

Perturbation theory for the asymptotic decay rates in the queues with Markovian arrival process and/or Markovian service process

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Abstract

Three kinds of queues with Markovian arrival process and/or Markovian service process, are considered in this paper. In great generality, their basic steady-state distributions have asymptotically exponential tails. We investigate the sensitivity of these asymptotic decay rates to the small entrywise perturbations in the parameter matrices of the Markovian arrival process.

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