

DIFFERENTIAL SCHEME OF HIGH DEGREE PRECISION  
DECOMPOSITION OF NONHOMOGENOUS EVOLUTION  
PROBLEM

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*Abstract*

In the present work symmetrized sequential-parallel decomposition method of the third degree precision for the solution of Cauchy abstract problem for the nonhomogeneous evolution equation is offered. Third degree precision is reached by introducing a complex coefficient. For the error of approximated solution the explicit a priori estimation is obtained.

*Key words and phrases:* Decomposition Method, Semigroup, Trotter formula, Cauchy abstract problem.

*AMS subject classification:* 65M12, 65M15, 65M55.