STATE – DEPENDENT RETRIAL QUEUES

Lebiediev Ievgen
Taras Shevchenko National University of Kyiv, Ukraine
leb@unicyb.kiev.ua

Classical retrial queues are characterized by the following feature: a call arriving when all servers are busy leaves the service area but after some random time repeats his demand. This feature plays a special role in many applications. A Markov retrial queue is given by three parameters: a rate of input Poisson flow of primary calls, a service rate and a rate of repeated attempts. In this presentation it's assumed that these rates may be depended on the moving phase state of the service process.

It is planned to consider the following points: a problem of exact formulas for stationary probabilities, steady state analysis of queues with constant retrial rate, a queue controlled by threshold strategies and a case of the set of hysteresis strategies. A class of models under consideration extends the field of applications and was used to find optimal parameters for state-dependent retrial queues.