

## **STEADY-STATE PROBABILITY ALGORITHM FOR A SINGLE-SERVER QUEUING SYSTEM**

**M. A. ADABANIJA AND \*A. E. OKEYINKA**

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Department of Pure and Applied Physics, Ladoke Akintola  
University of Technology, P.M.B. 4000, Ogbomosho, Nigeria.

Department of Computer Science and Engineering, Ladoke Akintola  
University of Technology, P.M.B. 4000, Ogbomosho, Nigeria.

\*Corresponding Author

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### **ABSTRACT**

A single-server queuing process is investigated. Using the assumptions of exclusiveness of events, randomly-distributed task duration and independence of the task duration of the length of time a task takes, the characteristics of a single server queue with space limits are investigated. An algorithm that uses the steady-state behaviours of a stochastic system is developed and implemented in Pascal language in this paper.