

## **Séminaire Vendredi 30 Novembre 11h00 / Seminar Friday November 30 11:00 AM**

**Conférencier/Lecturer:** Mohammed Shokr (ARMA - Toronto)

**Sujet/Subject:** Ice concentration retrieval from passive microwave observations

**Présentation/Presentation:** Anglais / English

**Lieu/Room:** Grande salle du premier étage CMC

### **Résumé/Abstract:**

Ice concentration is an important operational parameter and a climatic indicator. It is by far the most commonly retrieved sea ice parameter from remote sensing observations. A new algorithm, called Environment Canada's Ice Concentration Extractor (ECICE), has been developed to calculate total ice concentration and partial concentration of each ice type from remote sensing observations. It employs new concepts that make it different than most of the established algorithms. It has been evaluated against the operational analysis of Radarsat sea ice images, performed daily in the Canadian Ice Service. Results have shown that ECICE agree better with CIS estimates than most other algorithms in two regimes: the pack ice (>70% ice concentration) and open water. These are the two areas where CIS data are most reliable. In areas of less ice concentration, including ice edge, ECICE produces results that "make sense", but could not be verified against CIS data. The latter are not quite accurate in this regimes.

This presentation will cover basic material about ice and ice concentration in particular, very brief introduction to methods of ice concentration retrieval and the new concepts employed in ECICE. Results from ECICE are compared against the most popular algorithm; the Enhanced NASA Team (NT2). Results from ECICE are also presented using different combinations of remote sensing data to show how the output concentration is affected by the factors that influence the radiation received by each channel/sensor. Finally a brief discussion is presented on potential applications of this new method in Arctic studies and data assimilation.