

ALGEBRAS OF WEIGHT AND DEGENERATING PSEUDO-DIFFERENTIAL OPERATORS

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Special classes of pseudo-differential operators (PDO) of non-principal type are considered. These operators have a degeneration set of non-null measure, caused by presence of a weight factor α in their symbols. The offered research method of degenerating PDO is based on their comparison with other PDO, created using Fourier weight transformation F_ω introduced by V.P. Glushko. Transformation F_α "absorbs" the α multiplier, which results in operators with symbols from a well-known class. Weight spaces of Sobolev–Slobodedskiy type are also required for this theory.