

COLLOQUIUM

Subelliptic harmonic analysis on compact, semi-simple Lie groups

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We will build on classical harmonic analysis results in compact, semisimple Lie groups, to develop methods suitable to analyze the subelliptic Laplacia associated to an orthonormal basis of the orthogonal complement of a Cartan subalgebra. As results we will get eigenvalues and eigenvectors of the subelliptic Casimir operators associated to irreducible, unitary representations, sharp L^2 bounds for derivatives in the directions of vector fields from the Cartan subalgebra, and estimates of the best constant in the subelliptic Friedrichs-Knapp-Stein inequality in $SO(n)$.

The lecture will take place in Thackeray 704 at 3:30pm.
Refreshments will start at 3:00pm.