

سمینار هفتگی گروه آمار

A Signature-Based Approach in Redundancy Allocation Problems for Coherent Systems

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خلاصه:

This talk deals with the problem of allocating spare components for improving the system reliability when lifetimes of components are dependent. Two policies, called active and standby redundancies, are investigated in details. The optimal allocations are given without specific assumptions on the dependency structure among the component lifetimes. When there exist the (positive/negative) quadratic dependence and (upper/lower) orthant order among the component lifetimes, the derived results are simplified. Moreover, a signature-based approach for redundancy allocation problems in complex systems when component lifetimes are heterogeneous and dependent. Various illustrative examples are also given.