Exact Mixing Measures on Trees

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Abstract

Consider a random walk on a graph. A stopping rule for a random walk can achieve a desired distribution exactly and efficiently. Considering an optimal stopping rule that reflects some aspect of mixing, we can use the expected length of this rule as a mixing measure. For trees, we describe how some of these mixing measures identify particular nodes with central properties. We also show that while the path is usually the extremal tree structure, there is at least one mixing measure that is not maximized by the path.