

Enumeration of Fillings of Young Diagrams

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Abstract: In this talk I will present different pattern avoiding fillings of Young diagrams and show how they are interesting combinatorial objects and also how they can be used to solve problems coming from other fields. For example, the permutation tableaux come from the study of the positive part of the Grassmannian and can be used to understand a statistical physics model called the partially asymmetric self exclusion process. But they are also related to patterns in permutations, acyclic orientations of graphs, orthogonal polynomials and non commutative symmetric functions. This talk will be targeted for a general audience.