

# The finite element method scheme for a solution of an evolution variational inequality with a nonlocal space operator

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## Abstract

© Published under licence by IOP Publishing Ltd. We consider the parabolic inequality with monotone with respect to a gradient space operator, which is depended on integral with respect to space variables solution characteristic. We construct a two-layer differential scheme for this problem with use of penalty method, semidiscretization with respect to time variable method and the finite element method (FEM) with respect to space variables. We proved a convergence of constructed method.

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