

**Soil and Water Sciences Department
Distinguished Speaker Seminar
(Co-Sponsored by UF Water Institute)**

Speaker: [Daniella Rempe, Ph.D.](#)
**Assistant Professor, Department of
Geological Sciences
Jackson School of Geosciences
The University of Texas at Austin**



Title: **Investigating the Hydrology and
Biogeochemistry of Fractured Bedrock Underlying Forests**

Date: Friday, September 13, 2019

Time: 3:00 pm – 4:00 pm

Location: McCarty Hall A, Room G186

Many mountainous landscapes are mantled with thin soils that overlie meters to tens of meters of weathered bedrock. This transition zone between soil and bedrock often controls how infiltrating water is partitioned between evapotranspiration and runoff, as well as the rate and pattern of chemical denudation in a landscape. This region is largely invisible to observation. As a result, the geochemical reactions and hydraulic properties that govern its structural evolution over time are poorly constrained. Here, I will present the results of a multi-year monitoring effort focused on directly quantifying the complex fluid and solute pathways in the weathered bedrock region using novel sampling and geophysical instrumentation. Our findings indicate that water circulated by deep roots in bedrock fractures leads to ecosystem resilience to drought and deep organic carbon oxidation that strongly controls the pace and pattern of bedrock weathering. I will discuss the implications of our monitoring results for landscape evolution, as well as water and carbon cycling in uplands systems.

This seminar can be viewed via live or watched later via this link: [Daniella Rempe](#). Viewers of the live stream may now ask questions by clicking on the message icon at the bottom. Questions will be read at the end during the question and answer portion. In addition, all seminars are archived for viewing on our [SWSD Seminar Page](#).

For additional details about Dr. Rempe's visit, please contact Dr. Andrew Ogram (aogram@ufl.edu).