

Seminario - 4 aprile 2014, ore 14:30, aula A12

EVALUATION OF MODELLING PARAMETERS ON SEISMIC ASSESSMENT OF RC IRREGULAR STRUCTURES

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The introduction of new regulations for seismic assessment of structures established stricter performance requirements for existing buildings, such as analysis type, load distribution, accidental eccentricity, etc. At the same time, these codes give room for engineering judgment to be used with reference to the definition of structural and non-structural elements such as slabs or infill walls, and obviously leave the modelling assumptions, such as Finite Elements typology, meshing, mass modelling, etc. to the analyst decision. The main goal of this work is thus to provide an extensive and wide evaluation on the influence of each parameter on the seismic assessment of RC structures. In parallel, the present study aims to evaluate the capability and accuracy of some of the existing nonlinear static procedures (N2 and ACSM) for such buildings irregular in plan and elevation. Thus, in order to accomplish the abovementioned objectives, four existing irregular buildings were subjected to an extensive number of nonlinear static and dynamic analyses. The comparisons, focused on both global and local response parameters, provide first indications of the relative importance of each modelling parameter and of the reliability of the static methods to assess the seismic vulnerability of RC irregular buildings. *The current project has been part of the SYNER-G and NERA research programs and has been accomplished in EUCENTRE, Pavia with the collaboration of R.Sousa, D.Kazantzidou-Firtinidou, L.Sousa, M.Kohrangi, T.Eroğlu, under the supervision of prof. R.Pinho and Dr.R.Nascimbene.*

Danai Kazantzidou-Firtinidou has accomplished her under-graduate 5-years studies in N.T.U. of Athens and has continued her post-graduate studies in Earthquake Engrg. in the joined program of University of Patras and ROSE School, Pavia. Her domain of specialization is the seismic assessment of structures. After her studies she worked as a research asst. in Eucentre, Pavia and then, she was occupied within the field of structural/ seismic strengthening by FRPs in Fyfe Europe, Athens. She currently works in the Kurmann&Cretton design office in Switzerland and in parallel for the Research Center of Alpine Envir. and the Canton of Valais for the seismic assessment in territorial level of the swiss cities. She is a member of the Technical Chamber of Greece, the Swiss Soc. of Earthquake Engrg. and of the Work Group of the French Ass. of Civil Engineers for the composition of the "Guidelines regarding the seismic strengthening with composite materials". danai.kazantzidou@gmail.com

The seminar will be given in English

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