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Swapnil Garg and **Alan Peng*** (apeng1@mit.edu). *Pattern Avoidance in Rooted Forests.*

Following a definition made by Anders and Archer, say that an unordered rooted labeled forest avoids the pattern $\sigma \in S_k$ if each sequence of labels along the shortest path from a root to a vertex does not contain a subsequence with the same relative order as σ . For a set S of patterns, let $F_n(S)$ be the set of forests on n vertices that avoid each pattern in S . Anders and Archer give a bijection between $F_n(123)$ and $F_n(132)$. Here we use techniques by Anders-Archer and West to give a bijection between $F_n(\sigma_1 \dots \sigma_{k-2}(k-1)k)$ and $F_n(\sigma_1 \dots \sigma_{k-2}k(k-1))$ for all permutations $\sigma_1 \dots \sigma_{k-2} \in S_{k-2}$. We then generalize the notion of shape-Wilf equivalence to forests, proving an analog of this result for sets of multiple patterns. (Received September 17, 2019)