



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

**Covering radius of Melas codes and generalized
Zetterberg codes**

by

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Abstract

The problem of determining the exact covering radius of a given code is very hard in general, and it has been proven that this problem is both NP-hard and co-NP-hard. Melas codes and generalized Zetterberg codes are two important families of cyclic codes. In this talk, we develop some general techniques involving arithmetic of finite fields and algebraic curves over finite fields to determine their covering radii. As a result, we also obtain some quasi-perfect codes.

Date : 12 December 2024 (Thursday)

Time : 11:00a.m.-12:00noon

Venue : Room 4579 (Lift 27 & 28)

All are Welcome!