

Workshop Series 2017-18

**Department of Bio-statistics
Swami Rama Himalayan
University, Swami
Ramnagar Jolly Grant
Dehradun**



Date: - 07-11 MAY 2018

**Organizing 7th
*Workshop on
Statistical Modeling
using Health Data***

Workshop Objective

The workshop will focus on analysis and manipulation of large data sets and improve participant's ability to conduct regression analysis and study the relationship between response variable and multiple predictor variables. Purposes of a statistical model are Predictions, Extraction of information, and Description of stochastic structures. We will discuss proper statistical analysis of the health data emanating from methods based on normal distribution, transformation of data, single-distribution, generalized linear models, parametric models, mixtures of parametric distributions, survival methods, non-parametric methods, truncation or trimming of data, data components models, averaging across models, and Markov chain methods.

The goal of this workshop is to review many of the main concepts of regression from the perspective of the applied researcher and discuss on the underlying statistical assumptions, what happens when they are violated, and simple ways to address violations, interpreting a variety of regression coefficients correctly, and model fit.

Who should attend?

This workshop has been primarily planned for junior faculty and postgraduate medical/allied health sciences students, PhD students, post-doctorates and others associated with health research.

No prior knowledge of research methodology or statistics is required.

Registration

Filled registration form should be submitted by 07 May 2018 till morning. Workshop fee to be paid along with the registration form through Online in university website, Link is given below.

➤ <http://www.srhu.edu.in/conferences/667-biostatistics-workshop-series-2017-18.html>

you can also apply through offline on department mail hod.biostats@srhu.edu.in and demand draft will be made in favour of "Swami Rama Himalayan University" payable at State Bank of India, Jolly Grant, Dehradun Branch (Code: 10580) to The Registrar, Swami Rama Himalayan University, Swami Ram Nagar, P.O. Doiwala, Dehradun-248140 Uttarakhand.

Workshop Fee: 3500/- + (630/- GST) covers tuition, workshop kit, breakfast, lunch and tea for all five days.

Accommodation

Participants will have to bear their own expenses for travel and accommodation. However, single accommodation can be arranged for the participants inside SRHU campus with self-pay. Options are available outside the campus as well, within walking distance.

WORKSHOP COURSE CONTENT

Regression Analysis

Introduction to Regression, Simple Linear Regression, Assumptions

- Tests of Slope and intercept
- Multiple Linear Regression
- Model Building strategy
- Assessing Best Fit
- Multi-collinearity Problem and Diagnostics

Logistic Regression

Introduction to Logistic Regression, Rationale

- Single & Multiple Logistic Regressions
- Creating dummy variables
- Model Building
- Assessing Best Fit
- Diagnostics
- Matched Data Analysis
- Ordinal response logistic regression

Survival Analysis

Introduction to Survival Analysis

- Kaplan Meier Survival Curves
- Comparison of two Survival Curves
- Cox Proportional Hazards Model
- Proportional Hazards Assumption (Graphical Approach and Goodness of Fit)

Count data Model

- Poisson Regression Model
- Negative Binomial Regression model
- Data without zeros (Zero truncated and censored models)
- Data with more zeros (Zero-inflated and Hurdle models)
- Generalized Poisson – Modeling under dispersed data.

Multilevel Modeling (MLM)

Multi-stage sampling and multilevel theories: Macro, micro level units and cross-level relations

Statistical treatment of clustered data

Aggregation, disaggregation, Intra-cluster correlation coefficient (ICC), design effect in two stage sampling

Statistical Software

R & SPSS

Invited Speakers

Dr. Anil C Mathew

Professor of Biostatistics and Former General Secretary Indian Society for Medical Statistics
PSG Institute of Medical Sciences & Research
Coimbatore

Dr. Kh. Jitenkumar Singh

Scientist D
National Institute of Medical Statistics
ICMR New Delhi

Dr. Gulab Singh

Assistant Professor
Department of Mathematics & Statistics
Banasthali Vidyapith
Jaipur, Rajasthan

Organizing Committee

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