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论文

服务员假期中以概率p进入的M/G/1排队系统的随机分解

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摘要：

该文研究M/G/1多重休假排队系统，其中在服务员休假中到达顾客以概率p(0≤p≤1)进入。通过引进“服务员忙期”和使用拉普拉斯变换或拉普拉斯—
—司梯阶变换，我们获得队长瞬态分布的拉普拉斯变换和稳态分布的递推表达式，进一步得到稳态队长分布的随机分解和在特殊情况下相应的一些结果。

关键词： 服务员假期;p进入规则;队长;瞬态分布;稳态分布;随机分解

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The Stochastic Decomposition for M/G/1 Queue with p Entering Discipline During Server Vacations

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Abstract:

This paper considers the M/G/1 queueing system with server vacations in whi ch the customers who arrive during server vacations enter the system with probab ility p(0≤p≤1). By introducing the server busy period and using the Lapla ce or Laplace Stieltjes transform, both the recursion expression of the Laplace transform of the transient distribution and the recursion expression of the equ ilibrium distribution for the queue length are obtained. Furthermore, the stocha s tic decomposition of the queue length at a random point in equilibrium and some corresponding results under special cases are also given.

Keywords: Server vacation p entering discipline Queue length Transient distribution Equilibrium distribution Stochastic decomposition

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