



THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

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Extension of the covering method to any finite field

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$$v_p(k!) = \frac{k - \sigma_p(k)}{p - 1}$$

Abstract

The covering method is an elementary and intuitive approach to estimate or compute the exact p -divisibility of exponential sums over a prime field. It can be used to determine solvability of systems of polynomial equations and has applications to cryptography and coding theory. We will present this method and some results obtained for prime fields, then will extend the method and some of the results to any finite field.

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