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Wolfgang A Schmid* (schmid@math.univ-paris13.fr). *Bounding some constants in quantitative non-unique factorization theory via coding theory, and generalizations.*

When determining the asymptotics of the counting function of all principal ideals that are the product of at most k irreducible elements, in a maximal order of an algebraic number field (and the same is true in other or more general situations), a certain generalization of the Davenport constant arises; this is a result due to Halter-Koch. This constant is a zero-sum constant and depends on the class group only.

We discuss how for the case that the class group is an elementary 2-group, results from coding theory can be used in order to obtain bounds (and sometimes the exact value) on the numerical value of this constant; this is joint work with Plagne.

Time permitting, recent generalizations and related questions are discussed. (Received September 12, 2012)