

On Reflexible Polynomials

A polynomial $f(x) = a_0 + a_1x + \dots + a_nx^n$ over the prime field \mathbb{Z}_p , where p is odd, is reflexible if there exists $\lambda \in \mathbb{Z}_p^*$ such that $\lambda a_{n-i} = a_i$ (type 1) or $\lambda a_{n-i} = (-1)^i a_i$ (type 2), for all indices $i = 0, 1, \dots, n$. Such polynomials were instrumental in the classification of quartic arc transitive graphs arising as minimal elementary abelian covers of doubled cycles, a problem that stems from an old result of Gardiner and Praeger. Joint work with Boštjan Kuzman and Primož Potok.

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