Markov process on ends of tree and a nodewise orthogonal property

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Stochastic processes on the field of p-adic numbers have been studied for more than two decades. The theory of Dirichlet space is applied in important parts of the studies. In some recent observations, the hierarchical structure is handled by tree structure and the structure gives an overview for measure symmetric Markov processes on the field of p-adic numbers and ends of a tree. An orthogonal condition described in terms of Dirichlet form for eigenfunctions associated with distinct nodes is involved coherently in the existing formalisms based on Dirichlet space theory. The objective of this talk is paying a close attention to some characteristic property implied by the orthogonal condition and presenting a general formalism in compliance with the characteristic property.