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Section:

10. Partial Differential Equations

1991 MS Classification: 32,35,44,45
Vasil'ev, Vladimir B., Novgorod State University, Russia

Wave factorization of elliptic symbols

For studying of pseudodifferential equations solvability in non-smooth domains the concept of wave factorization of elliptic operator's symbol is introduced. Existence of such factorization permits to find general solution of "model" pseudodifferential equation with "freezing" coefficients in cone (plane sector) and to describe correct settings of some boundary value problems. In series of situations the wave factorization can be constructed explicitly and it permits to obtain sharp analytical solutions of some mathematical physics problems.

Reference: V. B. Vasil'ev, Pseudodifferential operators on cones, Differential Equations **31**(1995), 1335-1346.