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Title of Talk: Classifying Semigroups Associated to Refinements of a Star Graph

Abstract:
A zero divisor semigroup is a semigroup with zero where every element is a zero divisor. To each commutative zero divisor semigroup S, we associate a simple graph Gamma(S). The vertices of the graph are the nonzero zero divisors of S and there is an edge between two vertices a and b if and only if ab = 0. Via examination of the relationship between the semigroup theoretic properties and graph theoretic properties of Gamma(S), we classify those semigroups where Gamma(S) is a star graph or the refinement of a star graph.