.00 - 11.00 dott. Marco Peroni, Marco Peroni Ingegneria, , Recent researches on Messina suspension bridge.

11.00 – 13.00 prof. Luca Patruno, University of Bologna, Computational Wind Engineering: role and prospects in the analysis of wind-resistant structures.

15.00 – 17.00 Prof. G. Abate, University of Catania Dynamic geotechnical characterization: in-situ and laboratory tests, Part 1

17.00 – 19.00 Prof. G. Nastasi (University of Catania) Introduction to Python programming, 1

Tuesday, May 7

9.00 - 11.00 00 Prof. G. Abate, University of Catania Dynamic geotechnical characterization: in-situ and laboratory tests, Part 2

11.00 – 13.00 Prof. G. Abate, University of Catania, Ground response analysis and seismic microzonation maps: Part 1

15.00 – 17.00 Prof. G. Nastasi (University of Catania) Introduction to Python programming, 2

17.00 – 19.00 Prof. G. Nastasi (University of Catania) Introduction to Python programming, 3

Wednesday May 8

9.00 - 11.00 00 Prof. G. Nastasi (University of Catania) Introduction to Python programming, 4

11.00 – 13.00 Prof. R. Massimino, University of Catania, Ground response analysis and seismic microzonation maps: Part 2.

15.00 – 17.00 Prof. R. Massimino, University of Catania Dynamic soil-structure interaction: overground structures Part 1

17.00 – 19.00 Presentations of the students

Thursday, May 9

9.00 – 11.00 Prof. D. Pitilakis, University of Tessaloniki Eco-sustainable solution to reduce seismic risk of structures and infrastructures – Part 1

11.00 – 13.00 Prof. R. Massimino, University of Catania, Eco-sustainable solution to reduce seismic risk of structures and infrastructures – Part 2

On-line lectures

Monday, May 13, Also live in Room V8

15.00 – 19.00 Prof. S. Grasso (university of Catania) Seismic slope instability and liquefaction

Tuesday, May 14

15.00 – 19.00 Prof. R. Massimino, University of Catania Dynamic soil-structure interaction: overground structures Part 2 Dynamic soil-structure interaction: underground structures