

Meeting: 1003, Atlanta, Georgia, SS 11A, AMS Special Session on Riemannian Geometry, I

1003-53-1030 **Iva Stavrov*** (istavrov@clark.edu). *Locally isotropic pseudo-Riemannian manifolds*. Preliminary report.

Locally isotropic pseudo-Riemannian manifolds are known to be locally symmetric; this result is due to Wolf. In the Riemannian setting one proof, due to Szabó, uses spectral properties of operators defined by the Riemann curvature tensor. In this talk I will present an extension of Szabó's method to the pseudo-Riemannian setting, obtaining results comparable to those of Wolf. I will focus on the polynomial nature of operators defined by the curvature tensor along with their behavior over the nullcone. These techniques have both received little attention thus far. (Received October 02, 2004)