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PERMUTATIONS, SHAPES, AND THEIR TABLEAUX

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Permutations $w \in S_n$ are famously in bijection with pairs of standard Young tableaux having shape $\lambda(w)$, where $\lambda(w)$ is a partition of n . That bijection can be exploited to reveal structural connections between permutations and their shapes, for example via Schensted's theorem, and those relationships have important combinatorial implications. We will talk about recent developments regarding these relationships, giving combinatorial meaning to additional aspects of these shapes. We will also reveal connections between a permutation's reduced words and the contents of its tableaux.