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The purpose of this book is to give a comprehensive exposition of the theory of pointwise multipliers acting in pairs of spaces of differentiable functions. The theory was essentially developed by the authors during the last thirty years and the present volume is mainly based on their results.

Part I is devoted to the theory of multipliers and encloses the following topics: trace inequalities, analytic characterization of multipliers, relations between spaces of Sobolev multipliers and other function spaces, maximal subalgebras of multiplier spaces, traces and extensions of multipliers, essential norm and compactness of multipliers, and miscellaneous properties of multipliers. Part II concerns several applications of this theory: continuity and compactness of differential operators in pairs of Sobolev spaces, multipliers as solutions to linear and quasilinear elliptic equations, higher regularity in the single and double layer potential theory for Lipschitz domains, regularity of the boundary in L_p-theory of elliptic boundary value problems, and singular integral operators in Sobolev spaces.

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