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Dessins d'Enfants for the Eigenfunctions of Anharmonic Oscillator

Eigenfunctions of the Schrodinger operator on the real line with a polynomial potential are associated with certain properly embedded infinite planar trees. The braid group action on the trees helps to understand the dependence of the eigenfunctions and the corresponding eigenvalues on the coefficients of the potential. For several classes of potentials, including the even quartic potential known as anharmonic oscillator, the action of the braid group is computed and irreducibility of the spectral determinant is derived from the transitivity of that action.