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Eryilmaz, Serkan

On signatures of series and parallel systems consisting of modules with arbitrary structures.

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Summary: The signature of a system is a useful concept not only in the analysis of binary coherent systems but also in network reliability. Computation of system signature is a well-defined combinatorial problem. This article is concerned with the computation of signature vectors of series and parallel systems consisting of modules. We derive simple formulas for the signature and minimal signature of series and parallel systems based on signatures and minimal signatures of modules with given structures. We present computational results to illustrate the findings.

Keywords: module; reliability; signature

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