

Flexible Statistical Modelling

Overview

Data lie at the heart of scientific research, industrial processes, commercial enterprise and government policy and statistical models offer powerful tools to provide insight and reach decisions which are based on evidence. There are many situations in which the data we observe do not conform to simple linear forms and more flexible methods of modeling are required. The aim of this course is to introduce concepts and methods which allow the construction of flexible models in a variety of settings.

The topics covered in the course will include kernel approaches to density estimation and regression, spline and basis approaches, computational issues, an insight into theoretical properties, and generalized additive models. Other approaches such as Gaussian processes will also be mentioned. There will be a strong emphasis on real applications and on practical work, including case studies.

The course will assume that participants have some familiarity with linear models, generalised linear models, Taylor series expansions and matrix computations. Practical work will be in the R statistical computing environment so some familiarity with this would be helpful.

Modules	Flexible Statistical Modelling: October 10 - October 14 2016
You Should Attend If...	<ul style="list-style-type: none">▪ you are working in statistics and you wish to extend your knowledge of the tools available for flexible modelling.▪ you are working in a scientific or other application area where quantitative modeling is essential and you have some familiarity with standard statistical methods.▪ you are a student or faculty from an academic institution and you are interested in learning about the concepts and methods involved in modelling data in a flexible manner.
Fees	The participation fees for taking the course is as follows: Participants from academic institutions : Rs.2000/- Industry/ Research Organizations: Rs.5,000/-



Prof. Adrian Bowman is a Professor of Statistics in the University of Glasgow, where he is also currently Head of the School of Mathematics & Statistics. He has a strong and longstanding interest in flexible statistical modeling, with applications particularly in the environmental setting. He also carries out research in the statistical analysis of shape, applied mostly to the human face.



Prof. Ismail B is a Professor of Statistics in Mangalore University, where he is also currently Chairman of the Department of Post-Graduate Studies and Research in Statistics. His research interest is application of nonparametric regression methods for modeling discontinuous phenomena. Developed improved methods for estimation and testing change points in regression curves and surfaces with applications particularly in the financial time serie. He also carries out research in the statistical analysis of images using wavelets .