

**Relations Among the Distributions at Different Epochs
for Discrete-Time GI/Geom/ m and Continuous-Time
GI/M/ m Queues**

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Abstract

This paper presents relations among state probabilities at arbitrary, pre-arrival and outside observer's observation epochs in a discrete time multiserver queue GI/Geom/ m . Two cases are discussed: (i) early arrival system and (ii) late arrival system with delayed access. In the limiting case, these relations tend to the corresponding continuous-time results.

Keywords: Discrete-Time Queues, Multiserver, Outside Observer, Prearrival, Steady-State Distribution, Relations, Supplementary Variable.