

## Monitoring individual-scale leaf phenology across temperate forests with time-series PlanetScope observations

<b>Date</b>	10 <sup>th</sup> Dec (Fri.)	
<b>Time</b>	16:00 (UTC+8)	
<b>Venue</b>	3N01 & Zoom	

You can also email us to require the Zoom link  
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In temperate forests, leaf phenology – the study of the timing of periodic and recurring events in leaves – is an important indicator of climate change and a main regulator of carbon and water cycling. Many studies have evidenced that leaf phenology shows a large variability across individual trees. However, monitoring leaf phenology at individual-scale is restricted to local areas and remains challenging due to the lack of spatially explicit information over large spatial coverages. In this project, we explored the potential of using time-series satellite data with high spatio-temporal resolution (i.e., PlanetScope) to improve the monitoring of individual-scale leaf phenology across temperate forests. Our results show that (1) the PlanetScope-derived phenology metrics overall agree well with ground phenology observations; (2) PlanetScope-derived phenology metrics can capture phenological variations among individual trees; (3) Maps of phenology metrics derived from PlanetScope can capture large variations in leaf phenology over the forest landscape.



**Yingyi Zhao** is a PhD candidate in Global Ecology and Remote sensing lab and supervised by Dr. Jin Wu. She has broad interests in exploring plant-environment interactions with remote sensing techniques. Through her PhD, she is trying to explore the underlying controls of individual-scale leaf phenology and how the variability in individual-scale leaf phenology can ultimately affect ecosystem processes.

**All are welcome!**