RUTGERS

UNIVERSITY | NEWARK

Mathematics Colloquium

Palindromes in Teichmüller Theory

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Abstract

It is well known that every primitive word in a rank two free group is conjugate to either a palindrome or the product of two palindromes. However, there was no procedure for enumerating these words. We present an enumeration scheme that gives each primitive as the unique palindrome in its conjugacy class or as a product of two unique palindromes that have already appeared in the enumeration scheme. We use this result to obtain necessary and sufficient geometric conditions for a two generator non-elementary subgroup of $\mathrm{PSL}(2, \mathbb{C})$ to be discrete. Two generator groups are central to Teichmüller and Kleinian group theory because by a result of Jørgensen a group is discrete if and only if every non-elementary two generator subgroup is. This is joint work with L. Keen.

Wednesday, 12 April 2017, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.