**Analysis of a Queueing Model with Catastrophe and Restoration**

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**Abstract**:

In this talk, we analyse a Markovian single server queuing a model with catastrophe, restoration and reneging. The customers are arrived according to the Poisson distribution with rate 𝜆 and are served on FCFS basis with service rate µ. If a customer has to wait too long for a service, then they abandon the line is reneging with the rate 𝜃. A sudden disaster that causes significant suffering or loss is catastrophe with the rate . Restoration is the process of recovering something that has been damaged into its initial condition with the rate . Transient solutions of this model is obtained by using matrix geometric method. Also, graphical examples are used to display by performance measures in particular values of parameter.

**Key words:** Arrival rate, Service rate, Reneging, Catastrophe, Restoration, Matrix Geometric Method.

**AMS Subject classification:** 90B22, 60K25 and 60K30.