Short course:
Experimental Assessment & Numerical Modeling of Seismically Isolated Structural Systems

Marco Furinghetti
Assistant Professor of Structural Engineering
Department of Civil Engineering and Architecture - DICAr
University of Pavia, Italy

The present short course consists of 24 hours of both theory and practical applications related to the experimental assessment of full-scale isolation devices, together with the numerical modeling of case study structures. The outcomes of dynamic tests performed to full-scale devices of real applications will be analyzed, through data reduction procedures, according to the European Standard code for Anti-Seismic devices UNI:EN15129:2009. Finally, fast design procedure will be presented for the typologies of isolators adopted in the common practice, and the seismic response of a base-isolated case study structure will be assessed, through Non-Linear Time History Analysis (NLTHA), by means of a commercial F.E.M. software.

Week #1	***Topic:***	***Time:***
Monday 09/05	Introduction to Seismic Isolation	14:00 – 16:00
Tuesday 10/05	European standard for Anti-Seismic devices	14:00 – 16:00
Wednesday 11/05	Data reduction of dynamic tests on full-scale isolators	14:00 – 18:00
Thursday 12/05	Tutorial on modeling of isolated structures in SAP2000	14:00 – 16:00
Friday 13/05	Fast design procedures for isolation systems	14:00 – 16:00

Week #2	***Topic:***	***Time:***
Monday 16/05	Definition of a case study structure	14:00 – 16:00
Tuesday 17/05	Selection of the seismic input for NLTHA	14:00 – 16:00
Wednesday 18/05	Modeling and analysis of the isolated structural system	14:00 – 18:00
Thursday 19/05	Simplified lumped mass oscillators	14:00 – 16:00
Friday 20/05	Analysis of results	14:00 – 16:00

The short course will be both in person (@ University of Pavia) and remotely streamed (@ zoom platform). To subscribe: postlaurea@iusspavia.it