PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 EARLY STAGE GRANT LASTING 12 MONTHS FOR CONDUCTING RESEARCH PURSUANT TO ART. 22 OF LAW NO. 240/2010 AT THE DEPARTMENT OF ENGINEERING AND APPLIED SCIENCES (ARF 08/B3 - AD ICAR/09) - RESEARCH PROJECT *"SISTEMA DI MONITORAGGIO INTELLIGENTE PER LA SICUREZZA DELLE INFRASTRUTTURE URBANE – INSIST"* PRESENTED IN THE PON *"RICERCA E INNOVAZIONE"* 2014–2020 E FSC AVVISO PER LA PRESENTAZIONE DI PROGETTI DI RICERCA INDUSTRIALE E SVILUPPO SPERIMENTALE NELLE 12 AREE DI SPECIALIZZAZIONE INDIVIDUATE DAL PNR 2015-2020 (DD 13/7/2017 n. 1735) – CUP: F14E18000100005 - CODE PROJECT INSISTPRIVA19 - TYPE B
PICA CODE: 19AR008

announced with decree of the Chancellor Rep. no. 796/2019 of 09.12.2019 and posted on the official registry of the University on 13.12.2019

RESEARCH PROJECT

"Evaluation, analysis and modeling of vulnerabilities of reinforced concrete multi-storey buildings for structural health monitoring"

Research structure: Department of Engineering and applied sciences
Duration of the grant: 12 months
Scientific Area: 08 - Civil engineering and architecture
Academic recruitment field: 08/B3 – Structural engineering
Academic discipline: ICAR/09 – Structural engineering
Scientific Director: Prof. Paolo Riva

The project specifically involves the analysis of multi-storey buildings with a reinforced concrete frame structure, typical of the second post-war period and vulnerable to seismic actions. These buildings are generally characterized by the presence of masonry infills interacting with the structure. The activities include the assessment of the vulnerabilities / criticalities of these systems, the methods for calculating the capacity associated with each of them and the evaluation of the most appropriate finite element modeling strategy. Both the consequences of static vulnerabilities (eg overloads, constraint failures) and dynamic ones, in particular due to the earthquakes, will be considered. Nonlinear analyses of structural models with the analyzed vulnerabilities will follow.