広島統計談話会

Hiroshima Statistics Study Group

第288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 288th meeting as scheduled below.

日　時 :　　　2014 年 12 月 12 日（金）15:00 –
Date　 :　　　December 12th, 2014 (Fri) 15:00 –

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

演　者 :　　　中島 栄二（放射線影響研究所 統計部 副部長）
Speaker :　　Eiji Nakashima, Ph.D.
　　　　　　　Assistant Department Chief
　　　　　　　Department of Statistics, RERF

演　題 :　　　「独立で加法的な古典的およびバークソン共変量誤差を持つ線形回帰」
Title　:　　　"Linear Regression with Classical and Berkson Independent Additive Covariate
　　　　　　　 Measurement Errors"

要　約 :
Summary:

　　　　Covariate measurement errors are classified into two types, classical and Berkson errors. The Berkson covariate error occurs when grouping covariate under linear regression. We assumed the independence between classical measurement error and the true unknown covariate, and that between Berkson measurement error and observed covariate. In this talk, additive measurement errors are considered and the effects of the covariate measurement errors on the parameters in a simple linear regression model are investigated under the notions of true model and actual model. The theoretical explanation will be given for that the classical error attenuates the slope and the Berkson error recovers the bias but sometimes overshoots the recovery. We show the slope bias due to classical error can be cancelled out perfectly by grouping covariate or by grouping Berkson error. To cancel out the classical error, the exact formula for grouping Berkson error variance is given as a function of classical error variance. Some simulation studies were made.