

広島統計談話会
Hiroshima Statistics Study Group

第 319 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 319th meeting as scheduled below.

日 時 : 2019 年 10 月 25 日 (金) 15:00 –
Date : Oct 4, 2019 (Fri) 15:00 –

場 所 : 放射線影響研究所 E-205
Place : E205, RERF

演 者 : 松井 秀俊 博士 (滋賀大学データサイエンス学部准教授)
Speaker : Hidetoshi Matsui, Ph. D.
Associate Professor
Faculty of Data Science, Shiga University

演 題 : 「関数データに基づく判別モデルの変数選択と遺伝子発現データ分析への
応用」

Title : “Variable selection in classification models for functional data and its
application to gene expression data analysis”

要 約 :

Summary:

Functional data analysis is one of the most useful tools for analyzing longitudinal data by transforming repeatedly measured data into functions for individual. We consider constructing logistic regression models for functional data along with sparse regularization in order to identify genes with dynamic alterations in case/control study. We employ the mixed effects model based on basis expansions in order to convert time course profiles measured at small and irregularly spaced time points into functional data, and then estimate the functional logistic regression model using the penalized likelihood method with the group elastic net penalty in order to select genes that have time course expression profiles. We apply the proposed method to the analysis of gene expression data and show that our method selected biologically important genes.