Non-centrality parameter in STATIS interstructure

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Abstract

Statistical theory of STATIS interstructure relies heavily on F statistic. In this paper we show how to complete the inference working with the non centrality parameters of these statistics. Many times these statistics have very high values and there is an almost overflow of significant results. This lead us to use the non centrality parameters as measures of relevance for effects and interactions.

Keywords

STATIS method, Variation coefficient, Newton-Raphson method.

References

[1] Areia, A., M.M. Oliveira, and J.T. Mexia (2008). Models for series of studies based on geometrical representation. *Stat. Methodol. 1*, 277–288.

[2] Lavit, C. (1988). *Analyse Conjointe de Tableaux Quantitatifs*. Collection Méthods + Programmes, Masson, Paris.

[3] Lehman L. (1959). *Testing Statistical Hypothesis*. John Willey & Sons, New York.

[4] Mexia, J.T. (1989). *Controlled Heteroscedasticity, Quocient Vector Spaces and F Tests for Hypothesis on Mean Vectors*. Trabalhos de Investigação, 1. Departamento de Matemática, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa.

[5] Mood, M.M., F.A. Graybill, and D.C. Boes (1987). *Introdution to the Theory of Statistics*. McGraw-Hill.