Special Issue

Tree Physiology and Forest Dynamics Using Remote Sensing Technology

Message from the Guest Editor

Forests are one of the most important carbon sinks of terrestrial ecosystems and play an increasingly significant role in fostering biodiversity and mitigating climate change. With global warming and increasing weather extremes, individual trees and forest groups undergo obvious changes to adapt to environmental conditions. These can cause changes in the direction of forest succession and the widespread death of some tree species. Remote sensing was an excellent method to assess these physiological change and forest dynamics on a large scale. Hyperspectral remote sensing presents to be very excellent in quantitative monitoring of tree nutrients, applicable traits of trees to environmental condition, and fine classification of tree species. The development of unmanned aerial vehicle (UAV) technology, light detection and ranging (LiDAR), and multi-source remote sensing data can help in monitoring these forest changes in a non-destructive and rapid way at multiple scales. Forests are very complex forest ecosystems that will pose a huge challenge compared to traditional crop groups. Novel technology and research are paramount for precision silviculture and sustainable management.

Guest Editor

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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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