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# Remote Sensing Models of Forest Structure, Composition, and Function

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Deadline for manuscript submissions: closed (20 May 2022)



Message from the Guest Editors

Dear Colleagues,

Empirical, process, and/or stochastic models have long been used to model forest structure, composition, and/or function, yet a number of vegetation properties and processes remain challenging to simulate. Recent advances in deep learning for remote sensing provide a new opportunity to develop new spatiotemporal models. Machine learning models based on remote sensing may capture forest properties and processes, and can be embedded in existing models. These and other approaches such as radiative transfer model emulation and/or inversion may be applied to a variety of remote sensing data sources, including passive optical multispectral, hyperspectral, and high-resolution structurefrom-motion (SfM) data, and active LiDAR, SAR, and GNSS-R data, as well as PhenoCam near-sensing observations. FLUXNET tower measurements, and the TRY database for mapping traits to species locations. We especially invite papers demonstrating state-of-the-art techniques for learning models of forest properties and processes directly from these and other data sources in order to address shortcomings in the representation of forests in existing models of the terrestrial biosphere.



mdpi.com/si/36266





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