

広島統計談話会
Hiroshima Statistics Study Group

第 292 回談話会を下記のように開催致しますので
御参集下さいますようご案内申し上げます。

You are cordially invited to the 292nd meeting as scheduled below.

日 時 : 2015 年 7 月 3 日 (金) 15:00 –
Date : July 3, 2015 (Fri) 15:00 –
場 所 : 放射線影響研究所 講堂
Place : RERF Auditorium
演 者 : 稲津 佑 氏 (広島大学大学院 理学研究科 数学専攻 博士課程後期)
Speaker : Mr. Yu Inatsu
Department of Mathematics, Graduate School of Science, Hiroshima University
演 題 : 「パラレルプロファイルモデルにおけるランダムエフェクト共分散構造
に関する尤度比検定統計量の帰無分布の漸近展開」
Title : “Asymptotic expansions of the null distribution of the likelihood ratio test statistic
for a random-effects covariance structure in a parallel profile model”

要 約 :

Summary:

We introduce an asymptotic expansion of the null distribution of the likelihood ratio statistic for testing the adequacy of a random-effects covariance structure in a parallel profile model. We consider the large-sample framework that the sample size tends to infinity while the dimension is fixed, and a high-dimensional framework that both the sample size and the dimension tend to infinity. Under the large-sample framework the asymptotic expansion is expressed by using chi-squared distribution functions. On the other hand, under high-dimensional framework it is expressed by using normal distribution functions. We show that the accuracy of approximation can be improved by using the derived asymptotic expansion in both cases.