

ABSTRACT

Bachelor's thesis: 89 p., 1 tab., 5 fig., 2 append., 12 sources.

COMPOSITION METHOD, FORMULA OF TROTTER-DALETSKIY,
MODELING, PARALLEL COMPUTATION, SYSTEMS WITH DISTRIBUTED
PARAMETERS

The paper deals with the problems of modeling the behavior of systems with complex parameters and proposes a new approach to modeling such systems. Since the problem of resources constantly arises when solving such problems, one can bypass it by decomposing a complex problem into simple subtasks that can be calculated in parallel. This approach allows you to use the resource allocation approach and simulate a more precise system with less computer time.

Object of research: methods of modeling systems with distributed parameters.

Subject of research: alternative methods of modeling systems with distributed parameters.

The purpose of the work: to analyze the features of modeling systems with distributed parameters, to offer an alternative method of modeling such systems, compare it with "classical" methods.

Research methods: numerical experiments with comparison of results implemented with the Matlab program package.