[JJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-GI General Geosciences, Information Geosciences & Simulations

[M-GI26]Earth and planetary informatics with huge data management

convener:Ken T. Murata(National Institute of Information and Communications Technology), Takeshi Horinouchi(Faculty of Environmental Earth Science, Hokkaido University), Rie Honda(高知大学自然科学系理工学部門, 共同), Susumu Nonogaki(Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology)

Mon. May 21, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Increasingly large and complex data are produced by observations and numerical simulations in earth and planetary sciences. The target of this session is to discuss a broad range of practices and new knowledge of informatics, international standard and modelling, including techniques for large-scale data processing and numerical simulation, data preservation and publication, data transfer and collection and other data technologies with a vision to advance an emerging data-intensive science, namely "geoplanetary informatics".

[MGI26-P03]Programming Environment of Visual IoT Tools Working on Single-Board Computer (Raspberry Pi)

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The recent emergence of low-cost single board computers such as Raspberry Pi and Arduino, which are used as sensing devices with connectivity to Internet gateways and cloud services, has led to Internet of Things (IoT) architectures in the real world. Visual IoT is one of the classes of IoT that poses crucial end-to end challenges due to the need for sensing and processing of visual data. One of the significant roles of the visual IoT is information extraction from images by using image recognition techniques. In this paper, we present a programming environment of visual IoT on Raspberry Pi, and develop a couple of applications. The first one is an application for real-time information extraction and the second one is an augmented reality (AR)-oriented application. The performance of both applications is examined in outdoor fields using 4G LTE mobile networks to prove that our environment has a potential for many types of visual IoT devices.