

1135-VT-3112 **George Mytalas***, george.mytalas@brooklyn.cuny.edu, and **Ioannis Farmakis**. *Batch arrival queueing system with vacations, disasters and repairs under the N- policy*. Preliminary report.

We consider a M/G/1 queueing system with batch arrivals subject to disasters and server breakdowns under N-policy. The server is turned off as soon as the system empties. When the queue length reaches or exceeds a value N (threshold), the server is turned on and begins to serve the customers. When a disaster occurs the system is cleared of all customers and the server initiates a repair period. During the repair period arriving batches of customers accumulate in the queue without receiving service. Besides, the server has an exponential lifetime in addition to the catastrophe process. By applying the supplementary variables method, we obtain the steady-state solutions for both queueing measures and reliability quantities of interest. (Received September 26, 2017)