In Memory of Öcal Necmioğlu

SESSION 53- Seismic and non-seismic tsunamis: probability, assessment, preparedness, warning, mitigation and management perspectives

Conveners

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Session Description

Tsunamis originating from seismic and non-seismic sources remain among the most destructive natural hazards affecting coastal regions. The safety of coastal communities against tsunamis, presenting unique challenges for detection, forecasting and risk reduction, requires a comprehensive understanding of tsunami generation, propagation, coastal amplification, inundation and impacts, supported by deterministic and/or probabilistic approaches and development of effective mitigation and preparedness strategies.

This session invites research contributions and case studies that advance our knowledge of tsunamis, related coastal processes and their consequences, with a particular focus on recent findings, emerging methodologies, and new ideas *that integrate scientific research, technological innovation, understanding risk, policy frameworks, community-based preparedness,* structural and societal *resilience, public awareness campaigns, and sustainable coastal management practices aimed at long-term mitigation against tsunami events.*

We encourage contributions addressing (but not limited to) the following topics:

- Tsunami generation, propagation and impact due to both seismic and non-seismic sources

- Probabilistic and deterministic hazard and risk assessment of tsunamis

- Characterization of tsunami sources, recurrence intervals, and triggering processes

- Advances in tsunami detection, early warning and monitoring technologies

- Integration of multi-hazard frameworks for coastal resilience

- Strategies for community preparedness, evacuation planning, and public communication

- Insights and lessons learned from recent tsunami events and post tsunami surveys

- Multi-disciplinary approaches linking geoscience, engineering, and social science perspectives

- Deep learning, machine learning and other advanced technologies for tsunami risk reduction