



# CONSTRUCTING SIMPLY-CONNECTED ISOSPECTRAL MANIFOLDS VIA SUNADA’S METHOD

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Spectral geometry explores the relationship between the geometry of a Riemannian manifold  $(M, g)$  and the spectrum of its associated Laplace-Beltrami operator  $\Delta : C^\infty(M) \rightarrow C^\infty(M)$ . In this talk we will extend Sunada’s method to produce pairs of isospectral simply-connected, locally non-isometric manifolds. In addition, we will see that our manifolds admit isospectral group actions which are not measurably conjugate, thus demonstrating that von Neumann’s result concerning the spectral rigidity of abelian group actions does not hold in general.