Zhonghua Liu

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Address: Kadoorie Biological Sciences Building, The University of Hong Kong, PokFuLam Road, Hong Kong SAR,China

Education

M.S. in Ecology 2020 - 2023
University of Chinese Academy of Sciences
Thesis: Extraction of Wheat Spike Phenotypes from Field-Collected Lidar Data and Exploration of Their Relationships with Wheat Yield
Supervisor: Prof. Yanjun Su

B.E. in Forestry (Liang Xi Honors Class) 2016 - 2020
Beijing Forestry University
Thesis: Effects of Drought Stress on Ecological Stoichiometry of *Artemisia Ordosica* Leaves and Soil
Supervisor: Prof. Guodong Ding

Projects

[1] "A study on informatized vegetation surveying and mapping based on crowdsourcing and artificial intelligence techniques" (2022-2023), Chinese Academy of Sciences. (Responsible for data collection and data processing)
[2] "Intelligent high-throughput phenotyping technology" (2020-2024); Strategic priority research program of Chinese Academy of Sciences. (Main participant)
[3] "Microspatial heterogeneity in the temporal dynamics of photosynthetic and respiratory metabolism in *Salix psammophila*" (2018-2020), National Natural Science Foundation of China. (Main participant)
[4] "Effects of reduced rainfall on ecological stoichiometry of C, N and P in leaves and soils of *Artemisia ordosica*" (2019-2020),Beijing undergraduate innovative training project. (Team leader)
[5] "Feature-based terrain generation algorithm research" (2019-2020), Beijing undergraduate innovative training project. (Main participant)
[6] "Rapid propagation method for drought tolerant mosses on stony slopes" (2017-2018), National undergraduate innovative training project. (Main participant)

Publications & Patents

Liu Z., Su Y., et al., Extraction of wheat spike phenotypes from field-collected lidar data and exploration of their relationships with wheat yield (in submission)
Liu, X., Ma, Q., Wu, X., Hu, T., **Liu, Z.**, Liu, L., Guo, Q. and Su, Y., 2022. A novel

entropy-based method to quantify forest canopy structural complexity from multiplatform lidar point clouds. Remote Sensing of Environment, 282: 113280.

Yang Q., Su Y., Hu T., Jin S., Liu X., Niu C, **Liu Z**, Kelly M., Wei J., Guo Q., 2022. Allometry-based estimation of forest aboveground biomass combining LiDAR canopy height attributes and optical spectral indexes. Forest Ecosystems. 100059.

Jin S., Su Y., Zhang Y., Song S., Li Q., **Liu Z**., Ma Q., Ge Y., Liu L., Ding Y. Baret F., 2021. Exploring seasonal and circadian rhythms in structural traits of field maize from LiDAR Time Series. Plant Phenomics. 2021: 1-15.

Yu M., Ding G., Gao G., **Liu Z**., Wang C., 2020. Double effects of age and environment on resource allocation trade-offs of *Salix psammophila* in different microtopographic habitats of a sand dune. Journal of Plant Growth Regulation. 39(2). 544-552.

Ding G., **Liu Z.**, Yu M., Yang H., Wang C. Automatic change plant sand barrier planting machine. CN109451934B. 2021

Yu M., **Liu Z.**, Ding G., Yang H., Gao G., Zhao Y., Wang C. A kind of packaged type sun-shading rainproof canopy. CN 109869036A. 2019

Honors & Awards

Best Representation Award	2023
Excellent Student	2022, 2019
Outstanding Volunteer	2019, 2018
“Guan Junwei” Scholarship	2018
Outstanding League Member	2018
Outstanding Student Leader	2018,2017
Community Scholarship	2018,2017

Skills

Skills: Python, R(Basic), C(Basic), Google Earth Engine, ArcGIS, LiDAR 360
Languages: English (IELTS: 6.5), Mongolian (native), Mandarin (proficient)
Interests: Basketball