



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

Summer Research Program 2022

PG STUDENT SEMINAR

Orthogonal Matching Pursuit for Off-the-Grid Compressed Sensing

By

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Abstract

Compressed Sensing(CS) is a classical linear inverse problem with sparsity structure and the orthogonal Matching Pursuit(OMP) algorithm is a simple and fast algorithm for CS. I will go through the theoretical results of the OMP algorithm for the CS and the off-the-grid CS in this talk. In the first part, I will review the OMP algorithm's historical results for CS and discuss the challenges of extending these results to the off-the-grid scenario. I will then introduce our recent work of OMP for off-the-grid CS. We show that OMP may fail in off-grid settings and propose a new variant of the OMP algorithm that can provably solve the off-the-grid CS.

Date : 20 July 2022 (Wednesday)

Time : 11:00am

Zoom Meeting : <https://hkust.zoom.us/j/97256094218> (Passcode: 933258)

All are Welcome!