



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

POST GRADUATE WORKSHOP
Department of Statistics
4 AUGUST 2018

Partitioned GMM Logistic Regression Models for Longitudinal Data

Presented by:

Prof Jeffrey R Wilson, WP Carey School of Business, Arizona state University, USA

AND

Case study in Data Mining with SAS

Presented by:

Prof Jian Xiong, Department of Statistics, University of Guangzhou, China

Venue: Centenary 1

Programme

Saturday 4 August 2018

08:30 Registration and coffee
09:15 Introduction and Welcome
09:30 Session 1: Prof Wilson
10:45 – 11:00 *break*
11:00 Session 2 – Prof Wilson
12:15 *Lunch – Brown bag*
13:15 Session 3 – Prof Xiong
14:30 – 14:45 *break*
14:45 Session 4 – Prof Xiong
16:00 End of session

Sponsors

- South Africa DST-NRF-SAMRC SARChI Research Chair in Biostatistics
- SARChI Research Chair in “Nonparametric, Robust Statistical Inference and Statistical Process Control”

PARTITIONED GMM LOGISTIC REGRESSION MODELS FOR LONGITUDINAL DATA

JEFFREY R WILSON PHD

Correlation is inherent in longitudinal studies due to the repeated measurements on subjects, as well as due to time-dependent covariates in the study. In the National Longitudinal Study of Adolescent to Adult Health (Add Health), data were repeatedly collected on children in grades 7-12 across four waves. Thus, observations obtained on the same adolescent were correlated, while predictors were correlated with current and future outcomes such as obesity status, amongst other health issues. Thus, we depart from this assumption and instead use the Partitioned GMM approach to estimate multiple coefficients for the data based on different time-periods. This approach offers a deeper understanding and appreciation into the effect of each covariate on the response. Examples include obesity in Add Health, rehospitalisation in Medicare data, and depression scores in a clinical study.

Case Studies in Data Mining with SAS

Jian Xiong Ph.D. Professor

The workshop will introduce and review the SAS Enterprise Miner and its applications on how to access credit bureau data and university enrolment data, and how to use predict models to analyse these data. We will focus on the decision trees, neural networks and other advanced modelling tools on model assessment and implementation. Two case studies on bank credit scoring and university enrolment management will be used to illustrate these data mining techniques.

RSVP to carin.ferreira@up.ac.za by Wednesday 18 July 2018 – please indicate if you have any dietary requirements.

(For non UP guests – please include your email address and cell number to gain access to campus)