GEOM 4001 Special Topics

Radar Remote Sensing

Using data from Synthetic Aperture Radar (SAR) satellites to monitor the state and changing conditions of land can be mystifying, even for those experienced in analysis of optical satellite data. In **Winter 2025**, this Special Topics course will concentrate on the world of SAR. A combination of lectures, demonstrations, and hands-on exercises will give you the knowledge and skills you will need to become effective users of this increasingly useful technology.

Dates: January to April, 2025, Tuesdays and Thursdays 10 - 11:30

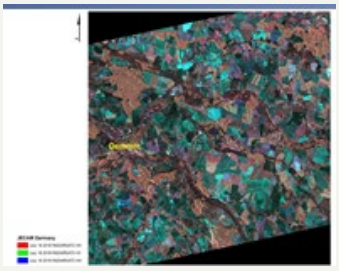


Instructor: Scott Mitchell

Course content:

SAR Basics:
Understanding polarization, frequency, incident angle and so much more

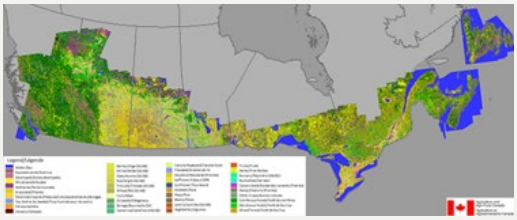
Where's the data?
Accessing SAR data and knowing what to order



SAR Polarimetry:
Unlocking the power of polarimetry

What's SNAP?
Using SNAP software for SAR processing

SAR system characteristics and the target:
Applying the right data in the right way



Interferometric SAR
Cool applications of InSAR

SAR processing:
Leading users through step by step pre-processing of SAR

Terrestrial application case studies will be featured.



Prerequisites: Participants would benefit from a base understanding of remote sensing and image processing. Previous exposure to basics of SAR would be helpful, but not mandatory nor assumed.

Questions? Email scott.mitchell@carleton.ca or visit me in Loeb A301B

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