

# **Correctness investigation of a boundary value problem for a parabolic equation with nonlocal space operator with respect to the solution gradient**

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## **Abstract**

© Published under licence by IOP Publishing Ltd. We consider the parabolic equation whose space operator is product of nonlinear bounded function which depends on nonlocal characteristic with respect to a solution gradient and strongly monotone, potential operator. The existence and uniqueness of the solution in the class of the vector-valued functions with values in Sobolev space are proved.

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