広島統計談話会
Hiroshima Statistics Study Group

第256回談話会を下記のように開催致しますので
御参加下さいますようご案内申し上げます。
You are cordially invited to the 256th meeting as scheduled below.

日時：2010年5月28日（金）15:00－
Date：May 28, 2010 (Fri) 15:00－
場所：放射線影響研究所 講堂
Place：RERF Auditorium
演者：永井 勇（広島大学大学院理学研究科 博士課程後期数学専攻）
Speaker：Isamu Nagai
Department of Mathematics, Graduate School of Science, Hiroshima University.
演題：「一般化多変量分散分析モデルにおける多変量一般化リッジ推定量と
リッジパラメータ選択のためのバイアス補正Cp基準」
Title：“A bias-corrected Cp criterion for optimizing ridge parameters in
multivariate generalized ridge regression for GMANOVA model”

要約:
Abstract:

A generalized ridge regression for a multivariate linear model was proposed
by Yanagihara, Nagai and Satoh (2009). In this talk, we consider a generalized ridge
regression for the generalized multivariate analysis of variance (GMANOVA) model
(Mallows, 1973) to the multivariate ridge regression case, and proposed the Cp
criterion to optimize ridge parameters. They also showed that the ridge parameters
optimized by minimizing Cp criterion are expressed by closed forms.
Furthermore, they proposed an unbiased Cp criterion (modified Cp; MCp) under
the assumption that response variables are distributed according to the normal
distribution. By extending their results, we propose the Cp and the MCp criterion to
optimize the ridge parameters in the generalized ridge regression for GMANOVA model.
By conducting a numerical study, we verify that the generalized ridge regression
estimator with ridge parameters optimized by Cp or MCp criteria is better than the
ordinary least square estimator in the sense of the MSE making small.