IMS Public Lecture

Unraveling genes: the role of mathematics and statistics

Speaker: Professor Warren Ewens
University of Pennsylvania

Date: Wednesday, 20 March 2002

Time: 6.00 - 7.00 p.m.

Venue: LT 31 (Faculty of Science Auditorium)
Blk S16, Level 3, 3 Science Drive 2
National University of Singapore
Singapore 117 543

Warren Ewens

The speaker is Professor of Biology at the University of Pennsylvania. He has written three books and published about 150 refereed journal papers in statistical and mathematical aspects of population genetics, computational biology and bioinformatics, and genomics. He received a gold medal in 1996 from the Australian Statistical Society for his scientific achievements. He is an elected Fellow of Australian Academy of Science and an elected Fellow of the Royal Society in UK.

ABSTRACT

Mathematics and statistics have been used since the early days of genetics to resolve problems that could not be handled by any non-quantitative approach. These problems are mainly concerned with evolutionary questions and the elucidation of the role of genes in genetic diseases.

With the drafting of the human genome in the year 2000, mathematics and statistics have an even greater role to play in modeling complex biological processes involving genes and proteins and in analyzing the huge amount of data and information amassed by the molecular biologists.
Through several examples, it will be shown how statistical problems arise from genetic questions and how solutions to these statistical problems help answer those genetic questions.

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