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 [JJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-IS Intersection

## [M-IS11]tsunami deposit

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The 2011 off the Pacific coast of Tohoku Earthquake and tsunami have an influence on the development of tsunami deposit research. After the tsunami, a lot of findings have been reported on various research fields. However, identification criteria of the tsunami deposit are not yet established. Moreover, it is still uncertain how to use the tsunami deposit in the risk assessment. In this session, we welcome researches from all aspect of sedimentary records of modern and paleo tsunamis both onshore and offshore, and numerical and experimental modeling studies for risk assessment. In addition, we also welcome other event deposits, such as flooding and storm surge, that they are considered to be important for discrimination of tsunami deposit.

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## [MIS11-P16]Historical Nankai-Suruga megathrust earthquakes recorded by tsunami and landslide deposits on the Shirasuka coastal lowlands, Shizuoka Prefecture

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Future megathrust earthquakes and consequential tsunamis pose exceptional hazards to densely populated and highly industrialised coastlines facing the Nankai-Suruga megathrust. Geological investigations of coastal sedimentary sequences play a key role in understanding megathrust behaviour and developing appropriate seismic and tsunami hazard assessments. In this study, we present a multi-proxy investigation of a coastal lowland in Shizuoka Prefecture, appraising evidence for tsunamis and earthquake-triggered landslides over the last 800 years. We present the most compelling geological evidence to date for the 1361 CE K&#x14d;an tsunami, a finding consistent with either of two recent hypotheses: a single larger rupture of both the Nankai and T&#x14d;nankai regions or two smaller ruptures separated by a few days. We verify previously documented evidence for the 1498 Mei&#x14d; tsunami at the site, enhancing the existing chronology with new radiocarbon dates analysed within a Bayesian framework. While previous studies documented evidence for extreme waves in 1605, 1680 or 1699, 1707 and 1854 CE, we encountered a thick sand layer rather than discrete event deposits. Lateral variability in the deposits and the occurrence of overprinting of evidence in some locations highlights the potential for geological records to underestimate the frequency of these events. We attribute the uppermost sand layer at the site to a coseismically-triggered terrestrial mass movement in 1944, a finding supported by radiometric dating and aerial photographs.