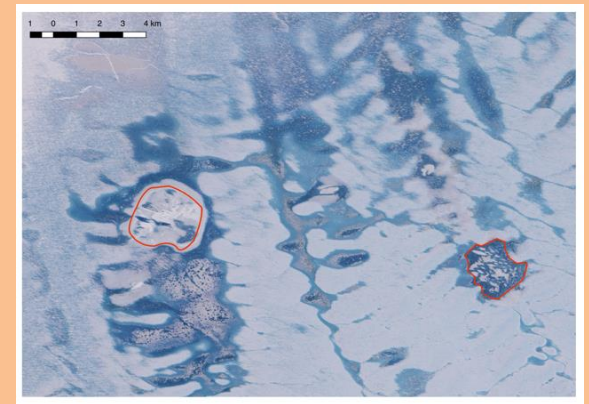


Open Seminar Series

Geoscience & Remote Sensing

Melt in the grounding zone of an East Antarctic ice shelf: the combined power of field work, remote sensing and climate modelling

Dr. Stef Lhermitte
TU Delft, GRS
September 27, 2016
12:40-13:30
CiTG room F



In West Antarctica, the disintegration of some ice shelves as a result of melt and "hydrofracturing" has been an important cause for glacier speed-up and subsequent sea level rise. In contrast, ice shelves on East Antarctica appear stable at present, but we expect enhanced potential for similar ice shelf instability in a warming climate.

During two consecutive field seasons (2014-2016), we have performed in-situ measurements, remote sensing analyses and climate model simulations to measure the amount of surface melt and related processes on the Roi Baudouin ice shelf, Dronning Maud Land, East Antarctica. Our results demonstrate a significant gradient of surface melt over the ice shelf, which can be explained by wind-albedo interactions and which might be important for hydrofracturing in a future climate.

Throughout this seminar, I will provide insight in the scientific life on an ice shelf, our latest results and I will discuss outstanding research problems and possible MSc topics.