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NUMERICAL SIMULATION OF NATURAL HAZARDS

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ABSTRACT

The last decades have seen a significant increase of extreme natural events. According to climate change prediction, this trend is likely to accelerate in the coming years. Large part of these hazards are driven by hydrological processes, such as floods, mudslides, landslides, and tsunamis. The huge costs associated to these natural disasters, in terms of casualties and damages, call for the enhancement of the current forecasting and mitigation capabilities.

The recent improvements of both computer technology and numerical methods encourage the application of numerical techniques to the simulation of natural hazards. The objective of this minisymposium is to present and discuss the last advances in the numerical simulation of natural hazards. The event aims to bring together experts to communicate the latest advancements in the field and to feed the debate on this urgent topic.

Although this thematic session is mainly focused on hydrological hazards, the application to other type of natural events, such as geological and meteorological phenomena, will be also welcome. In particular, all those numerical methods analyzing the interaction among different natural hazards (*e.g.* landslides triggered by earthquakes) will be appreciated.

To account for the impact of natural hazards against civil constructions, contributions in the framework of coupling techniques, like fluid-structure or fluid-soil-structure interactions will be also appreciated.