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**Amol Aggarwal\*** ([agg\\_a@mit.edu](mailto:agg_a@mit.edu)). *Correlation Functions of Schur Processes.*

Schur processes are measures on sequences of partitions that are weighted by products of skew-Schur functions. They were introduced in 2003 by Okounkov and Reshetikhin as an algebraic framework to understand a vast collection of combinatorial models that had captured the attention of probabilists for decades, including Last Passage Percolation, the Totally Asymmetric Simple Exclusion Process, and the Longest Increasing Subsequence of a Random Permutation. Central to Okounkov-Reshetikhin's analysis is their derivation of the correlation functions of the Schur process; they showed that the Schur process is a determinantal point process and found its correlation kernel matrix explicitly. The original proofs of these results were representation theoretic; they used properties of the fermionic Fock space. In this talk, we will define the Schur process; highlight a few of its many applications; and outline a new, combinatorial way to derive the correlation functions of the Schur process through Macdonald difference operators. (Received September 21, 2015)