

**Prakasa Rao, B. L. S.**

**On distributions with periodic failure rate and related inference problems.** (English)

[Zbl 0903.62079](#)

Panchapakesan, S. (ed.) et al., Advances in statistical decision. Theory and applications. Basel: Birkhäuser. Statistics for Industry and Technology. 323-341 (1997).

The author investigates properties of distributions with periodic failure rates. The Cauchy functional equation, the “almost lack of memory” property and distributions with periodic failure rates are explained in detail. A representation of these distributions is given with detailed proofs. The problem of estimation of parameters of these distributions is considered. The non-homogeneous Poisson process with periodic intensities for modeling a minimal repair system is discussed and nonparametric as well as parametric estimates of the intensity of non-homogeneous Poisson processes are obtained.

For the entire collection see [[Zbl 0990.62506](#)].

Reviewer: [M.P.Moklyachuk](#) (Kyïv)

**MSC:**

[62N05](#) Reliability and life testing

[62E15](#) Exact distribution theory in statistics

[62F10](#) Point estimation

[62E10](#) Characterization and structure theory of statistical distributions

**Keywords:**

[periodic failure time](#); [reliability](#); [integrated Cauchy functional equation](#); [non-homogeneous Poisson processes](#)