AAC Colloquium Talk

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Counting Factorizations of Permutations into Star Transpositions

Professor John Irving
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Room HH-3017 at 2 pm

Abstract

We consider the problem of finding the number of ways of expressing a given permutation on $\{1, 2, ..., n\}$ as an ordered product of a minimal number of transpositions of the form $(1\ j)$. The outcome is a surprisingly simple enumerative formula with an as-yet-unexplained symmetry. Our proof is combinatorial, but the general connection between factorization problems and both algebra and geometry will also be discussed. This is joint work with A. Rattan (M.I.T.).