Oberseminar Coding and Cryptography

Sommersemester 2025

February 27   **Speaker:** Martino Borello, Université Paris 8

Location and Time: Theresienstrasse 90, building N4, room N2405, 11:00

Title: Intersecting Codes: Geometry and Applications

Abstract:

Intersecting codes are classical objects in coding theory that find applications in various contexts, such as secret sharing, oblivious transfer, hash functions, separating systems, digital fingerprinting, and even certain theoretical problems in additive combinatorics. In this talk, we will present a geometric perspective on such codes. It is well known that a nondegenerate linear code of length n and dimension k can be associated with a set of n points (with multiplicities) in a projective space of dimension $k - 1$. Some coding-theoretical properties can be interpreted geometrically. In particular, intersecting codes correspond to non-2-cohyperplanar sets, meaning sets in projective space that are not contained in any pair of hyperplanes. We will illustrate some recent results obtained using this geometric approach and discuss how this perspective can be extended to the rank metric.

April 3   **Speaker:** Anurag Bishnoi, TU Delft

Location and Time: Theresienstrasse 90, building N4, room 2408, 11:00

Title:

Abstract:

April 24 Speaker: Alessandro Neri, University of Naples Federico II

       Location and Time: Theresienstrasse 90, building N4, room 2408, 11:00

       Title:

       Abstract: