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Boundary value problems and edge pseudo-differential operators. (English) Zbl 0874.35141
Rodino, Luigi (ed.), Microlocal analysis and spectral theory. Proceedings of the NATO Advanced Study Institute, Il Ciocco, Castelvechio Pascoli (Lucca), Italy, 23 September–3 October 1996. Dordrecht: Kluwer Academic Publishers. NATO ASI Ser., Ser. C, Math. Phys. Sci. 490, 165-226 (1997).

The author shows how pseudo-differential boundary value problems on manifolds fit into a more general class of pseudo-differential operators on manifolds with edges, with specific operator-valued symbols in a pseudo-differential algebra. The elements of this exposition (edge Sobolev spaces and operator-valued symbols, parameter-dependent pseudo-differential operators and cone theory, pseudo-differential calculus on manifolds with edges) are chosen to be an ingredient of a future pseudo-differential calculus on manifolds with higher edge and corner singularities, which requires parameter-dependent variants of this operator algebra.

For the entire collection see [\[Zbl 0864.00062\]](#).

Reviewer: [V.Iftimie \(București\)](#)

MSC:

[35S15](#) Boundary value problems for PDEs with pseudodifferential operators
[58J40](#) Pseudodifferential and Fourier integral operators on manifolds
[47G30](#) Pseudodifferential operators

Cited in **6** Documents

Keywords:

[pseudo-differential boundary value problems on manifolds](#); [operator-valued symbols](#); [pseudo-differential algebra](#); [pseudo-differential calculus on manifolds with edges](#)