



Department of
Mathematical Sciences

Master's Thesis Defense

Grant Kopitzke

PhD Graduate Student

Under the Supervision of Jeb Willenbring

Friday, April 23rd,
2021 @ 1:00pm

Online via.
Collaborate Ultra



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The Gini Index in Algebraic Combinatorics and Representation

The Gini index is a number that attempts to measure how equitably a resource is distributed throughout a population, and is commonly used in economics as a measurement of inequality of wealth or income. We will define a Gini index on the set of integer partitions and present a number of original combinatorial results related to it. We will then show that this Gini index can be understood as the degrees of the graded multiplicities of certain representations of the general linear group, and will discuss how this notion can be generalized to other connected reductive algebraic groups.

Committee Members:

Prof. Jeb Willenbring, Allen Bell, Kevin McLeod, Boris Okun, and Yi Ming Zou.



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