



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PURE MATHEMATICS

Recent progress on the mass formula for linear codes with prescribed hull dimension

by

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Abstract

The hull of a linear code over a finite field is the intersection of the code and its dual, which was introduced by Assmus and Key to classify finite projective planes. In this talk, we introduce some recent progress on the mass formula for linear codes with prescribed hull dimension. Firstly, we determine the mass formula for the binary case. Such a result can be trivially generalized to arbitrary finite fields of even characteristic. Secondly, for the case where q is odd, we give an important characterization for the types of dual codes of linear codes with prescribed hull dimension. Based on this, we determine the mass formula for the q -ary case where q is odd. Finally, we consider the analogous problem for the Hermitian and symplectic inner products.

Date : 7 July 2026 (Tuesday)

Time : 8:30a.m.-9:30a.m.

Zoom Meeting:

<https://hkust.zoom.us/j/92053464812?pwd=LGHQkwkoWuqQuZ52lCgdqEH57Dxl6.1>

Meeting ID: 920 5346 4812

Passcode: 053959

All are Welcome!