

# **A MARKOV CHAINS APPROACH TO LOCAL LIMITS OF PERMUTATIONS ENCODED BY GENERATING TREES**

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We develop a general technique to study local limits of random permutations in families enumerated through generating trees. We propose an algorithm to sample uniform permutations in such families using Markov chains and we recover the local behavior of permutations studying local properties of the corresponding random walks. The method applies to families of permutations with a one-dimensional-labeled generating tree and can be potentially generalized to multi-dimensional-labeled generating trees.