

# Definition of seismic input at an intercontinental airport according to the current European seismic hazard model

Teraphan Ornthammarath<sup>1,\*</sup>, Francesca Bozzoni<sup>2</sup>,

<sup>1</sup>Department of Civil and Environmental Engineering, Faculty of Engineering, Mahidol University THAILAND

<sup>2</sup>EUCENTRE, Pavia, ITALY

---

## ABSTRACT

In this study, a preliminary 1D fully stochastic site response analyses (100 simulations) for Venice airport were carried out by accounting for the uncertainty of soil model parameters as well as the variability of seismic input. Although the seismicity at the site of the airport is moderate based on the past literatures, the dynamic response of soils is nonlinear even at low to moderate deformation levels. Thus, these manifestations of soil behaviour have been taken into account using a linear-equivalent constitutive model. Further ground response analyses are currently ongoing by adopting a larger number of simulations (e.g. 1000) and with reference to a more severe seismic action (i.e. referred to 2475-year return period).

**Keywords:** ground motion