Politecnico di Torino | DISEG | EOS EURASIAN OPENSEES

SUMMER SCHOOL
5th-6th July 2022

7th International course on
Seismic Analysis of Structures using OpenSees
Finite Element-based Framework and Civil Engineering Applications

Together with ▶

OPENSEES DAYS EURASIA
2nd EURASIAN CONFERENCE ON OPENSEES
7-8 JULY 2022

AIM OF THE COURSE

OpenSees (Open System for Earthquake Engineering Simulations) is an open source software conceived for the seismic analysis of structures. The source code is public to facilitate its wide diffusion and to be adaptable to the needs of users, who can also modify and extend default libraries in terms of materials, components, and algorithms. The main difficulties that users usually face during their first approach to OpenSees are due to the programming language, which might appear rather complex. Following previous editions, the main goal of this short course is to provide a basic understanding of finite element-based theoretical framework and programming language in OpenSees. Applications in research and practice will be also presented.

SHORT PROGRAM

(Full program https://eosd2022.weebly.com/summerschool-programme)

July 5 2022

8:30-13:30 • Registration, • Framework, aims and scope of the course, • Fundamental of the Finite Element Method, • Introduction to TCL and OpenSees.

14:30-19:30 • Methods and formulations for non-linear analysis of reinforced concrete frames, • Non-linear Static analysis of frame structures using OpenSees: concentrated plasticity approach.

July 6 2022

8:30-13:30 • Non-linear Static analysis of frame structures using OpenSees: distributed plasticity approach, • Dynamic analysis of frame structures using OpenSees, • Dynamic analysis of base isolated structures using OpenSees.

14:30-19:30 • OpenSees in Python environment and modelling of 3D structures, • Adding a new material to OpenSees, • Modelling of Soil-Structure interaction.

MAIN ORGANIZERS

Fabio di Trapani (Politecnico di Torino), **Giuseppe Carlo Marano** (Politecnico di Torino), **Giorgio Monti** (Sapienza University of Rome), **Giuseppe Andrea Ferro** (Politecnico di Torino), **Cristoforo Demartino** (Zhejiang University).

COLLABORATORS

Antonio Pio Sberna, Marco Martino Rosso, Jonathan Melchiorre, Laura Sardone, Stefanos Sotiropoulos, Beibei Xiong

REGISTRATION AND FEES

Registration is required on the website **https://eosd2022.weebly.com**
Registration Deadline: **May 20, 2022**
A **discounted fee** is offered to those attending both the **Summer School and the EOSD 2022 Conference**.

VENUE

Politecnico di Torino
Room 5D, Corso Duca degli Abruzzi, 24, 10129 Torino
Remote attendance is also available.

SCIENTIFIC COMMITTEE

Giorgio Monti (Sapienza University of Rome, EOS), **Giuseppe Carlo Marano** (Politecnico di Torino), **Camillo Nuti** (Roma Tre University), **Fabrizio Mollaioli** (Sapienza University of Rome), **Yan Xiao** (Zhejiang University/University of Illinois at Urbana Champaign Institute), **Giuseppe Quaranta** (Sapienza University of Rome), **Fabio Di Trapani** (Politecnico di Torino), **Giuseppe Andrea Ferro** (Politecnico di Torino), **Antonio Pio Sberna** (Politecnico di Torino), **Cristoforo Demartino** (Zhejiang University/University of Illinois at Urbana Champaign Institute), **Francesco Marmo** (University of Naples Federico II), **Giovanni Minafò** (University of Palermo), **Jose Abell** (Universidad de los Andes, Chile), **Amedeo Flora** (University of Basilicata), **Luciano Rosati** (University of Naples Federico II), **Bruno Briseghella** (Fuzhou University).

SPEAKERS

Theoretical lectures

Emma La Malfa
University of Palermo

Francesco Marmo
University of Naples Federico II

Applicative lectures

Josè Abell
Universidad de los Andes

Cristoforo Demartino
Zhejiang University

Fabio Di Trapani
Politecnico di Torino

Amedeo Flora
University of Basilicata

Giovanni Minafò
University of Palermo

Salvatore Sessa
University of Naples Federico II