



## **Linking lithosphere dynamics and earthquake modelling to seismic risk assessments**

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Understanding of lithosphere dynamics, tectonic stress localization, earthquake occurrences, and seismic hazards has significantly advanced during the last decades. Meanwhile despite the major advancements in geophysical sciences, yet we do not see a decline in earthquake disaster impacts and losses. Although earthquake disasters are mainly associated with significant vulnerability of society, comprehensive seismic hazards assessments and earthquake forecasting could contribute to preventive measures aimed to reduce impacts of earthquakes. Modelling of lithosphere dynamics and earthquake simulations coupled with a seismic hazard analysis can provide a better assessment of potential ground shaking due to earthquakes. Improved seismic hazard assessments can serve better in risk reduction efforts. This presentation will illustrate applicability of the integrated studies to Tibet-Himalayan and Caucasus earthquake prone regions.