Lv, Jiaxin; Gupur, Geni
Spectral analysis of the M/M/1 retrial queueing model with special retrial times. (Chinese. English summary) Zbl 07448815

Summary: We study spectrum of the operator, which corresponds to the M/M/1 retrial queueing model with special retrial times on the left real axis, and prove that if the arrival rate of customers $\lambda$, retrial rate of customers $\alpha$ and service rate of the server $\beta$ satisfy $\alpha \neq \beta$, then $-(\lambda + \alpha), -(\lambda + \beta)$ and all points in the interval between $-(\lambda + \alpha)$ and $-(\lambda + \beta)$ are not eigenvalue of the operator.

MSC:
60K25 Queueing theory (aspects of probability theory)
90B22 Queues and service in operations research

Keywords:
M/M/1 retrial queueing model; underlying operator; eigenvalue