Clones between Group $(\mathbb{Z}_8, +)$ and Ring $(\mathbb{Z}_8, +, \cdot)$

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Abstract

A clone on a set is a family of operations that includes all projections and is closed under compositions. An important example is the clone of polynomial operations on groups or rings.

Let p be a prime number. Our work continues the line of research initiated by Rosenberg (1970), Krokhin et al. (1997), Idziak and Bulatov (2003), which investigates the interval between the clone of group polynomials and the clone of ring polynomials on the same set $\mathbb{Z}_p$, respectively $\mathbb{Z}_{p^2}$, within the clone lattice on the corresponding set. The talk will focus on a complete description of all clones generated by polynomials with even coefficients, except for the univariate polynomials, that lie between the clone of group polynomials and the clone of ring polynomials on the set $\mathbb{Z}_{p^3}$, for $p = 2$.