

MARKOV CHAINS IN THE THEORY OF MULTIPLE ORTHOGONAL POLYNOMIALS

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Given a family of orthogonal polynomials or multiple orthogonal polynomials, with a non-negative recurrence matrix, using the Perron–Frobenius theorem, we construct an infinite number of finite Markov chains. The hypergeometric expressions for the families of orthogonal polynomials in the Askey diagram, with non-negative recurrence matrices, allow the explicit construction of a diversity of examples of such Markov chains.