

広島統計談話会
Hiroshima Statistics Study Group

第 280 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 280th meeting as scheduled below.

日 時 : 2013 年 11 月 29 日 (金) 15:00 –
Date : November 29th, 2013 (Fri) 15:00 –

場 所 : 放射線影響研究所 比治山ホール
Place : RERF Hijiyama Hall

演 者 : 柳原 宏和 博士 (広島大学大学院 理学研究科 准教授)
Speaker : Hirokazu Yanagihara, Ph.D.
Associate Professor, Department of Mathematics
Graduate School of Science, Hiroshima University

演 題 : 「正規性を仮定した高次元多変量線形回帰モデルにおける対数尤度に基づく情報
量規準が実際には正規性が満たされていない状況下で一致性を持つための条件」

Title : “Conditions for Consistency of a Log-likelihood-Based Information Criterion in
High-Dimensional Multivariate Linear Regression Models under the Violation of
Normality Assumption”

要 約 :

Summary:

In this talk, we clarify conditions to satisfy a consistency of an information criterion, which is defined by adding a penalty term to negative twofold maximum log-likelihood, in multivariate linear regression models with normality assumption, when the dimension of response variables and the sample size are large, and the normality assumption is violated. The conditions are derived from the high-dimensional asymptotic framework, such that the dimension of the response variables and the sample size are approaching infinity. The conditions indicate the consistency properties of AIC and bias-corrected AIC. Moreover, it turns out that the BIC and consistent AIC (CAIC) are not always consistent model selection criteria under the high-dimensional asymptotic framework. The consistency property is also checked numerically by conducting a Monte Carlo simulation.