PODICHERRY UNIVERSITY

DEPARTMENT OF STATISTICS

Ramanujan School of Mathematical Sciences

All Students, Research Scholars and Faculty Members are cordially invited for Expert Lecture Series Program

on

Projection Matrices and Linear Models

Delivered By

Prof. Sumitra Purkayastha

**Applied Statistics Unit,
Indian Statistical Institute (ISI), Kolkata, India**

Schedule and Venue of the Program:

Date	Time	Venue
October 16, 2018	02:30 pm -05:30 pm	Seminar Hall Dep. of Statistics RSMS, PU
October 17, 2018	09:30 am -11:30 am	

Dr. Navin Chandra
(Co-ordinator)

Dr. P. Tirupathi Rao
(Convener and Head)

Projection Matrices and Linear Models

ABSTRACT:

Beginning with a discussion on projection matrices, we'll discuss how the standard problem of least squares estimation in a linear model can be understood by using the language of projection matrices. Following this, general results on estimation of linear parametric function and test about them will be discussed. These results will be discussed at length for one-way ANOVA models and balanced two-way ANOVA models -- both with and without interaction. We'll see how use of facts of linear algebra makes the results easy to follow and transparent. Our treatment will largely follow "Plane Answers to Complex Questions: The Theory of Linear Models" (Fourth edition) by Ronald Christensen (2011).