

THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

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Applications of the covering method for computing p -divisibility of exponential sums

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ABSTRACT

The p -divisibility of exponential sums of polynomials over finite fields can be used for a variety of applications. A little improvement on the estimation of the p -divisibility might be important in some applications. For example, the relation between the 2-divisibility of a Boolean function and certain deformations give information about cosets of Reed-Muller codes. Moreover, the computation of the exact p -divisibility of exponential sums associated to families of systems of polynomials guarantees the solvability of the system and, in the case of a Boolean functions, it proves that the functions are not balanced.

In this talk we present the covering method, an elementary method to compute p -divisibility of exponential sums and see how it can be used in some applications.

Monzón Building, Room 201, **10:45 AM**
Refreshments will be served 15 minutes
before the colloquium in Monzón 213



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