短文

一类可修非周期Fork-Join排队网络分析

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收稿日期 1994-12-16 修回日期 网络版发布日期 接受日期

摘更

研究一类排队空间有限且服务台可修的非周期Fork-Join排队网络,给出求解稳态概率的直接法和等效法,并计算一些排队指标和可修指标(如稳态队长、服务台的可用度和服务台的失效概率),最后通过仿真验证其正确性.

关键词 排队网络 可靠性 稳态 概率分布

分类号

Analysis of a Class of Repairable Acyclic Fork-Join Queuing Networks

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Abstract

A class of repairable acyclic fork-join queuing networks (RAFJQN) with finite queuing spaces and repairable service machine is considered. In calculating steady-state probability, both direct method and equivalient method are proposed. In addition, some indices (such as steady-state queuing length, failure probabilities of server and utilizable rates of server) in queueing theory and repairable theory are obtained. Finally, examples are given by simulation.

Key words <u>Queuing network models</u> <u>reliability</u> <u>steady states</u> <u>probability</u> <u>distribution function</u>

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