Title: Estimation of Young Sea Ice in the Arctic Region

Abstract:
Due to intensive physical changes and processes in Young sea ice (thickness < 15 cm), this ice type has been identified as most difficult to characterize and therefore classify in remote sensing data. The decline of the ice cover in the Arctic gives rise to wider areas of Young ice coverage and hence more attention in research studies. The presentation will start by defining some key processes operating in Young ice to show the large range of each property that can be used to characterize this ice types. It will be followed by presenting results from an algorithm, called ECICE, to show the propagation of the Young ice front in the Arctic basin during the early winter period (September-December). Comparison between results from different algorithms using data from a laboratory experiment will be also presented. The presentation will be concluded with an overview of methods to estimate thickness of Young ice and an outline of a suggested method with preliminary results.