

The spectrum of non-symmetric operators and Markov processes

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This is a joint work with Y. Ikeno. We discuss the spectrum of non-symmetric operators, in particular, normal operators. We first give an criterion of normal operators on a Riemannian manifold. And we give examples of normal operators. We also give the precise description of the spectrum. For example, we consider the two dimensional Euclidean Laplacian with rotation and the two dimensional Ornstein-Uhlenbeck operator with rotation. We show that their spectrum can be determined explicitly. We also discuss the relation between the sector condition and the spectrum.

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