The Disjunctive Sets Application
for a Multi-Stage Processes Simulation

© V.I. Serdyukov, S.I. Shishkina

Bauman Moscow State Technical University, Moscow, 105005, Russia

The paper presents a new approach to the multistage processes simulation, which is based on the sequential operation according to Markov or semi-Markov processes schemes. Markov and semi-Markov processes are widely used in the queuing theory and the reliability theory. The application of such processes makes it is possible to describe the behavior of various real systems and devices. In the paper we consider processes with a finite number of states. In order to build the model we use the special procedure to minimize a number of states to be taken into account while studying multistage processes.

***Keywords*:** *disjunctive set, Markov process, multistage process, set of states.*

Serdyukov V.I., Dr. Sci. (Eng.), Professor of "Applied Mathematics" Department of Bauman Moscow State Technical University. e-mail: wis24@yandex.ru

Shishkina S.I., Ph.D., Senior Lecturer of "Applied Mathematics" Department of Bauman Moscow State Technical University. e-mail: shish-bmstu@mail.ru