

PhD SEMINAR

Quasi exact frequentist inference (what is it, how it performs and how to compute it)

Prof. Chris Lloyd Melbourne Business School, The University of Melbourne, Australia

Chair: Prof. Enrico Ripamonti University of Brescia

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Frequentist inference treats unknown parameters as fixed unknown constants rather than random variables and requires computation of the properties of a statistical procedure under repeated sampling from the assumed model. This present difficulties because the unknown parameters that are of no direct interest cannot simply be "integrated out".

There has been much progress over the past twenty years. This talk will review methods for hypothesis testing and of constructing confidence limits, that have close to ideal frequentist properties. The methods are illustrated and compared on an extremely simple model to highlight their properties as well as the computational challenges in general. I will conclude with a short review of efficient computational methods for more general models.

The talk includes material from 9 papers that are available for direct download here.