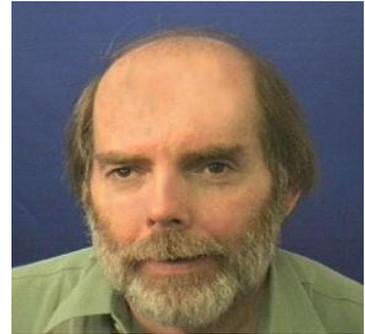




Fitting Mixtures of Skew Normal and Skew t- Distributions with Applications in Flow Cytometry

Professor Geoff McLachlan
University of Queensland, Australia



Date : 11 October 2012 (Thursday)
Time : 4.00pm – 5.00pm
Venue: MAS Executive Classroom 2, MAS-03-07
School of Physical and Mathematical Sciences

Flow cytometry is one of the fundamental research tools available to the life scientist. With modern-day machines now capable of providing measurements on at least 20 markers for a cell population, there is a need for an automated approach to the analysis of flow cytometric data. We consider here an automated approach based on mixture models using skew t-distributions. The latter components can handle clusters that are skewed and have outliers which is the case for flow cytometric data. The performance of this approach is demonstrated by its application to some real data sets.

Speaker Biography

Geoff McLachlan is Professor of Statistics in the Department of Mathematics at the University of Queensland. He has written numerous research articles and six monographs, the last five in the Wiley series in Probability and Statistics. His current research interests are in the related fields of cluster and discriminant analyses, machine learning, and pattern recognition, and in the field of statistical inference. The focus in the latter field has been on the theory and applications of finite mixture models and on estimation via the EM algorithm.

**Host: Assistant Professor Xiang Liming, Division of Mathematical Sciences,
School of Physical and Mathematical Sciences**