広島統計談話会

Hiroshima Statistics Study Group

第 304 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 304th meeting as scheduled below.

日　時：　2017 年 6 月 2 日（金）15:00 –
Date　:　June 2, 2017 (Fri) 15:00 –

場　所：　放射線影響研究所　講堂
Place　:　RERF Auditorium

演　者：　橋本 真太郎 博士　(広島大学大学院 理学研究科 助教)
Speaker　:　Shintaro Hashimoto, Ph.D.
Assistant Professor, Department of Mathematics
Graduate School of Science, Hiroshima University

演　題：　「擬似事後分布に基づくロバストなベイズ推測について」
Title　:　“Robust Bayesian inference based on quasi-posterior distributions”

要　約：

Summary:

In this talk, we consider a robust estimation based on the gamma-divergence in Bayesian framework. The gamma-divergence is one of the statistical distance which is proposed by Fujisawa and Eguchi (2008), and it is a powerful tool to estimate the probability density for heavily contaminated data. We propose a robust posterior distribution based on the gamma-divergence (we call it the gamma-posterior) and show that some asymptotic properties of the Bayes estimator under quadratic loss function. As measures of robustness, the Bayesian influence functions of the Bayes estimator and the overall posterior are also discussed. Further, we compare the empirical biases among the Bayes estimators based on the several type of divergences for heavily contaminated data through some simulation studies.

This work is a joint with Tomoyuki Nakagawa of Hiroshima University.