

Big Data Science and CyberGIS

Transforming Geospatial Discovery and Innovation

Distinguished Department of Geography Lecture

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CyberGIS represents an interdisciplinary field combining advanced cyberinfrastructure and e-science, geographic information science and systems (GIS), spatial analysis and modeling, and a number of geospatial domains (e.g., emergency management, smart cities, and the nexus of food, energy, and water systems) to enable broad scientific and technological advances. It has also emerged as new-generation GIS based on holistic integration of high-performance and distributed computing, data-driven knowledge discovery, visualization and visual analytics, and collaborative problem-solving and decision-making capabilities. The growing importance of cyberGIS is reflected by increasing calls for solutions to bridge the significant digital divide between advanced cyberinfrastructure and geospatial communities in the big data era. This presentation discusses challenges and opportunities for cyberGIS and big data science to transform geospatial discovery and innovation through interdisciplinary approaches.

