

---

[JJ] Evening Poster | H (Human Geosciences) | H-TT Technology & Techniques

## [H-TT19]New Developments in Shallow Geophysics

convener:Kyosuke Onishi(Public Works Research Institute), Kunio Aoike(Oyo corporation), Keisuke Inoue(国立研究開発法人 農業・食品産業技術総合研究機構, 共同), Tishiyuki Yokota(National Institute of Advanced Industrial Science and Technology)

Thu. May 24, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

The session of shallow geophysics calls many research contributions on geophysical exploration techniques for the near surface. Our target depth is strictly restricted in the depth zone from 5 cm to 30 m (or from 2 in to 100 ft) below the surface of the ground. It may be the closest unknown territory for human society and advanced societies cannot have controlled yet to avoid disasters caused by dynamics in the shallow near surface. Peoples require techniques to manage levee, landslide and earth constructions also knowledge to control groundwater, liquefaction and soil pollution. The near surface has many geotechnical, environmental and hydrogeologic problems.

Major survey techniques are surface wave method, electric exploration, ground-penetrating radar and land streamer, but any methods will be discussed if your target is located in the specified depths. This session welcomes to discuss laboratory tests and rock physics for unconsolidated porous media in the vadose zone. Also, we will welcome not only cutting-edge technologies but also classic theory, if the knowledge is useful for human living.

---

## [HTT19-P08]Geophysical Investigation under Agricultural Facility Damaged by the 2016 Kumamoto Earthquak

\*Keisuke Inoue<sup>1</sup>, Kosuke Wakasugi<sup>1</sup>, Ryosuke Nomiya<sup>1</sup>, Nobuhisa Koga<sup>1</sup>, Hiroshi Niimi<sup>1</sup>, Hirotaka Ihara<sup>1</sup>, Tsuyoshi Yamane<sup>1</sup>, Keiko Nakano<sup>1</sup> (1.National Agriculture and Food Research Organization)

Keywords:Agricultural Facility, surface wave method, resistivity survey

To investigate underground parts of farmlands damaged by the 2016 Kumamoto Earthquake, resistivity survey, and surface wave method were conducted. The S velocity and resistivity of soil at a greenhouse where a pole of house sunk because of liquefaction, were high around the pole, indicating that sand derived from the lower soil layer was mixed with the silty surface soil layer.