

Session ID: ASR-13

Title

ECONOMIC LOSS IN SEISMIC AREAS: FROM EMPIRICAL DATA TO PRESCRIPTIVE GUIDANCE FOR MITIGATION

Convenors

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Description

Recent devastating seismic events pointed out the number of fatalities and huge economic losses. Indirect losses related to interruption of functionality of buildings and infrastructures can be detrimental for the economy of entire regions. This expose governments or insurance companies involved in the reconstruction to severe economic consequences. Nowadays the available methodologies enable scientists to accurately predict seismic losses at building or regional level and to conduct studies to define loss-mitigation strategies and efficient loss-minimization design procedures. However, because of the complexity of the available frameworks and the different competence needed for their application their widespread in the design practice cannot happen yet. Furthermore, because of the regional peculiarities of constructions and related losses, their application to construction standards different from those used in the development may lead to significant errors. There is thus much to do on the collection and analyses of actual data from post-earthquake observations worldwide, including repair and retrofit strategies and related costs, and on the development of loss-mitigation strategies and design guidance that can be effectively applied in the practice.

This session includes original research papers from invited speakers from different countries and presenting on a range of experiences and research projects related to post-earthquake damage, losses and recent research oriented to the definition of loss-mitigation strategies. Studies reporting novel methodologies, actual data on observed damage and economic losses or simulations on the earthquake response of private and public buildings will be presented. Academics, researchers, post-graduate students, practitioners and insurance companies interested in the damage analysis, cost of repair/retrofit interventions on buildings are invited to attend. These topics are also part of the DPC-ReLUIIS research project.

Invited Speakers

M. Maeda ⁴, T. Sullivan ⁵, J. Xiaodong ⁶, A. Ilki ⁷, S. Pampanin ⁸, R. Gentile ⁹, C. Molina Hutt ¹⁰, J. Poveda ²

Affiliations

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