

# The srank Conjecture on Schur's $Q$ -Functions

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**Abstract:** We show that the shifted rank, or srank, of any partition  $\lambda$  with distinct parts equals the lowest degree of the terms appearing in the expansion of Schur's  $Q_\lambda$  function in terms of power sum symmetric functions. This gives an affirmative answer to a conjecture of Clifford. As pointed out by Clifford, the notion of the srank can be naturally extended to a skew partition  $\lambda/\mu$  as the minimum number of bars among the corresponding skew bar tableaux. While the srank conjecture is not valid for skew partitions, we give an algorithm to compute the srank.

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**Keywords:** srank, bar tableau, Schur's  $Q$ -function, power sum symmetric function, strip tableau, skew bar tableau

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