

ON INDICIAL OPERATORS

THOMAS KREINER

Penn State Altoona

ABSTRACT. Indicial families and their quantized versions, indicial operators, arise as principal parts associated with the singularities for elliptic operators on stratified spaces with certain incomplete geometries. They determine to leading order the admissible boundary behavior of solutions relative to a base function space, which typically is the geometric L^2 -space. Analytic methods deployed in this context are inductive in nature with respect to the depth of the stratification, and a robust understanding of the phenomena at any level is required to successfully proceed through the induction, starting with the principal parts. The talk will be partly survey and will partly expand on work by Gerardo Mendoza and collaborators on extensions and asymptotics of elliptic operators in the presence of (generalized) conical singularities.