



## INVITED SESSION SUMMARY

**Title of Session:** Seismic and energy retrofitting of the existing buildings

**Name, Title and Affiliation of Chair:**

Prof Dr Tiago Miguel Ferreira, Assistant Professor, University of the West of England - UWE Bristol, United Kingdom

Prof Dr Eva Barreira, Assistant Professor, University of Porto, Portugal

Prof Dr Ricardo Almeida, Assistant Professor, Polytechnic Institute of Viseu, Portugal

**Details of Session (including aim and scope):**

It is well known that the retrofitting of existing building stock in urban areas is an increasingly leading branch in the construction sector. It is also widely acknowledged that, because they were constructed in a period in which energy efficiency, seismic vulnerability and environmental sustainability requirements were not a critical part of the design, a very significant part of existing building stock presents an inadequate performance to the present design codes in both energetic and structural terms. To guarantee greater resilience of the existing building stock, a holistic approach for its renovation, which conjugates technical and functional performances with principles of sustainability and feasibility, able to contextually solve structural and energy deficiencies, is still required. However, there are no widespread methodologies capable of combining these topics in a comprehensive and unified manner, although this issue is already assumed by the governments and the academic institutions as a priority, clearly stated and transversal to many of the 17 UN sustainable goals. On the light of the exposed, this Invited Sessions aims at stimulating the exchange of ideas and knowledge on the seismic and energy retrofitting of the existing buildings, presenting recent developments on this topic. To this purpose, original contributions containing fundamental and applied research, case studies or comprehensive state of art discussion on the following and related topics are welcome:

- Seismic and energy performance assessment approaches and design tools
- Traditional and innovative strategies, cost-benefit analysis and experimental testing
- Measures and policy-making to overcome current challenges and to promote seismic and energy retrofitting
- Case studies, interventions and good practices

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

N/A yet

**Website URL of Call for Papers (if any):**

N/A yet

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