

1st SHORT COURSE ON MULTIHAZARD FOR EXTREME EVENTS: Fires, Explosions, Floods, Earthquakes, University of Cagliari (Italy), 17th – 20th September 2019



DICAAR



The increasing complexity of human settlements characterized by significant demographic increases and socio-economic development, leads to interconnected urban and infrastructural systems. Consequently, the safety expectation and the reliability of the territorial systems is growing. In addition, recent climatic changes and greater awareness of the anthropized environment protection raise new questions to the scientific community.

Indeed, an increasing demand for risk prediction comes from civil society. In this sense, the development of technical know-how cannot be limited to the refined investigation of a single construction or interventions on the territory but must provide the political decision-maker with new tools for forecasting the risk to which the community is exposed, in order to mitigate the effects of extreme events, both natural and anthropogenic.

Course Objectives

Considering the main natural hazards (floods, earthquakes) and anthropic risks (fires, explosions), the course introduces to multi-hazard approaches for this problem starting from the territorial scale to a single construction focus.

In the first day an overview of the main risks and forecasting methodologies, with an emphasis on the so-called "multi-risk", i.e. the possibility that individual events can be chained together negatively, will be provided.

In the second days scientific insights on the fires and explosion effects on structures and infrastructures will be discussed.

During the third day natural risks like floods, earthquakes will be analyzed considering their impact on urban environment and infrastructure and settlements.

On the final day a visit to an important LNG tank construction site will be held, where it will be possible to observe significant applications of risk assessment and mitigation techniques.

The main objective is thus to provide the participants with a solid basis for using multi-hazard approach in trying to achieve a robust and resilient design of urban environment and its infrastructure.

**Course Schedule**

| Date | Time | Topic |
|------------|-------------|-------------------------------------|
| 17/09/2019 | 15:00-19:00 | Multihazard |
| 18/09/2019 | 09:00-13:00 | Session 1 – Blast |
| 18/09/2019 | 15:00-19:00 | Session 2 – Fire |
| 19/09/2019 | 09:00-13:00 | Session 3 – Flooding |
| 19/09/2019 | 15:00-19:00 | Session 4 – Earthquake |
| 20/09/2019 | 09:00-13:00 | Visit to LNG tank construction site |

Organizing Committee

Fausto Mistretta. fmistret@unica.it
Mauro Sassu. msassu@unica.it
Flavio Stochino. fstochino@unica.it

Course Location

Faculty of Engineering and Architecture, University of Cagliari, via Marengo 2, 09123 Cagliari (Italy)

Registration

Participants should communicate by e-mail a statement of participation to the Secretariat and, after the payment, send a scan copy of the bank transfer receipt. Registration is considered completed only after the bank transfer receipt has been received by the Secretariat.

Course fee is established as follows:

Whole course: 350 €

The fee comprises fixed-menu lunches, coffee breaks and course documents.

Bank transfert to:

BCC BANCA DI CAGLIARI, Agenzia Viale Ciusa - Cagliari

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Please always write: MHEE CAGLIARI 17 - 20 September 2019 + your name and surname

Lecturers

- Fabio Biondini (Politecnico di Milano)
- Franco Bontempi (University of Rome La Sapienza)
- Christoph Butenweg (FH Aachen- University of Applied Sciences)
- Fadi Chehade (Lebanese University)
- Mario De Stefano (University of Florence)
- Ignacio Paya-Zaforteza (Universitat Politècnica de València)
- Juan Sagaseta (University of Surrey)
- Isam Shahrour (University of Lille1)

Secretariat

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