

1155-12-65

David J Saltman* (saltman@idacrr.org), 805 Bunn Dr, Princeton, NJ 08540. *Two generalizations of Artin-Schreier polynomials*. Preliminary report.

Inspired by a deep paper by Suresh Venapally, we can define a generic polynomial which gives a short proof of local/global results in mixed characteristic for cyclic Galois extensions. Along the way we discovered a cute generalization of the Artin-Schreier polynomial and Galois action. A second part of the talk will revisit an old characteristic p inverse Galois result and give an improved proof. Renewed interest in these questions was spurred by the questions and research of Catherine Ray in the theory of homotopy groups of spheres. (Received December 13, 2019)