NORTHERN ARIZONA UNIVERSITY

Department of Mathematics and Statistics
Colloquium
Thursday March 15
AMB 164 3:00 - 3:50 pm *

On the maximum cardinality of braid classes

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Abstract

Abstract: A Coxeter group W can be thought of as a generalized reflection group that is generated by a set of involutions together with a set of relations that describe when generators commute and the so-called braid relations. Every element w of some Coxeter group W can be written as an expression in these generators. When the number of generators used is minimal (including multiplicity), the expression is reduced and the number of generators is its length. Given some $w \in W$, we can form an equivalence relation on its set of reduced expressions: reduced expressions w and w' are braid equivalent if w' is obtainable from w via a sequence of braid moves. The corresponding equivalence classes are called braid classes. In this talk, we will describe a concise way of encoding braid classes to obtain a sharp upper bound on the cardinality of braid classes among all elements of a fixed length.

Refreshments at 3:45

*Note nonstandard time