

A Workshop on
Statistical Genetics

December 29-30, 2009

Organized by

Centre for Population Studies
Department of Statistics
Cochin University of Science and Technology
Cochin 682 022

About the Workshop

Statistical genetics is a classical branch of applied probability and statistics, which has recently received much new interest, due to the significant breakthroughs in genetics, both experimentally and theoretically. With modern techniques and significantly increased data it is hoped to link diseases and other traits to genes that can be precisely located on the genome in an unprecedented manner. These developments provide remarkable opportunities for the prevention and cure of human disease, but require investigators working at the interface between human genetics and the mathematical sciences. There are plenty of opportunities for statisticians interested in life sciences. This two day workshop incorporates parts of many different areas of statistics.

The workshop will be inaugurated by **Dr.A.Jayakrishnan,Vice Chancellor, Cochin University of Science and Technology** on **29-12-2009** at **10.00a.m.**

Tentative Topics to be covered:

- Foundational Concepts in Population and Statistical Genetics
- Methods of Linkage Analysis
- Association Studies: Family-based, Case-Control and GWAS
- Sample size, Power and FDR
- Population Stratification and Genomic Control
- Haplotype Analysis and Fine Mapping

Venue of the Workshop

Seminar Hall
Department of Statistics
Cochin University of Science and Technology
Cochin 682 022

Speakers

Robert C. Elston, PhD: Dr. Robert C. Elston serves as Professor and Chair, Department of Epidemiology and Biostatistics, Case Western Reserve University, Cleveland, Ohio. He is one of the most renowned world leaders of Statistical Genetics. Professor Elston received his Ph.D. from Cornell University in 1959, was on the faculty of the University of North Carolina, Chapel Hill from 1960-1962 and 1964-1979, Head of the Department of Biometry and Genetics at the Louisiana State University Medical Centre from 1979-1995, and joined Case Western Reserve University in 1995. Professor Elston is a Fellow of the American Statistical Association and of the Institute of Mathematical Statistics. He has served as President of the International Genetic Epidemiology Society, receiving the Society's Leadership Award in 1995. Most notable among his other awards are the Hoch Award from the American Psychopathological Association in 1992, the Wick R. Williams Memorial Award from the Fox Chase Cancer Center in 1994, the William Allan Award from the American Society of Human Genetics in 1996, and the Marvin Zelen Leadership Award for Statistical Science from the School of Public Health, Harvard University, in 2004.

Varghese George, PhD: Dr. Varghese George serves as Professor and Chair of the Department of Biostatistics at the Medical College of Georgia (MCG) since 2005. Dr. George has a well-established track record of graduate training and mentoring, and methodological and collaborative research in Biostatistics, Statistical Genetics and Genetic Epidemiology. He received his doctorate in Statistics from the University of Missouri - Columbia in 1981 followed by his post-doctoral fellowship in Statistical Genetics at the Louisiana State University Medical Center in New Orleans under Professor Robert Elston. He continued his career as faculty in the Department of Biometry and Genetics at LSUMC, in the Division of Biostatistics at the Medical College of Wisconsin, and in the Department of Biostatistics at the University of Alabama at Birmingham, prior to joining MCG. Professor George is a Fellow of the American Statistical Association, and an elected member of the International Statistical Institute. His primary methodological research focus is on family-based association and linkage disequilibrium methods and Bayesian methods in genetic analysis.

Saurabh Ghosh, PhD: Dr. Saurabh Ghosh is an Associate Professor in the Human Genetics Unit at the Indian Statistical Institute (ISI), Kolkata, India. He obtained his masters degree in Statistics with specialization in Biostatistics in 1995 and his Ph.D. degree in Statistical Genetics in 2000, both from ISI. He completed a two-year post-doctoral fellowship in the Department of Psychiatry at the Washington University School of Medicine, St. Louis, before joining the ISI faculty. His primary research interests include developing model-free statistical methods for linkage and association mapping of complex traits with special emphasis on quantitative traits and multivariate phenotypes. He is involved in various international and Indian collaborative projects in genetics, such as the Collaborative Study on the Genetics of Alcoholism and the molecular genetic study of bipolar disorder. He has received the Haldane Memorial Award from ISI, a Fogarty Grant award for foreign investigators from the National Institutes of Health, USA, and the Suraj Kali Jain Award from the Indian Society of Medical Statistics. He has been elected as an Associate member of the Indian Academy of Sciences.

Organizing Committee

- Dr.K.R.Muraleedharan Nair
- DR.V.K.Ramachandran Nair
- Dr.N.Balakrishna (Chair)
- Sri.K.C.James
- Dr.P.G.Sankaran (Coordinator)
- Dr.S.M.Sunoj
- Dr.Asha Gopalakrishnan

Registration

All participants are encouraged to pre-register to secure a guaranteed place at the Workshop. The registration fee for the Workshop is Rs.500. The Registration Fee includes two lunches, coffee breaks and conference material. The participants those who need accommodation in the University Guest House will be charged Rs.300 per day. Those participants who wish to

stay at hotels (outside the campus), are requested to inform the coordinator well in advance. Each accompanying person is required to pay Rs.300 to meet the expenses of lunches and coffee breaks. Interested participants are requested to confirm their participation on or before **November 30, 2009**.

For further details, please contact:

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About the Centre

The Centre for Populations Studies, established in 2001, is intended to enhance academic pursuits in socially relevant and scientifically interested fields with particular interest in emerging new technologies. The centre conducts research studies in Demographics, Community Health and related social sciences and disseminates the research findings in a format useful for planners from the state of Kerala. The centre conducted two workshops one in July, 2006 and other in November 2007

About of the Department

The Department of Statistics was established in 1994 by bifurcating the erstwhile School of Mathematical Sciences into two Departments namely Department of Mathematics and Department of Statistics. The Department offers two post-graduate programmes namely, an M.Sc. degree course in Statistics and an M.Tech. degree course in Engineering Statistics. The Department is being identified by the UGC under the Special Assistance Programme (SAP), at DRS level in 2005. Further, this is a DST-FIST sponsored Department. The Department has organized several conferences at the national and international level.