Radar and Imaging Techniques

Fall 2019

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Objectives:
This course will introduce the different radar target detection and imaging techniques. Students will become familiar with radar cross-section (RCS) measurements techniques.

Course Materials:
Lecture notes
Journal papers

Lab:
Polarimetric RCS measurement

Tentative Course Topics:

1. Polarimetric calibrations and polarimetric imaging of targets

2. Inverse Synthetic Aperture Radar (ISAR) and SAR imaging techniques.

3. Detection of angle or arrival (AOA)

4. Passive radars

5. Thru-wall and hard-wall radar imaging techniques

6. Signal processing techniques applied for radar imaging

7. Weather radar and detection of rain fall

8. Radiometer and applications

Grading policy:
Six to seven projects will be assigned. The final grade will be based on the projects/reports. No exam.

Note: This course is different from the previous Radar class (EE575) taught by Professor Sahr. Although we plan to use EE575 in the future, the current course number is EE579/ EE P 592.