

Indian Statistical Institute

Applied Statistics Unit

SEMINAR NOTICE

Speaker: Samiran Ghosh, University of Texas School of Public Health

Title: On the Estimation of the Incidence and Prevalence in Two-Phase Longitudinal Sampling Design

Date: 20 December, 2022

Time: 16:15 PM

Online Platform: Google Meet (<http://meet.google.com/xhp-cnxr-wjq>)

Abstract:

In this talk, we will consider efficient and cost-effective estimation of prevalence and incidence rates in epidemiological studies. The HOME HEALTHCARE study serves as a motivating example from which major depressive disorder prevalence and incidence rates are constructed for a population of elderly adults who are at high risk of late-life depression. Efficient and simultaneous estimation of major depressive disorder prevalence and incidence rates are considered at multiple time points using a two-phase sampling design approach and a sampling design perspective. Two-phase sampling designs are commonly used in medical studies with rare disorders for cost efficiency. Generally, the first-phase classification is fallible but relatively cheap, while the second-phase state-of-the-art medical diagnosis is accurate but complex and expensive to perform. Two-phase designs offer great potential for higher precision and true case detection over standard designs while expending equal or fewer resources.

All are invited to attend.