



DEPARTMENT OF MATHEMATICS AND STATISTICS

presents THE FOURTH MAZUMDAR LECTURE

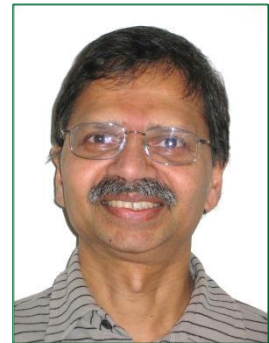
Speaker: Dr. H.N. Nagaraja, Division of Biostatistics, The Ohio State University

Title: Some Models for Ordered Data and Their Applications to Business and Economics

Date: June 3, 2011

Room/Time: Refreshments: 2:30 p.m. Room: 222 MM
Talk: 3:00 p.m. Room: 202 MM

Host: Dr. Weizhen Wang



ABSTRACT:

We introduce three probability models for ordered data viewing them as (i) order statistics, (ii) record values, and (iii) order statistics and their concomitants. We describe the joint probability distributions, the concept of censoring, and introduce some basic properties. Applications of spacings of order statistics to auction theory and actuarial science will be illustrated with two examples: (a) properties of expected rent in regular and reverse auctions, and (b) finding approximation to finite-time ruin probabilities for a company with large initial reserves. The problem of estimating mobility rates in search models using record value theory will be discussed. We will also see how the concept of concomitants of order statistics can be used to model data-snooping biases in tests of financial asset pricing models. Time permitting, some recent/current work on concomitants of order statistics will be discussed.

ABOUT THE SPEAKER:

Dr. Nagaraja received his Ph.D. in Statistics from Iowa State University (1980) and then joined Department of Statistics at the Ohio State University. He is now Professor and Chair, Division of Biostatistics, College of Public Health at OSU. He is an Elected Member, International Statistical Institute (1993); Fellow, American Statistical Association (2000); President International Indian Statistical Association (2010-11); the Associate Editors for several peer-reviewed statistical journals. He has many publications including 3 Books and has supervised 17 Ph.D. students in Statistics and Biostatistics. His research interest includes order statistics, record values, distribution theory, stochastic modeling of medical data, clinical trials, and measuring agreement.