The density of states for periodic Jacobi matrices on trees

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Periodic Jacobi matrices on trees are a natural generalization of one dimensional periodic Schroedinger operators. While the one dimensional theory is very well developed, very little is known about the general tree case. In this talk we will review some of the few known results with a focus on the question of convergence of the appropriately defined finite volume approximations. If time permits, we will also discuss some open problems. Based on joint works with Nir Avni, Gil Kalai and Barry Simon.