

Session Abstracts

Evaluating Methodological Approaches to Urban Park Accessibility: A Comparative Analysis of Statistical, Network-Based, and Gravity Measures in Quincy, Illinois

Presented by Arup Ratan Devnath, Western Illinois University GIS Center

Description: This study evaluates how different GIS-based methodologies influence the measurement of urban park accessibility in Quincy, Illinois. It compares three approaches, such as statistical, network-based, and gravity-based models, to understand how methodological choices shape accessibility outcomes. Using spatial overlay, service area analysis, and origin–destination modeling, the research examines the effects of travel distance, transportation modes, and park destination definitions (centroids, edges, and entrances) on accessibility patterns. Results reveal significant spatial inequalities in park access and highlight how walking and driving thresholds produce different accessibility outcomes. Among the approaches, network-based analysis using park entrances provides the most realistic representation of everyday access. The study emphasizes the importance of selecting appropriate methods to support equitable urban planning, sustainable land use, and improved access to green spaces.

Keywords: *Spatial Analysis, Urban Park Accessibility, Network Analysis, Gravity Model, Accessibility Modeling, Urban Planning, Spatial Inequality*

Cache Me if You Can: Smarter Cloud Imagery for Distributed Teams

Presented by Laura Wilson, ROK Technologies

Description: Imagery is no longer just a static background; it is the high-velocity fuel for safety audits, asset management, and emergency resiliency. By utilizing platforms like AWS and Azure, organizations can overcome the physical limitations of local hardware to eliminate data lag and improve system accessibility. This session provides practical guidance of how caching diverse data layers, from raster tiles to point clouds reduces storage costs and enhances distributed collaboration transforming once-orphaned datasets into AI-ready assets available across the enterprise. Join ROK Technologies for a roadmap on transitioning from legacy storage to the scalable, high-speed cloud architectures required for modern infrastructure demands.

Keywords: *cloud, geotiff, imagery, caching, AI, AWS, Azure, S3, resiliency, performance*

How to apply your Lidar for the field

Presented by Adam Derringer, Ayres Associates

Description: Nearly everyone has access to multiple Lidar datasets in Wisconsin and across the Country. These new data are 8 to 30 times as dense as data collected just 10 years ago. Combined with new high resolution orthoimagery, these two foundational data can be used for quick visual inspections for roadways, planning and zoning, and conservation. Using advanced analytics can help investigate complex issues on the landscape. Having a plan to apply this data can help in project planning and day-to-day operations in the office and the field. Using surface water flow, culverts, depressions, erosion, conservation planning tools, heights, slopes, and orthoimagery we will look at several examples where this data was applied to help with real world projects.

Keywords: *Lidar, spatial analysis, culverts, drainage, profiles*