

## An Algorithm for Producing the Fixed Points of Rédei Permutation Polynomials

Rédei functions are of interest for their use in primality testing, various integer factorization methods, as well as their cryptologic properties. The results presented in this talk aim to provide a better understanding of the cycle structure of Rédei permutations over  $F_q$ . By calling on basic algebraic and number theoretical principles, this talk presents an algorithm which efficiently produces the fixed points for a given Rédei permutation. These results may be of use for cryptologic purposes, as some cryptosystems require Rédei permutations with very few fixed points. The ability to pinpoint fixed points efficiently may facilitate further work to produce such permutations.