GeoAI for Intelligent Mapping

Speaker:	**Professor Wen Wen Li**
	School of Geographical Sciences and Urban Planning, Arizona State University, US
Chair:	**Professor David Taylor**
	Department of Geography, NUS
Date/Time:	Monday 13 January 2025, 3.30pm to 5.30pm
Place:	Earth Lab, AS2 #02-03

Abstract

GeoAI, or geospatial artificial intelligence, represents an exciting transdisciplinary field that combines AI, big data, and high-performance computing to address critical social and environmental science problems through data-driven discovery. This talk will introduce a series of research efforts applying and advancing GeoAI for intelligent mapping—ranging from mapping natural features to enrich gazetteers, to identifying disasters and assessing their damage, to monitoring landscape degradation to enhance our understanding of how global change impacts the Arctic ecosystem and its people. This talk will also cover recent explorations in integrating large language models and their convergence with vision models to address spatiotemporal challenges. Across these themes, it is the GeoAI innovation in incorporating multi-modal, multi-source geospatial data and advanced learning strategies that enriches the knowledge representation of geospatial phenomena to ensure fair, trustworthy, and reproducible findings.

About the Speaker

Dr. Wenwen Li is a Professor of GIScience in the School of Geographical Sciences and Urban Planning at Arizona State University, where she serves as the Research Director for the Spatial Analysis Research Center (SPARC) and directs the Cyberinfrastructure and Computational Intelligence (CICI) Lab. Her research interests include cyberinfrastructure, big data, geospatial artificial intelligence (GeoAI), and their applications in data- and computation-intensive environmental and social sciences. Leading her team, Dr. Li has developed several cyberinfrastructure projects to make geospatial data more accessible, interoperable, and reusable. Her research is supported by multiple funding agencies, including NSF, NASA, NIH, and Google.org, and has been recognized by NSF with the CAREER Award (2015) and the Mid-Career Advancement Award (2021). Dr. Li is an elected Fellow of the American Association of Geographers (2023) and the University Consortium for Geographic Information Science (2023).

There will be light refreshments before the seminar at 3.30pm.

Convenors

Professor Brenda Yeoh   Professor Darek Wojcik   Professor Lu Xi Xi   Professor TC Chang