



## **CLIM Program Transition Workshop**

### **May 14-16, 2018**

**Lecture:** *Understanding Sea Ice Data for Data Assimilation*

**Speaker:** Christian Sampson

**Abstract:**

Sea ice is a porous composite of ice and brine with a variety of microstructures that control a broad range of transport phenomena through it. These transport phenomena play a strong role in regulating the thermodynamics and optical properties of the ice at both small and large scales. As a result, sea ice microstructure is intimately tied to many of the most important parameters in numerical sea ice models used for climatological and operational forecasting. These parameters are also important for understanding remote sensing data for sea ice. Data assimilation schemes serve as powerful tools to improve model forecasts, quantify their uncertainty, and estimate model parameters through the combination of both model and observational information. In this talk I will discuss some recent work quantifying the differences between two of the most common crystallographic types of sea ice and how understanding these differences can be used to improve both models and observations of sea ice.