



**UAA College of Engineering**  
UNIVERSITY of ALASKA ANCHORAGE

UAA Professional Development Seminar Series



## **A Changing Arctic Water Cycle: Understanding the Processes and Implications**

Presented by Dr. Eric Klein

The water cycle in the Arctic is experiencing profound shifts. These changes are largely driven by reductions in both the spatial (i.e., how much) and temporal (i.e., how long) extent of sea ice cover. We will explore how water isotopes can be used to understand past and present Arctic water cycle changes and the implications of these shifts on the distribution of water both in the Arctic and across the Earth.

Dr. Klein is a geoscientist who incorporates both modern and paleo environmental and climatological techniques in studies of hydroclimate patterns, ecosystem dynamics, and land cover changes. His past work includes research on wetland drying and succession in southcentral Alaska, and demonstrating the importance of hydrogeologic variability on the response of Alaskan peatland carbon accumulation to changes in climate. Dr. Klein's recent work uses water isotope geochemistry as a tool to help understand northern latitude hydroclimatic processes. These data and analyses not only provide a modern processed-based understanding of the current water cycle, but also help elucidate past hydrologic changes recorded in paleo records, such as Greenland Ice Sheet cores.

**Friday, April 26, 2019**

**11:45 am-12:45 pm**

**UAA College of Engineering, EIB 211**