

広島統計談話会  
Hiroshima Statistics Study Group

第 260 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 260<sup>th</sup> meeting as scheduled below.

日 時 : 2010 年 11 月 19 日 (金) 15:00 –  
Date : November 19, 2010 (Fri) 15:00 –  
場 所 : 放射線影響研究所 講堂  
Place : RERF Auditorium  
演 者 : 小泉 和之 博士 (東京理科大学理学部数理情報科学科 助教)  
Speaker : Kazuyuki Koizumi, Ph.D.  
Assistant Professor  
Dept. of Mathematical Information Science, Tokyo University of Science  
演 題 : 「多変量正規性に対する総括的な検定統計量の改良」  
Title : “Improved omnibus test statistic for multivariate normality”

要 約 :

**Abstract:**

In this paper, we consider an omnibus test for the multivariate normality based on the sample measures of multivariate skewness and kurtosis. Sample measures of multivariate skewness and kurtosis were defined by Mardia (1970), Srivastava (1984) and so on. For univariate case, Jarque and Bera (1987) proposed bivariate test using skewness and kurtosis. Koizumi et al. (2009) proposed the Jarque-Bera type test (MJB) for assessing multivariate normality by using Srivastava (1984)'s multivariate skewness and kurtosis. Our purpose is to give an improved MJB test statistic by normalizing transformations. Finally, numerical results by Monte Carlo simulation are shown in order to evaluate accuracy of upper percentage points for a new test statistic proposed in this paper.