Title:	Quantization and Coherent States
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Abstract:	This thesis is a review of two methods of Quantization - Geometric and Toeplitz Quan- tization. Given a symplectic manifold (M, w), geometric quantization consists of a pre- quantum line bundle and a polarization such that the space of square-integrable polarized sections of the line bundle is taken to be the Hilbert space of quantization. According to the scheme given by Kostant-Souriau, one can construct a mapping f→f such that it obeys the axioms of quantization specified by Dirac. In Toeplitz quantization, the map f→T") satis- fies the quantum conditions in a limiting sense (as m→ ∞) and is more of an approximation of C (M) by operator algebras in the norm sense. There is a beautiful connection between the two theories. We review some special vectors in the Hilbert space called Rawnsley co- herent states which are relevant in geometric quantization. We also discuss another type of coherent states, corresponding to the Heisenberg-Weyl group and SU (2), called Perelomov coherent states. These states are constructed out of the action of a group on the Hilbert space. Coherent states are special because that they form an overcomplete basis for the Hilbert space and satisfy the maximal likelihood property.
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