

International Society for Geomorphometry Coffee Talk

October 7th (Wednesday), 2026

14:00 UTC

(visit <https://tinyurl.com/5n2dbbxf> to convert to your specific time zone)



LiDAR and Terrain Analysis in the Browser with GeoLibre

Dr. Qiusheng Wu

Department of Geography & Sustainability
University of Tennessee, Knoxville

Dr. Qiusheng Wu is an Associate Professor in the Department of Geography & Sustainability at the University of Tennessee, Knoxville. His research focuses on advancing open-source geospatial analytics through cloud computing and GeoAI. He is the creator and maintainer of several widely used open-source Python packages, including Geemap, Leafmap, Segment-Geospatial, GeoAI, and GeoLibre. Dr. Wu's work bridges remote sensing, Earth observation, and artificial intelligence to make large-scale geospatial analytics more accessible and reproducible. Check out his open-source projects at <https://github.com/opengeos>.

Abstract: LiDAR and terrain analysis has traditionally required specialized desktop software, complex installations, and large data downloads before analysis can even begin. This presentation introduces GeoLibre, a free and open-source, cloud-native GIS platform that brings LiDAR and terrain workflows directly to the web browser. Powered by Whitebox geoprocessing tools compiled to WebAssembly, GeoLibre enables users to process and analyze geospatial data locally in the browser without installing specialized software or uploading data to a server. Through a live demonstration, the presentation will showcase an end-to-end workflow, from discovering and accessing LiDAR data to generating and analyzing LiDAR-derived DEMs. The session will highlight how modern web technologies can make advanced terrain and LiDAR analysis more accessible, portable, and reproducible.

Zoom link: <https://uqac.zoom.us/j/88487101653>