LSGI Distinguished Lecture Series

Urban Dynamic Mapping with Ubiquitous Point Clouds

Date: 14 December 2017 (Thu)
Time: 2:30pm - 3:30pm
Venue: Z414

Prof. Bisheng Yang

Wuhan University, China

Urban Dynamic Mapping with Ubiquitous Point Clouds

Light weighted and portable sensors (e.g., Kinect, UAVs) have been widely used for capturing high resolution spatial data in an efficient way, making complementary point clouds. The point clouds from different sensors (e.g., airborne, mobile sensors) describe a specific part of one scene or an object, show different resolutions and overlapping, thus posing great challenges to process the different sources of point clouds in an aligned coordinate framework for dynamic mapping. This talk will elaborate an integrated framework for urban dynamic mapping with ubiquitous point clouds, including the registration, segmentation, and sematic labelling of ubiquitous point clouds. Firstly, the registration between different sources of point clouds (e.g., laser scanning, imagery) is investigated and a robust method to register different sources of point clouds is elaborated in detail. Secondly, a semantic mapping method is proposed for semantically labelling the point clouds in a hierarchical way, improving the completeness and correctness of features extraction of point clouds. Finally, the integrated framework is validated to check the effectiveness and advantages for urban dynamic mapping with several examples of projects.

Biography

Professor Bisheng Yang is a full Professor in GeoInformatics at Wuhan University, China. He obtained his Ph.D degree in Photogrammetry and Remote Sensing in 2002 from Wuhan University. He holds ‘Yangtze River Scholar’ Distinguished Professor and Distinguished Young Scholars Professor. His research expertise includes mobile mapping, UAV mapping, point cloud processing, and GIS applications. Dr. Yang has so far published more than 100 papers in peer-review journal articles, conference and workshop proceedings, more than 40 of them are in SCI-indexed journal articles. He is Co-Chair of Point Cloud Processing Workgroup in the Photogrammetry Commission of the International Society for Photogrammetry and Remote Sensing (ISPRS) from 2016-2020 and Editorial Boarding Member of ISPRS Journal of Photogrammetry and Remote Sensing from 2016-2020. He is the recipient of a lot of national and international academic awards including ESRI Best Scientific Paper in GIS awarded by ASPRS (2005), First order award from the Ministry of Education of China (2009), First order award from Bureau of Science and Technology of Hubei Province (2016). He organized and participated in organizing many national and international conferences and chaired many conferences, such as ISPRS Geospatial Week, Laser Scanning, MMT, and serves as program committee member of more than 10 international conferences, symposiums, and workshops in the field of GeoInformatics. He is also active in cooperation with industrial community. His technology in point cloud processing is working with Baidu Inc. for automated driving.

All interested are WELCOME!

To register, please go to: https://goo.gl/bCRH7s
For enquiries, please contact Ms. Anna Choi at anna.choi@polyu.edu.hk or 3400 8158.

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