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

**The courses**

**Fundamentals of Risk Analysis**

24 hrs  
Instructors:  
Prof. Carmine Galasso Institute for Risk and Disaster Reduction, London  
Prof. Fabrizio Paolacci, Dipartimento di Ingegneria civile, informatica e delle tecnologie aeronautiche, Università Roma 3

**Nonlinear Computational Mechanics (Fluids and Solids)**

27 hrs  
Instructors:  
Prof. Gabriele Freni, Ingneria Civile e Amientale, Universotà KORE, Enna  
Prof. Mauro De Marchis, , Ingeneria Civile e Amientale, Universotà KORE, Enna  
Prof. Giovanni Garcea, Dipartimento di Ingegneria Informatica, Modellistica, Elettronica e Sistemistica, Università della Calabria  
Prof. Leopoldo Greco, Dipartimento di Ingegneria Civile e Architettura, Università di Catania  
Prof. Massimo Cuomo, Dipartimento di Ingegneria Civile e Architettura, Università di Catania

**Nonlinear Oscillations and Perturbation Methods**

15 hrs  
Instructor:  
Prof. Daniele Zulli, Dipartimento di Ingegneria civile, edile - architettura e ambientale, Università degli Studi dell’Aquila

For information  
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