

UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar Series - 2002

Friday May 31, 2.00pm., Carslaw Lecture Room 273 (level 2)

**Using Contingency Tables to Construct Both
Traditional and New Nonparametric Tests**

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Abstract

The Rayner-Best approach to nonparametric testing for a given experimental design exhibits the data in a contingency table that is at least partially ordered, constructs a model for the table of counts, and derives an omnibus test statistic and its components. For several important designs the components are asymptotically chisquared distributed, are asymptotically independent and assess moment differences between treatments. Often the initial components are the basis for well-known nonparametric rank tests such as the Kruskal-Wallis and Spearman tests. LSD comparisons are easily derived. We recommend combining the higher moment components into a residual.

This is work done jointly with D.J. Best.

Shelton Peiris

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