"Spectra and resolvents of elliptic cone operators"

Abstract:
I will give an account of recent work regarding the spectral theory of elliptic cone operators. In particular, we will analyze the structure and asymptotic behavior of their resolvents. Cone operators arise naturally in the study of differential equations on a manifold with conical singularities --simplest (but fundamental) case of an incomplete Riemannian manifold. Our approach uses pseudodifferential techniques combined with a systematic study of Grassmannians associated with the closed extensions of the operators. Time permitting, I will discuss how to apply our results in the study of quantum graphs.

Thursday, April 23, 2009
2:00 PM in 353 Jabara Hall