

Title and abstract

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Title: On inductive approach to the representation theory

Abstract: Okounkov and Vershik developed an inductive approach to study the representation theory of the symmetric group S_n using the multiplicity-free chain

$$S_1 \subset S_2 \subset \cdots \subset S_n,$$

where S_i consists of those permutations in S_{i+1} which fix $i+1$. An advantage of the inductive approach over the classical approach is that it gives a spectral explanation for the appearance of Young diagrams and standard Young tableaux in the representation theory of symmetric groups. In the first part of the seminar, we give an introduction to the inductive approach. In the latter part of the seminar, I will indicate some of my research works in this direction.