

FACULTY MENTOR

Meyer, Florian

PROJECT TITLE

Radar-Based Machine Perception

PROJECT 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.

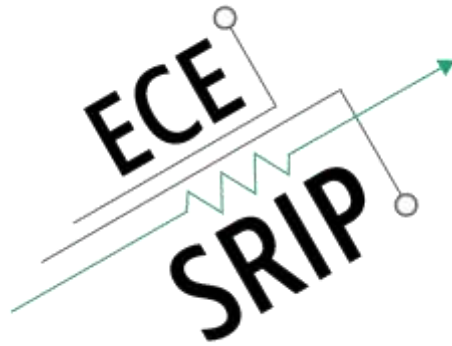
This project can accommodate both remote and in-person students

INTERNS NEEDED

2

PREREQUISITES

Matlab programming experience in algorithm development as well as background on estimation and detection theory is expected.



FACULTY MENTOR

Meyer, Florian

PROJECT TITLE

Underwater Acoustic Environmental Inversion

PROJECT DESCRIPTION

Underwater acoustic environment characterization is a key problem for maritime situational awareness. In this research problem, we will combine acoustic processors with machine learning methods to infer the temporally- and spatially-varying ocean environment. The investigated approaches will be tested based on experimental underwater acoustic data.

This project can accommodate both remote and in-person students

INTERNS NEEDED

2

PREREQUISITES

Matlab programming experience in algorithm development as well as background on signal processing as well as estimation and detection theory is expected.