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

[M-IS11]tsunami deposit

convener:Tetsuya Shinozaki(Center for Research in Isotopes and Environmental Dynamics (CRiED), University of Tsukuba), Takashi Chiba(Maritime Disaster Prevention Center), Daisuke Ishimura(首都大学東京大学院都市環境科学研究科地理学教室)

Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

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.

[MIS11-P24]Large-scale laboratory experiment of tsunami deposits on alluvial lowland with an aeolian dune

*Takumi Yoshii[1], Shiro Tanaka[1], Masafumi Matsuyama[1] (1.Central Research Institute of Electric Power Industry)

Keywords:Tsunami deposit, Large-scale laboratory experiment, sedimentation

The characteristics of tsunami deposits, such as distribution and sedimentary structure, are greatly influenced by the incident wave, topography, bed material and post-tsunami alternation. However, considerable variation of tsunami deposits in the field caused by local topography makes it difficult to reveal the effects of these factors on the resulting deposits. The authors have conducted the large-scale laboratory experiment on tsunami deposits and succeeded in reproducing the deposits that shows landward thinning and fining and several subunits with normal and inverse grading. The parameter control regarding incident wave, bed material, and topography in the flume enables us to investigate the relationship between hydrodynamic conditions and the resulting deposits.

In this presentation, we are going to present the experimental result with the topography similar to the alluvial lowland. We will discuss the characteristics of deposits on the lowland and compare them with those on the sloping topography. Our experimental result will provide useful information for future field investigation and interpretation of tsunami deposits.