Ziheng Sun, PhD

Research Assistant Professor, Center for Spatial Information Science and Systems
Research Assistant Professor, Department of Geography and Geoinformation Science

Education
PhD, Photogrammetry and Remote Sensing, Wuhan University

Key Interests

Agricultural Remote Sensing | Geospatial Cyberinfrastructure | Land Cover Classification | Scientific Workflow

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SELECT PUBLICATIONS

> Z. Sun *et al.*,. Deep learning classification for crop types in North Dakota. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2020).

> Z. Sun *et al.*, Geoweaver: Advanced cyberinfrastructure for managing hybrid geoscientific AI workflows. *ISPRS International Journal of Geo-Information* 9(2), 119 (2020).

> Z. Sun *et al.*,Advanced cyberinfrastructure for intercomparison and validation of climate models. *Environmental Modelling & Software* 123, 104559 (2020).

Research Focus

I am a practitioner of using the latest technologies such as machine learning and high-performance computing to seek answers to Earth scientific questions. He has invented RSSI, a novel index for recognizing artificial objects from high resolution aerial images, and proposed parameterless automatic classification solution for reducing the parameter-tuning burden on scientists. He has successfully used long short-term memory to learn the seasonal changes to better recognize crops from remote sensing images. He has a lot of experiences on building web-based geospatial information systems for better disseminating, processing, visualizing, and understanding spatial big data.

Current Projects

- Collaborative Research: GI Catalytick Track: Cyberinfrastructure for Intelligent High-Resolution Snow Cover Inference from Cubesat Imagery, National Science Foundation