

CS693 Compressed Sensing and its applications

Credit: 3-0-0-3

Approval: Approved in 2nd Senate

Prerequisites: Signal Processing.

Students intended for: Masters/PhD

Elective or Core: Elective

Semester: Odd/Even: Even

Course Outline:

Sparse and Redundant Representations – Theoretical and Numerical Foundations , Uniqueness and Uncertainty, Pursuit Algorithms – Practice , From Exact to Approximate Solutions , Iterative-Shrinkage Algorithms, The Dantzig-Selector Algorithm, Sparsity-Seeking Methods in Signal Processing, The Quest for a Dictionary, MAP versus MMSE Estimation, Case study: Image Deblurring, Image Denoising and face recognition.

Text & Reference Books:

Michael Elad , “Sparse and Redundant Representations : From Theory to Applications in Signal and Image Processing `”, Springer, 2010.

Research articles from IEEE

Proposed by: Anil Kumar Sao

School: Computing and Electrical Engineering
