



On the signature of repairable coherent systems

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We introduce the notion of signatures in repairable systems made of different components which can individually fail and be minimally repaired up to a fixed number of times. Failures occur according to Poisson processes, which might have either the same intensity function for each components or different ones. The former case reminds the notion of signature presented by Samaniego for i.i.d. random variables, whereas here independent Poisson processes with identical intensity function are considered. We provide also the reliability function for different systems, from series to coherent ones.

Keywords: signature; nonhomogeneous Poisson process; stochastic ordering; minimal path set.