
Splitting for a non-Markovian tandem queue

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Abstract

In this talk, we consider a non-Markovian tandem queue and we use splitting in order to estimate the probability that the total number of customers in this tandem queue reaches some high level N during a busy cycle of the system. We present a splitting scheme, and we give some insights in how we prove that our splitting scheme results in an asymptotically efficient estimator for the probability of interest. Among these insights, we present the decay rate starting from some general point in the state space.

Keywords: Rare event simulation, splitting, GI—GI—1 queues, tandem queues

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