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

[H-TT15]Geographic Information Systems and Cartography

convener: Takashi Oguchi (Center for Spatial Information Science, The University of Tokyo), Yuji Murayama (Graduate School of Life and Environmental Sciences), Yoshiki Wakabayashi (首都大学東京大学院都市環境科学研究科)

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

This session discusses various methods which acquire, store, analyze and visualize geospatial data, and presents the outcomes of empirical studies using GIS or mapping methods. The session also deals with applications of digital data, and GIS, and mapping to various fields of earth and planetary science and human society. All presentations and discussion of this session are made in English.

[HTT15-P03]Mapping of Coastal Wetlands and Volumetric Change Analysis in the West Coast in Sri Lanka Using Remote Sensing and GIS

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The environment of urban wetlands is affected by both human activities and climate changes. The spatio-temporal transformation and seasonal inundation determine the structure and functions of tropical wetland ecosystems. Information on the spatial and temporal changeability of inundation is necessary to understand and manage these ecosystems. The western region of Sri Lanka represents one of the most emerging growth centers in the country and there is an extreme pressure on the natural environment and wetland ecosystems. A combination of methods of environmental history, urban ecology and wetland science based on geographical information system (GIS) and remote sensing (RS) have been applied to the research. Moreover, this research focuses on understanding and assessing the current potential spatial stress on a regional wetland ecosystem due to human interference. This study uses remote sensing images of two time periods (during 2001-2016) to interpret the chronological spatial data of the wetland landscape changes over the 215 years time span. The result shows that the wetland system in this study area presents a trend of widely extent urban-rural situation with rapid land use changes, urban expansion, wetland degradation, and rapid urban built-up land. The different driving forces make complicated patterns of this wetland ecosystem.