



## NEW COURSE: GEOM 4001 Special Topics in Geomatics

### FALL 2019 Theme: Active Microwave Remote Sensing

Having free Synthetic Aperture Radar (SAR) data from Sentinel-1 and more recently from RADARSAT Constellation Mission has highly increased the use of SAR data in operational remote sensing applications. Having said that, it is now more important for remote sensing users to learn how to process, analyze and use SAR data. However, using data from 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 this course, the students will learn from basic to advanced topics in SAR in a way that they will not only learn the theory of the SAR remote sensing but also will be equipped with hands-on experience processing and analysis of SAR data. Therefore, the course interweaves lectures with hands-on labs.

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Basics of SAR

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Matrix Algebra for Geographers

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SAR Polarimetry and its Lab

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SAR Sensors and SAR System Characteristics

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Effects of Targets on Microwave Signals and its lab

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Agricultural Applications of SAR and their labs

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Interferometric SAR and its lab

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NOTE TO GEOM Majors: this course **can** be used for your 4<sup>th</sup> year GEOM course requirements, even though it doesn't yet show up that way in the calendar. See Karen Tucker or Murray Richardson for details.