SINGSTAR Conference 2017 : Index theory and Singular Structures

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Bergman kernels on symplectic manifolds and applications.

jeudi 1 juin 2017 14:00 (45 minutes)

A suitable notion of "holomorphic section" of a prequantum line bundle on a compact symplectic manifold is the eigensections of low energy of the Bochner Laplacian acting on high *p*-tensor powers of the prequantum line bundle. We explain the asymptotic expansion of the corresponding kernel of the orthogonal projection as the power p tends to infinity. This implies the compact symplectic manifold can be embedded in the corresponding projective space. With extra effort, we show the Fubini-Study metrics induced by these embeddings converge at speed rate $1/p^2$ to the symplectic form. We explain also its implication on Bezerin-Toeplitz quantizations.

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