

**Meeting:** 1006, Lubbock, Texas, SS 2A, Special Session on Differential Geometry and Its Applications

1006-58-13            **Igor Prokhorenkov\*** (i.prokhorenkov@tcu.edu), Department of Mathematics, TCU Box 298900, Fort Worth, TX 76110, and **Ken Richardson** (k.richardson@tcu.edu). *Witten deformation and index of Dirac operators.*

We describe sufficient conditions under which the index of a deformed Dirac operator  $D_s = D + sZ$  ( $0 < s < \infty$ ) can be computed in terms of combinatorial local data near the singular set of a zeroth order perturbation  $Z$ . We provide several examples of such computation. (Received December 13, 2004)