CR Laplacian-type operator on the boundary of the generalized upper half plane

Hideyuki Ishi

We discuss analysis on the boundary of the generalized upper half plane, which is the Siegel domain realization of the unit ball. It is known that the boundary is naturally identified with the Heisenberg Lie group, where the CR structure is described efficiently in a Lie theoretical way. In this talk, we introduce a special inner product on a space of forms so that the associated Laplacian-type operator has discrete spectrums.