

**FACULTY MENTOR** Gerstoft, Peter

**PROJECT TITLE** Compressive and sparse methods in acoustic/EM signal processing

### **PROJECT DESCRIPTION**

Acoustic and EM signals observed in the natural environment often have true or useful 'sparse' models, which assume the signals are generated by few causes at any given time. The relatively recent signal processing paradigm of Compressive Sensing (CS) has received lot of attention for its ability to estimate sparse model parameters with great accuracy using few observations. CS and related sparse algorithms rely on tools such as signal processing, optimization theory, probability theory, etc. to obtain sparse solutions to linear systems, which are often highly underdetermined.

**INTERNS NEEDED** 2 MS Students OR 2 Undergrad Students

### **PREREQUISITES**

Knowledge of Signal processing, Probability, Optimization, Statistics, MATLAB programming.

