COLLOQUIUM

Subelliptic harmonic analysis on compact, semi-simple Lie groups

András Domokos
Berkeley University

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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.