

1023-35-1899

Thomas Krainer* (krainer@psu.edu), Penn State Altoona, Mathematics and Statistics, 3000 Ivyside Park, Altoona, PA 16601. *Elliptic boundary problems on a class of noncompact manifolds.*

We discuss Fredholm criteria and regularity results for elliptic boundary value problems on a particular class of noncompact manifolds. An example for the topological setup would be Euclidean space with a noncompact obstacle removed.

Analytically, the operators under consideration may be regarded as cusp operators on manifolds with corners after suitable compactification of the noncompact ends, and boundary conditions are imposed on some of the boundary hypersurfaces.

Cusp operators (with cusp degeneracy on all boundary hypersurfaces) were introduced by Richard Melrose and Victor Nistor in 1996 in the context of the index problem on manifolds with corners of codimension 1 (unpublished), and in the case of higher codimensions by Robert Lauter and Sergiu Moroianu (2002).

A preprint related to the material presented in this talk is accessible from <http://arXiv.org> under math.AP/0508516 (2005). (Received September 27, 2006)