

Nonparametric Estimation of Tail Probabilities for the Single-Server Queue

P. W. Glynn and M. Torres

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- [GTorres96.pdf](#)

We consider the estimation of tail probabilities in queues via the nonparametric estimator constructed by simply computing the observed fraction of time that the queue is out in the tail. We show that for reflected Brownian motion, the M/M/1 queue-length process, and the G/G/1 waiting time sequence that the amount of time over which one must observe the queue grows exponentially in tail parameter when such a nonparametric estimator is used.