

# On the asymptotic distribution of model averaging based on information criterion

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**Abstract:** Smoothed AIC (S-AIC) and Smoothed BIC (S-BIC) weights are widely used in model averaging. In this paper, we investigate their asymptotic behavior. The asymptotic distributions of the corresponding model averaging estimators, the S-AIC and S-BIC estimators, under the general fixed parameter framework are derived. Further, we theoretically check the confidence intervals constructed by Buckland et al. (1997), which have not been studied from theoretical aspect in literature. Both simulation study and real data analysis support our theoretical conclusions.