
[EE] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-TT Technology & Techniques

[M-TT35]HIGH-DEFINITION TOPOGRAPHY AND GEOPHYSICAL DATA ANALYSIS

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High-definition, or high-resolution data of earth surface topography and geophysical properties have become widely available for better understandings of the earth surface processes and dynamics. Here in this session, we accept discussions on high-definition topographic and geophysical data, including its theory, acquisition, archiving, processing, modeling and analysis. The approaches may include applications of, but not limited to, laser scanning, SfM-MVS photogrammetry, GNSS positioning, SAR interferometry, multi-beam sonar, geomagnetics and electromagnetics sensors based on terrestrial (fixed or mobile) and aerial (UAV or manned airborne) platforms.

[MTT35-P02]Clarification of short-term topographic change in the Kujukuri coastal sand dunes using UAS-SfM photogrammetry

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This study discusses change in the small-scale topography of Kujukuri coastal dune located in Chiba Prefecture, Japan. Throughout the study, we investigated the short-term formation mechanism of the dune. Previous studies dealt with these dunes because they represent large coastal dune in Japan and their fast change allows us to examine the dynamics of coastal dunes. This study focuses on a relatively short time period. Studies on topographic change during a short period has gained recent attention because of the increased availability of high-resolution topographic data from newly advanced techniques such as unmanned aerial system-based structure-from-motion (UAS-SfM) photogrammetry and terrestrial laser scanning (TLS). Our detailed data were acquired through UAS-SfM photogrammetry, and aerial photographs of the past 70 years were also used for observing general topographic change. We targeted dynamics of sand dunes with the natural state and tried to clarify short-term topographic change due to sand movement.