**ANNEX A**

*PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 GRANT LASTING 12 MONTHS FOR CONDUCTING RESEARCH IN ACCORDANCE WITH ART. 22 OF LAW OF 30.12.2010 NO. 240 AT THE DEPARTMENT ENGINEERING AND APPLIED SCIENCES OF THE UNIVERSITY OF BERGAMO - ACADEMIC RECRUITMENT FIELD 08/B3 – STRUCTURAL ENGINEERING - AD ICAR/09 – STRUCTURAL ENGINEERING - CUP: E18B17000170009.*

*announced with decree of the Rector Rep. no. 96/2018 of 2.2.2018 and posted on the official registry of the University on 2.2.2018.*

**RESEARCH PROJECT**

**TITLE: "*Structural health monitoring of existing buildings*"**

The project aims to study and implement a single product, within the smart living, able to monitor the energy performance of a building, to provide a first indication of the seismic conditions of the building and at the same time to monitor the seismic damage, detecting and recording the fundamental parameters of the earthquake.

Specifically, the researcher will take care of the seismic part, developing management algorithms to provide the user with damage information following each earthquake, comparing the seismic parameters recorded on the building and providing the user with important indications on the damage found in the building following an earthquake. The system allows to "dialogue" with the building, controlling its state of health and improving the seismic risk perception. Starting from the evaluation of the seismic damage modalities in buildings of various structural typology, and from the literature analysis of the damage indexes, specific algorithms of data analysis will be developed and evaluated to capture the various types of damage. The final validation will take place via simulations on a shake table.