Improved Inference for the Signal Significance

Thursday 1 August 2019 09:30 (30 minutes)

We present a method for deriving signal significance p-values in the 5 sigma region for finite samples, to order $O(n^{-3/2})$, for a number of signal detection statistics (Wald, score, and likelihood ratio). Connection with the look elsewhere effect is discussed.

The talk is based in part on the article by I. Volobouev and A. Trindade 2018 JINST 13 P12011

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Session Classification: General