Sequential Selection for Accelerated Life Testing via Approximate Bayesian Inference

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Abstract

Approximate Bayesian inference has been proposed to construct computationally tractable statistical learning procedures for incomplete or censored data. In this talk, I will discuss a sequential model-updating procedure via approximate Bayesian inference for the Log-normal model with censored observations. We show that the proposed procedure leads to a consistent model parameter estimation. The developed model updating procedure also enables a closed form expression of a sequential design criterion. The proposed procedure is applied to accelerated life testing experiments, which aims at determining the material alternative with the best reliability performance.