ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE DOCTORAL SEMINAR

Bent Functions

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Chaired by Clemens Heuberger | Department of Mathematics

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ABSTRACT

Boolean bent functions, introduced by Rothaus in the 1960s, were initially studied for their connections to applications in cryptography and coding theory. Due to their relations to many objects from combinatorics and geometry, Boolean-, p-ary-, and vectorial bent functions have been intensively studied over the last decades. In this talk, connections of bent functions to cryptography, coding theory, and objects like various kinds of difference sets, Hadamard matrices, commutative semifields, projective planes etc are outlined. Finally, recent achievements on connections of bent functions to partial difference sets, LP-partitions, generalized semifield spreads, amorphic association schemes (edge-decompositions of complete graphs into strongly regular graphs) shall be highlighted.

We hope to see you there!