1057-35-137 **Selma Yildirim-Yolcu*** (selma.yildirim-yolcu@gcsu.edu), Department of Mathematics, CBX 017, Georgia College & State University, Milledgeville, GA 31061. *On Eigenvalue Inequalities for the Klein-Gordon Operators.*

In this talk, I will present some universal eigenvalue inequalities for Klein-Gordon operators $H_{m,\Omega}$ restricted to a bounded domain Ω in $\mathbb{R}^d$. Many of these results concern finding bounds for some spectral functions of these operators. The subject is examined from the spectral theory perspective through some of the tools used to prove analogues results for the Laplacian. For instance, the Weyl asymptotics and semiclassical bounds for the operator $H_{m,\Omega}$ are developed. In addition, I will present a Berezin-Li-Yau type inequality and an improvement of the bound. (joint work with Evans Harrell) (Received January 19, 2010)