

PolyU-PDE Seminar

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Topic

Eigenvalue Problems for Degenerate Elliptic Operators on Sub-Riemannian Manifolds

Date | Time

13 December 2024 (Friday) | 4:00 pm – 5:00 pm (HK Time)

Venue

Y303, PolyU

Abstract:

In this talk, we shall report for some recent results on an eigenvalue problem for self-adjoint Hormander operators on non-equiregular sub-Riemannian manifolds. Using the Rayleigh-Ritz formula and the sub-elliptic heat kernel estimates, we establish the upper bounds of eigenvalues which depend on the volume of subunit ball and the measure of the manifold. Under a certain condition, we obtain the explicit upper bounds of eigenvalues which have the polynomial growth in k with the optimal order related to the non-isotropic dimension of the manifold.