

Department of Mathematics and Statistics Colloquium

McNuggets, semigroups, graphs, and Riemann-Roch

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Abstract: Numerical semigroups are important in a variety of mathematical fields including algebraic coding theory, graph theory, computer science, and probability. Moreover, these mathematical objects are interesting in their own right. A common example is the set of numbers of chicken McNuggets that one can purchase. In this talk, we consider a numerical semigroup that arises from chip-firing games on a finite graph and give some examples in which this semigroup can be explicitly described by utilizing the Laplacian. We also will briefly discuss the connection between this semigroup, Riemann-Roch theory on a finite graph, and error-correcting codes.

Monday, November 11 at 3:45 in Roop 103
refreshments at 3:30