

ABSTRACT

The theme of this thesis is "Stochastic modeling approach to the cars' parking process research".

The thesis: 69 p., 7 fig., 11 tabl., 10 sources and 3 appendices.

The theme of this thesis is "Methods of object recognition in musical notation".

The purpose of this thesis is to develop adequate mathematical model of parking process, and getting the estimation of maximum count of vehicles on the parking as the result of mathematical inference.

Thesis results:

- three deterministic models of drivers' behaviour were examined and corresponding analytical formulas were deduced;
- two non-deterministic models of drivers' behaviour were examined, more precisely – a model with uniform distribution of vehicles along the parking, and a model based on the mixture of uniform and Bernulli distribution;
- all implemented algorithms were assembled into console application for imitational parking process modeling.

Thesis newness:

- a detailed analysis of R enyi's results was performed, the classical R enyi's parking model was generalised and corresponding analytical formula was deduced;
- a console application for imitational parking process modelling in case of different disciplines was created.

STOCHASTIC PROCESS THEORY, PROBABILITY THEORY, BIASED INTEGRAL EQUATION THEORY, OPERATIONAL CALCULUS, TAUBERIAN THEOREMS.