RESEARCH SEMINAR

DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT THE CHINESE UNIVERSITY OF HONG KONG

Deep Learning from Volunteered Geographical Information and Heterogeneous Geospatial Data

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Volunteered Geographic Information (VGI) refers to a special case of user-generated content harvesting big geographic data that are contributed voluntarily by individuals. OpenStreetMap (OSM) is considered as the most popular and successful VGI project aiming at creating a digital and open map of the world via collaborative mapping. Despite the recent progress of VGI, in particular OSM, to lower technological barriers to producing GIS map data, the reality is that global mapping inequalities have been observed for long between counties in the Global North and South. Fortunately, recent years have witnessed an ever-increasing availability of heterogeneous geospatial big data, for instance, multimodal Earth Observation (EO) and geosocial media data. This offers a promising data source for geospatial artificial intelligence (GeoAI) approaches to mitigate the global mapping inequality issue. In this seminar, Dr. Li will present a series of recent works on developing scalable and robust GeoAI models with OSM and heterogeneous geospatial data, such as remote sensing and geo-social media data, in multiple mapping scenarios, especially in the Global South. Finally, he will share his perspective on opportunities and future trends of user-centric geospatial big data analysis.

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Hao Li is a Lecturer at the Department of Aerospace and Geodesy, Technical University of Munich (TUM), where he is pursuing his Habilitation (venia legendi). Prior to TUM, he got his Ph.D. in Geoinformatics from the GIScience research group, Heidelberg University, with which he is now affiliated as an Associated Postdoc fellow. His research interests include Volunteered Geographic Information (VGI), geo-semantics, remote sensing, and geospatial big data management. Besides research, he is passionate about delivering teaching, i.e., lectures, seminars, and thesis supervision at both Heidelberg University and TUM.





