LSGI Distinguished Lecture Series

"GIScience beyond Absolute Space: A Space-Place (Splatial) GIScience Framework"

Overview

It was our pleasure to invite Prof. Shih-Lung SHAW, Department of Geography, University of Tennessee, USA, to deliver a seminar of the LSGI Distinguished Lecture Series on 9 October 2019.


Biography

Prof. Shaw is Alvin and Sally Beaman Professor and Arts and Sciences Excellence Professor of Geography at the University of Tennessee, Knoxville. His research interests cover GIS for transportation, space-time GIS, time geography, transportation planning and modeling, and human dynamics. His recent research has focused on space-time analytics of human dynamics in a hybrid physical-virtual world based on various types of individual tracking data. Prof. Shaw is an elected Fellow of the American Association for Advancement of Science (AAAS) and a recipient of Edward L. Ullman Award for Outstanding Contributions to Transportation Geography and Outstanding Scholar Award in Regional Development and Planning from the Association of American Geographers (AAG). He served as Interim Associate Provost for International Education and Head of the Department of Geography at the University of Tennessee. He is the current Chair of the Research Committee of the University Consortium for Geographic Information Science (UCGIS), the lead editor of Springer's Human Dynamics in Smart Cities book series, and an editorial board member of International Journal of Geographical Information Science, Journal of Transport Geography, Travel Behaviour and Society, among others.

GIScience beyond Absolute Space: A Space-Place (Splatial) GIScience Framework

Conventional geographic information systems (GIS) follow the traditional cartographic approach of mapping things as static map layers that are based on Newtonian absolute space, which assumes an infinite and immovable space without considering anything contextual or subjective. This absolute space approach is conceptually constrained due to its confinement to absolute space and physical place, which is insufficient to support human dynamics research. This presentation first covers some examples of a space-time GIS developed from the concepts of Torsten Hägerstrand's time geography.
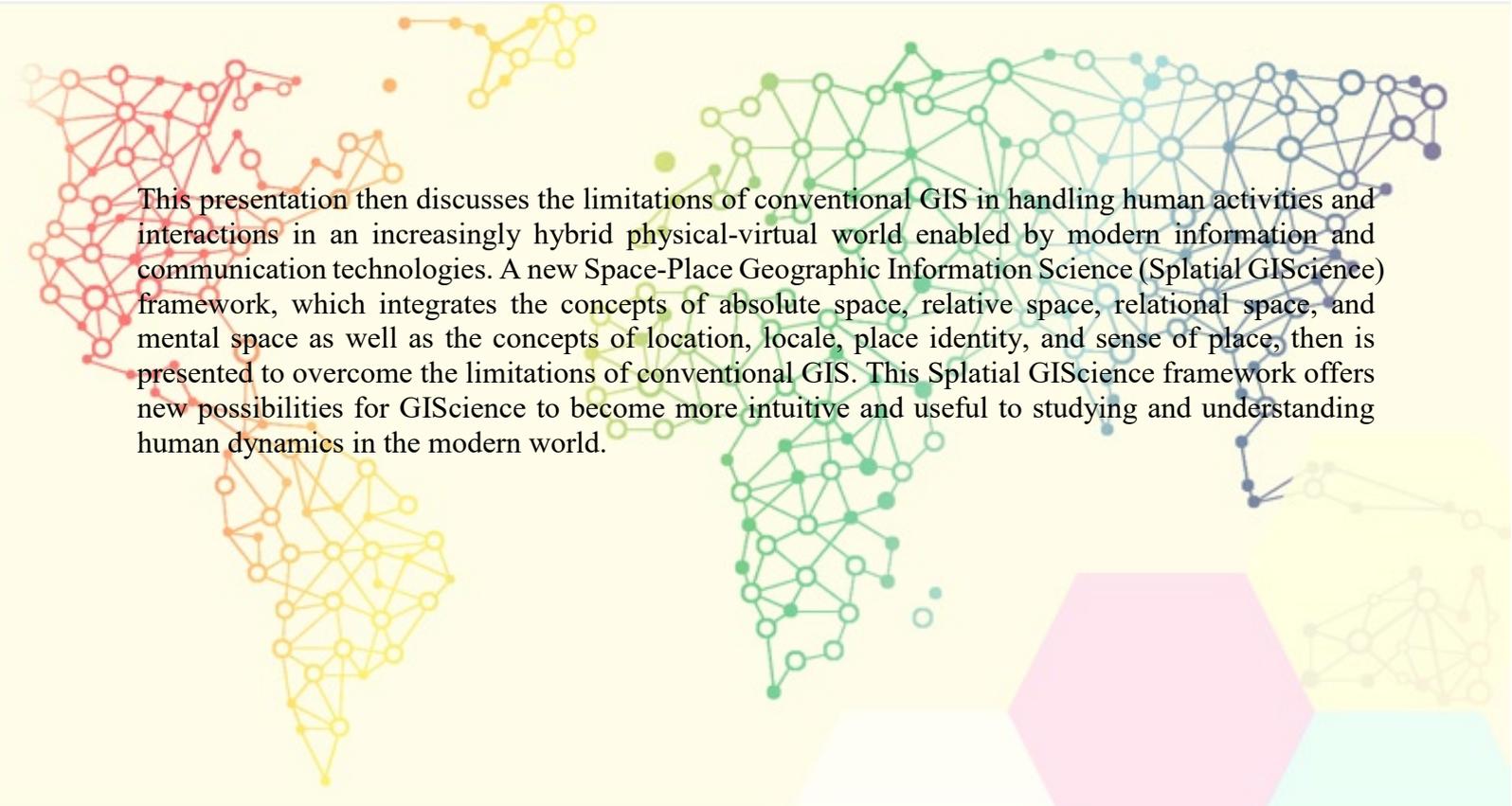
This presentation then discusses the limitations of conventional GIS in handling human activities and interactions in an increasingly hybrid physical-virtual world enabled by modern information and communication technologies. A new Space-Place Geographic Information Science (Splatial GIScience) framework, which integrates the concepts of absolute space, relative space, relational space, and mental space as well as the concepts of location, locale, place identity, and sense of place, then is presented to overcome the limitations of conventional GIS. This Splatial GIScience framework offers new possibilities for GIScience to become more intuitive and useful to studying and understanding human dynamics in the modern world.