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Isospectral flat orbifolds

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A Riemannian orbifold is a topological space that is locally homeomorphic to the quotient of a Riemannian manifold by a finite group of isometries. The Laplace operators on these manifolds yield the Laplacian on the entire orbifold. I am going to give an introduction into the spectral geometry of orbifolds and present a few pairs of nonisometric flat orbifolds with the same eigenvalue spectrum of the Laplacian. One of them (found recently by J.P. Rossetti) shows that the spectrum does not determine the orders of the isotropies appearing on an orbifold, where the isotropy group in a certain orbifold point is the smallest group occurring in some chart around this point.

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