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cases	authors	Iryna S. Chepurukhina Aleksandr A. Murach	authors	Iryna S. Chepurukhina Aleksandr A. Murach		
	title	Elliptic boundary-value problems in the sense of Lawruk on Sobolev and Hörmander spaces	title	Elliptic problems in the sense of B. Lawruk on two-sided refined scales of spaces		1
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	abstract	We investigate elliptic boundary-value problems with additional unknown functions in boundary conditions. These problems were introduced by Lawruk. We prove that the operator corresponding to such a problem is bounded and Fredholm on appropriate couples of the inner product isotropic $H\tilde{A}\P$ rmander spaces $H^s, \ddot{I}^\dagger,$ which form the refined Sobolev scale. The order of differentiation for these spaces is given by the real number s and positive function \ddot{I}^\dagger that varies slowly at infinity in the sense of Karamata. We consider this problem for an arbitrary elliptic equation $Au=f$ on a bounded Euclidean domain \hat{I}^\odot under the condition that $u\hat{a}^+H^s, \ddot{I}^\dagger(\hat{I}^\odot)$, s <ord <math="" a,="" and="">f\hat{a}^-L_2(\hat{I}^\odot). We prove theorems on the a priori estimate and regularity of the generalized solutions to this problem.</ord>	abstract	We investigate elliptic boundary-value problems with additional unknown functions on the boundary of a Euclidean domain. These problems were introduced by Lawruk. We prove that the operator corresponding to such a problem is bounded and Fredholm on two-sided refined scales built on the base of the isotropic H\"ormander inner product spaces. The regularity of the distributions forming these spaces are characterized by a real number and an arbitrary function that varies slowly at infinity in the sense of Karamata. For the generalized solutions to the problem, we prove theorems on a priori estimates and local regularity in these scales. As applications, we find new sufficient conditions under which the solutions have continuous classical derivatives of a prescribed order.		
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