cases	doc_1	doc_2	decision	id
			DUPLICATES	824

doc_1

authors	• Valerii Los • Vladimir Mikhailets • Aleksandr A. Murach
title	Parabolic problems in generalized Sobolev spaces.
publication_date	2019-07-09 00:00:00
source	SupportedSources.OPENALEX
journal	arXiv (Cornell University)
volume	
doi	None
urls	• https://openalex.org/W2956370941
id	id4989075490424353423
abstract	
versions	

doc_2

authors	• V. Los • V. Mikhailets • A. Murach
title	Parabolic problems in generalized Sobolev spaces
publication_date	2019-07-09 00:00:00
source	SupportedSources.SEMANTIC_SCHOLAR
journal	
volume	
doi	10.3934/cpaa.2021123
urls	• https://www.semanticscholar.org/paper/707c898e951aba4fb0bdfed7e0586d1cf8a5cc2d
id	id3819320825886976042
abstract	We consider a general inhomogeneous parabolic initial-boundary value problem for a <inline-formula><tex-math id="M1">\begin{document}$ 2b $\end{document}</tex-math></inline-formula>-parabolic differential equation given in a finite multidimensional cylinder. We investigate the solvability of this problem in some generalized anisotropic Sobolev spaces. They are parametrized with a pair of positive numbers <inline-formula><tex-math id="M2">\begin{document}$ s $\end{document}</tex-math></inline-formula> and <inline-formula><tex-math id="M3">\begin{document}$ s/(2b) $\end{document}</tex-math></inline-formula> and with a function <inline-formula><tex-math id="M4">\begin{document}$ \varphi:[1,\infty)\to(0,\infty) $\end{document}</tex-math></inline-formula> that varies slowly at infinity. The function parameter <inline-formula><tex-math id="M5">\begin{document}$ \varphi $\end{document}</tex-math></inline-formula> characterizes subordinate regularity of distributions with respect to the power regularity given by the number parameters. We prove that the operator corresponding to this problem is an isomorphism on appropriate pairs of these spaces. As an application, we give a theorem on the local regularity of the generalized solution to the problem. We also obtain sharp sufficient conditions under which chosen generalized derivatives of this solution are continuous on a given set.
versions	