Swanepoel, J. W. H.; **van Wyk, J. W. J.**
Fixed width confidence intervals for the location parameter of an exponential distribution.
(English) Zbl 0559.62030
Commun. Stat., Theory Methods 11, 1279-1289 (1982).

Let $f_{\theta,\sigma}(x) = \sigma^{-1}e^{-(x-\theta)/\sigma}I_{(x \geq \theta)}$. The authors study fixed width confidence intervals for θ, when σ is not known. The paper has two parts. In the first part, the authors obtain second order results, as $d \to 0$, for the expected sample size and coverage probability. For the estimate proposed by *N. Mukhopadhyay* [Bull., Calcutta Stat. Assoc. 23, 85-95 (1974; Zbl 0342.62058)] Monte-Carlo results are also presented to elucidate the results.

In the second part, the authors construct confidence intervals of width d and coverage probability 1-α. They then study the asymptotic behaviour of the expected sample size as $d \to 0$ and also as both d and α go to 0.

Reviewer: R.V.Ramamoorthi

MSC:

62F25	Parametric tolerance and confidence regions
62E20	Asymptotic distribution theory in statistics
62L12	Sequential estimation

Cited in **24** Documents

Keywords:

asymptotic expansion; stopping rule; exponential distribution; sequential procedures with non-asymptotic coverage probability; fixed width confidence intervals; second order results; expected sample size; asymptotic behaviour

Full Text: DOI

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