Primeness of group-graded rings, with applications to partial crossed products and Leavitt path algebras

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Abstract

In this talk we will explain how one can characterize primeness for a rather broad class of group-graded rings called nearly epsilon-strongly graded rings. Our main result generalizes a classical result by D. Passman from the 1980s. We will also show how to apply our results to Leavitt path algebras and partial crossed products, thereby obtaining generalizations of more recent results by Larki and by Abrams-Bell-Rangaswamy. This is joint work with Daniel Lännström (Blekinge Institute of Technology), Patrik Lundström (University West), and Stefan Wagner (Blekinge Institute of Technology).