Compactness of the Resolvent for Degenerate Kramers-Fokker-Planck Operators

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Abstract

In this talk, I will discuss recent contributions to the spectral theory of Kramers-Fokker-Planck operators with a degenerate potential. In that, I will present sufficient conditions for the compactness of the resolvent, a fundamental problem related to the Helffer-Nier conjecture, which links the compactness of the resolvent of the Kramers-Fokker-Planck operator with that of the associated Witten Laplacian on zero-forms.