Schulze, Bert-Wolfgang; **Sternin, Boris**; **Shatalov, Victor**

An operator algebra on manifolds with cusp-type singularities. (English) Zbl 0914.58029

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The algebra of pseudodifferential operators on an arbitrary smooth manifold with a finite number of points of cusp-type is investigated. A family of local cusp algebras is constructed and the local Fredholm properties are established. The Fredholm property (global) is a direct consequence of the existence of local regularizers. The resurgent character of solutions is proved for elliptic pseudodifferential equations with infinitely many exponentially flat near-singular points on the right-hand side.

Reviewer: V.M.Deundjak (Rostov-na-Donu)

MSC:

58J05 Elliptic equations on manifolds, general theory
35J70 Degenerate elliptic equations
47A53 (Semi-) Fredholm operators; index theories

Keywords:

Fredholm theory; cusp-type singularities; pseudodifferential operators

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