Abstract:

A system of $k > 0$ queues in series is considered. The structure of queue i is of the form $(M(\lambda_i) \mid M(\mu_i) \mid 1): (FCFS \mid \infty \mid \infty)$. The implication of λ_i is that customers access the system through all the service stations, making the system to become what we call *porous* with λ_i^{-1} being the mean interarrival time having a Poisson distribution, and μ_i^{-1}, the mean service time of server i. It is shown heuristically that the steady state probability of the number of customers in the system has a product form.