

**On a Fluid Model Driven by an $M/M/1$ Queue
with Catastrophe**

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Abstract

In this paper, a fluid queue driven by an $M/M/1$ queue with catastrophe is discussed. The transient solution is expressed through continued fraction and deduced the steady state solution of our fluid queue. Further we deduce the results of the Fluid model driven by an $M/M/1$ queue without catastrophe.

Keywords: Fluid queue, $M/M/1$ queue, catastrophe, continued fractions, Laplace transform.