LSGI & RILS RESEARCH SEMINAR

Mapping leaf age structure in tropical moist forests

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ENGLISH

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ABSTRACT

Leaf age regulates the physical and chemical properties of plant leaves in tropical moist forests and exerts considerable impacts on the leaf photosynthesis, thereby influencing their carbon sink potential. However, trees in this biome often asynchronously shed and rejuvenate leaves asynchronously, leading to diverse leaf ages that may vary from months to several years. However, in situ measurements of leaf age and related traits are still limited and thus the continental-scale distribution and variability of leaf age structures remain poorly understood. The significant knowledge gaps highlight the need and urgency to explore new technologies for unraveling the spatiotemporal variability in leaf age structure across tropical moist forests. In this presentation, Dr. Chen will introduce their recent studies about mapping tropical leaf age structure using state-of-the-art remote sensing techniques, and assessments of the spatial variations and temporal trends in tropical leaf age.

BIOGRAPHY

Xiuzhi Chen is YiXian Distinguished Professor of Sun Yat-sen University and director of the Guangdong Land-Ocean Ecosystem Carbon Neutrality Science Data Center. He mainly focused on tropical forest phenology and carbon cycling related research. He has produced the first gridded dataset of tropical forest leaf age products, and developed a leaf-age-dependent productivity estimation model. These studies have been published in Nature Climate Change, Nature Communications, Global Change Biology, Earth System Science Data, Remote Sensing of Environment and other journals. His scientific research achievements have won the first prize of the Natural Science Award of Guangdong Province. He has been selected in the National Youth Talent Plan, which is a nationwide program aimed at supporting young scientists to engage in fundamental research.

Moderator: Dr Shuo WANG, LSGI

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