The Laboratory of Tree-Ring Research

presents a talk by

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Miracle March, August flooding, and October atmospheric rivers: Seasonal wet extremes & the tree-ring record

Wednesday, November 3, 2021 - 12:00pm to 1:00pm
Room: Zoom Only

Moisture-sensitive trees provide exceptional long-term records of streamflow, snowpack, and rain within the context of our changing climate. The delivery of a large portion of annual moisture in a short period of time can present a challenge to our interpretation of these records. This is particularly true in arid and semi-arid regions, where late-spring snowpack, summer convective storms, or autumn atmospheric rivers can provide a high percentage of annual water in a season that might not be aligned with tree growth. In this talk, I will discuss the potential impacts of seasonal wet extremes based on my recent research on asymmetrical and seasonal extreme capture in tree-ring records. I will also present results from my current model-based research that uses a variety of precipitation perturbation experiments to study the impact of seasonal precipitation extremes on tree-ring formation in the Lower Sacramento and South Platte watersheds. Results indicate that although caution is warranted in interpretations of past climate, the challenges posed by seasonal wet extremes are not insurmountable.

The University of Arizona