[HTT07-P01_PG]Spatial analysis of archaeological sites and landforms in Kayseri, central Turkey using multiscale topographic data

3-min talk in an oral session
*Yuichi S. HAYAKAWA¹, Hiroyuki OBANAWA², Ryutaro NARUHASHI³, Hidetsugu YOSHIDA⁴, Masumi ZAIKI⁵, Ryoichi KONTANI⁶, Hiroshi SUDO⁷, Takahiro ODAKA⁸, Yuji YAMAGUCHI⁹, Fikri KULAKOGLU¹⁰ (¹.Center for Spatial Information Science, The University of Tokyo, ².Center for Environmental Remote Sensing, Chiba University, ³.Earthquake Research Institute, University of Tokyo, ⁴.Department of Geography, Meiji University, ⁵.Faculty of Economics, Seikei University, ⁶.Notre Dame Seishin University, ⁷.Okayama Orient Museum, ⁸.Waseda University, ⁹.Okayama University, ¹⁰.Ankara University)

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Human habitat and cultural activities had been significantly influenced by natural environments including landforms in the prehistoric periods. Assessment of such relationships between palaeoenvironment and artificial remains is therefore crucial in understanding the historic development. Here we examine the nature-human interactive system in the ancient period of Kayseri region, central Anatolia Highland in Turkey, in terms of spatial analysis of the distribution of landforms and archaeological settlements, targeting mainly the period from B.C. 3000 to A.D.100. We perform geospatial analyses based on several topographic data including topographic maps, satellite-based remote sensing (10 m DEM derived from PRISM sensor images on ALOS), ground-based laser rangefinder measurement with global navigation satellite system (LRF + GNSS) and ground-based structure from motion multi-view stereo photogrammetry (SfM-MVS). The topographic data at different levels of scales provides both regional- and local-scale views of landform conditions, landform classifications, and detailed characteristics of settlements. Certain effects of gradual and sudden changes in palaeoenvironment on human activities are detected, and potential of natural disasters in the study area is also discussed.