

國立東華大學應用數學系 專 題 講 座

日期：109年12月25日
時間：15:00 - 17:00
地點：理工一館A324室
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A robust likelihood approach to inference about the difference between two multinomial distributions in paired designs

Pairing serves as a way of lessening heterogeneity but pays the price of introducing more parameters to the model. This complicates the probability structure and makes inference more intricate. We employ the simpler structure of the parallel design to develop a robust score statistic for testing the equality of two multinomial distributions in paired designs. This test incorporates the within-pair correlation in a data-driven manner without a full model specification. In the paired binary data scenario the robust score statistic becomes the McNemar's test. We provide simulations and real data analysis to demonstrate the advantage of the robust procedure.

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