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*Approximating and prescribing orbifold spectra.*

For any  $N \geq 0$ , we provide a sequence of smooth manifolds and a smooth orbifold having nontrivial singular set such that the first  $N$  eigenvalues of the Laplace spectra of the manifolds come arbitrarily close to the first  $N$  eigenvalues of the orbifold. Here, the result holds whether the Laplacian acts on functions or on forms. We also show that for any  $N \geq 0$ , it is possible to prescribe the first  $N$  eigenvalues of an oriented orbifold of dimension  $\geq 3$ . We achieve these results by generalizing results of Colin de Verdière, Jammes, and Rauch and Taylor to the orbifold setting, and by proving a Hodge decomposition theorem for orbifolds having manifold boundary. (Received January 17, 2021)