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Food For Thought Seminar

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Permutation Patterns and Schubert Varieties

Abstract:

In 1990 Lakshmibai and Sandyha proved a remarkable result which provides a purely combinatorial method of determining whether or not a Schubert variety is smooth. In this talk we will start by examining the combinatorial tools needed for this theorem, namely pattern containment and avoidance in permutations. We then move to the land of algebraic geometry, starting with a brief description of varieties and singular points on varieties. Finally we will construct Schubert varieties as special subsets of the complex full flag manifold and state without proof the Lakshmibai-Sandyha Theorem. In doing so we hope to show that the intersection of combinatorics and algebraic geometry is nonempty (although maybe it is only an epsilon neighborhood).

Monday, October 16, 2017
12:00 PM
AP&M 5402

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