FACULTY MENTOR
Florian Meyer

PROJECT TITLE
Long-Range Maritime Situational Awareness

PROJECT DESCRIPTION
Description: High-frequency surface wave (HFSW) radar can exploit propagation paths along the salty ocean surface and provide long-range maritime situational awareness. This project will focus on the development of inference algorithms for HFSW radar. You will learn how to localize and track surface vessels from received radar signals. The developed algorithms will be evaluated using data provided by multiple HFSW radar systems.
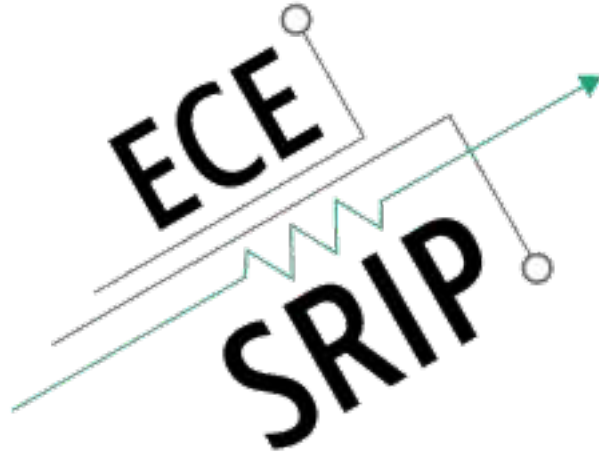
INTERNS NEEDED
2 MS

PREREQUISITES
Required Qualifications:
1. Matlab programming experience in algorithm development
2. Background on estimation and detection theory is preferred

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PROJECT TITLE
Radar-Based Machine Perception

PROJECT DESCRIPTION
Description: High-resolution radar is a key technology for machine perception in fields including autonomous driving and indoor navigation. This project will focus on the estimation of location and shape of features in the environment from radar detections. Star-convex shapes represented by Gaussian processes and elliptical shapes represented by random matrices will be considered. The investigated approaches will be tested on data provided by millimeter-wave automotive radar sensors.

INTERNS NEEDED
2 MS

PREREQUISITES
Required Qualifications:
1.Matlab programming experience in algorithm development
2. Background on estimation and detection theory