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*Functional Graphs of Rédei Functions*

Let  $\mathbb{F}_q$  be a finite field of order  $q$  and  $f : \mathbb{F}_q \rightarrow \mathbb{F}_q$  be a mapping. The functional graph associated to  $f$  is a directed graph where the vertices are labelled by the elements of  $\mathbb{F}_q$  and an edge connects  $a$  to  $f(a)$  for every  $a \in \mathbb{F}_q$ . In this talk we discuss the structure of the functional graph of a Rédei function  $R_n(x, a)$  over  $\mathbb{F}_q$  where  $n \in \mathbb{N}$  and  $a \in \mathbb{F}_q$ . We show conditions for such graphs to be isomorphic for a fixed  $q$ , and present families of isomorphic graphs. This is joint work with Juliane Capaverde and Virgínia Rodrigues.