Arctic Seminar:

Observational Approaches for Seasonal Sea Ice Environments

12:00, Friday 26 January 2018
Borgir, R262
Coffee and light snacks provided

The International Arctic Science Committee (IASC) is proud to host one of our 2018 Fellows for a general-audience midday seminar.

Abstract: **Melting summer Arctic sea ice** is one of the most visible indicators of climate change. Ice that grows out of open water, increasingly common in the modern Arctic, **presents particular challenges for observation**. This presentation covers **two remote sensing methods** developed to study first-year ice environments. The first uses **an ice-tracking algorithm** to trace ice floes backwards through the winter from an end-of-season ice thickness measurement to the time and location of freeze-up. The second method addresses a remote sensing gap: persistent monitoring of ice conditions on coastlines. **Initial validation against Alaska Native community records** show that this approach can detect freeze-up events and seasonal breakup. This data product will provide a more complete estimate of sea ice extent in the Arctic and will be a **tool for operational ice centers** that require sea ice information near shorelines.

Alice Bradley is a postdoctoral researcher at Dartmouth College where she develops methods for observing coastal sea ice, including instrumented buoys and remote sensing techniques. She completed her PhD at the University of Colorado Boulder in 2016 with a dissertation on observed over-winter feedback processes in the Arctic seasonal ice zones. Alice was President of the Association of Polar Early Career Scientists for 2016-2017 and is now an IASC Fellow for the Cryosphere Working Group.

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