

LSGI Research Seminar

Remote Sensing of Urban Impervious Surfaces in Tropical and Subtropical Areas

Date: 24 Nov 2021 (Wed)
Time: 15:30 - 16:30
Venue: Z503 & Zoom (Hybrid)
Language: English

Bio:

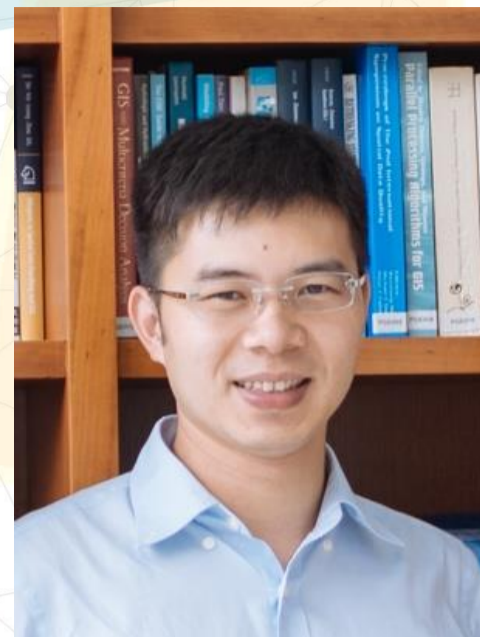
Dr. Hongsheng Zhang received the B.Eng. degree in computer science and technology and the M.Eng. degree in computer applications technology from South China Normal University in 2007 and 2010, respectively, and the Ph.D. degree in earth system and geoinformation science from The Chinese University of Hong Kong in 2013. Dr. Zhang is an IEEE senior member and serves on the Editorial Boards and as Guest Editor in multiple journals. He received multiple awards for research excellence, including the NSFC Excellent Young Scientists Fund, ACM SIGSPATIAL China Rising Star Award, and Excellent Young Scientists of NRSCC, Ministry of Science and Technology (MOST), China. His research is mainly focused on incorporating multiple remote sensing technologies to understand the urbanization process and its environmental and ecological impacts at various spatial and temporal scales.

Abstract:

Although urban areas occupy less than 1% of the world's land surface, they contribute over 90% of the global economy. By 2018, already 55% of the world's population will live in urban areas, and this figure is increasing (United Nations, 2018). The urbanization process brings along with different environmental and ecological issues, including the urban heat island, non-point source pollution and urban flooding. Urban impervious surfaces, such as buildings, parking lots and transportation networks, have been widely recognized as an important indicator of urban expansion and socio-environmental issues. In the long run, a comprehensive assessment of urban land dynamics will be vital and urgent in the assessment and management of these effects and support the sustainable development goals. Particularly, the tropical and subtropical area have undergone intensive urbanization process at varying degrees. The rainy and cloudy weather, complex geography, urbanization levels complicated the urban monitoring in these area, and thus requires multiple remote sensing technologies to overcome weather/geography-related difficulties. We aimed to develop a multi-level framework of integrating optical and radar data for monitoring urban land dynamics with spaceborne, airborne and ground observations. The methodological framework consists of various modules of processing, analyzing and integrating the optical and radar data at data (pixel) level, feature level and decision level.

All are welcome. To register, please [click here](#) for the details.

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