Title: Non-negative versus positive scalar curvature.

Abstract: Understanding the difference between non-negative curvature and positive curvature on manifolds is a subtle and often difficult problem. In this talk we focus on the scalar curvature, the weakest commonly used notion of curvature. Scalar curvature is closely related to the so-called Dirac operator. We will present a new result about the eigenvalues of the Dirac operator, and explore the implications of this for the question of non-negative versus positive scalar curvature.