IMPROVED SEQUENTIAL ESTIMATION OF MEANS OF EXPONENTIAL DISTRIBUTIONS

N. MUKHOPADHYAY

Department of Statistics, U Box 120, University of Connecticut, 196 Auditorium Road, Storrs, CT 06269, U.S.A.

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Abstract. Both one-sample and multi-sample estimation problems for the means of one parameter exponential distributions are addressed. In the one-sample case, for the existing purely sequential and recently obtained piecewise sequential estimation methodologies, we follow and extend the development in Isogai and Uno (1993, *Ann. Inst. Statist. Math.* (in press)) in order to obtain a class of estimators that provides asymptotic second-order risk improvement. In the multi-sample problem, we address the analogous aspects for the existing purely sequential methodology as well as the newly developed piecewise methodology.

Key words and phrases: Risk improvement, second-order asymptotics, exponential distributions, sequential methods, piecewise sequential methods, one-sample problems, multi-sample problems.