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Title
RECENT ADVANCES AND CHALLENGES IN (RE)INSURANCE PORTFOLIO RISK MANAGEMENT

Convenors
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Description
Catastrophe vendor models used in (re)insurance portfolio risk management to assess expected losses from earthquake risk are often characterised by limitations, mostly given by the old vintage of some available models as well as untransparent underlying assumptions used for their development; recent events, including the devastating Turkey earthquakes, have highlighted once more the need of sophisticated modelling methodologies where the single components (hazard component, vulnerability module, financial engine) can be directly accessed and validated against empirical evidence. These needs are posing a real challenge to the current standard practice in catastrophe modelling (e.g. the widely used assumption of poissonian distribution of events).

This session will focus on advances in modelling phenomena such as triggered events resulting from stress transfer, earthquake cluster modelling and building damage accumulation during sequences. These time-dependent phenomena are of particular importance for the industry as they closely relate to the concept of the hours clause (a time window used from underwriters within which all losses are aggregated into a single event) and single/multi event definition.

In addition, some of the latest events have also emphasized the importance of considering triggered perils following significant earthquake ruptures such as tsunami, liquefaction, landslide and fire-following. These phenomena in most cases have caused a substantial increase in losses given from shake-only damage.

Understanding the impact on expected losses of improved earthquake modelling and triggered secondary perils as well as estimating the net change in view of risk compared to standard shake-only poissonian models is a crucial aspect for the industry. Academics as well as researchers in the (re)insurance market are called to address these key topics towards a holistic and enhanced understanding of seismic risk.

Invited Speakers
N. Shome [4], R. Stein [5], C. Galasso [6], P. Bazzurro [7], S. Iacoletti [8], R. De Risi [9], K. Goda [10], F. Gatti [11], V. Silva [12], A. Rosti [13]

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