

**Reliability Analysis of a Repairable Parallel System  
with Standby Involving Human Error and  
Common-Cause Failures**

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**Abstract**

This paper presents a mathematical model to evaluate availability, MMTF and cost analysis of a repairable parallel system with standby units involving human error and common-cause failures. Laplace transforms of the various state probabilities and steady state availability are developed. Some particular cases have been discussed. The cost function for the case when where is repair due to hardware and human failures is derived.

*Keywords:* MTTF, Cost Analysis, Lasplace Transform.