Combinatorial Markov Chains

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Combinatorial families, such as partitions, permutations, binary trees and Harris-Ulam trees, are usually graded by some basic size parameter, such as the number of nodes for trees or the size of the basic set for partitions and permutations. We consider Markov chains $X_1,X_2,\ldots$ with the property that X_n has its values in the set of the size n objects of the family in question. For some of these, diverse boundaries can be worked out. We explain the general theory and give several examples.

The talk is mainly based on joint work with Anton Wakolbinger (Frankfurt) and Steve Evans (Berkeley).