

Session B5

Teaching Statistics for Business and Econometrics Students

- Organisers:* Lucette Carter (Paris, France)
Eric Sowe (Sydney, Australia)
- Invited Speakers:* Gordon Fisher (Montreal, Canada)
J P Florens (Toulouse, France) and
Michel Mouchart (Louvain-la-Neuve, Belgium)
Eric Sowe (Sydney, Australia)
- Contributed Papers:* Robin Boyle (Melbourne, Australia) and
Peter Mortensen (Aarhus, Denmark)
Claude Bressand (Paris, France)
James Clayson (Paris, France)
Jane Horgan and Anthony Walsh (Dublin, Ireland)
John Iacono (Melbourne, Australia)
Maxwell King, Chandra Shah and Kees Jan van Garderen
(Melbourne, Australia)
Wing-Keung Wong and Teck-Wong Soon (Kent Ridge,
Singapore)
- Abstracts and Short Presentations:* Serguei Aivazian (Moscow, USSR)
Susanti Linuwih (Surabaya, Indonesia)
Douglas Lonnstrom (Loudonville, New York, USA)
and John Wilkinson (Troy, New York, USA)
Lynn McAlevey (Dunedin, New Zealand) and
Charles Sullivan (Wellington, New Zealand)
Karl-August Schäffer (Cologne, Germany)
- Panel Discussion:* Chair: Eric Sowe
Panel: Adrian Bowman, Robin Boyle, John Iacono,
Robin Lock, Gordon Smyth

Introduction

The papers published in this session offer a fund of ideas and practical experiences on improving the teaching of statistics in university faculties of economics and business. In the spirit of ICOTS, they represent a truly international contribution.

For the first time at ICOTS, this session also includes papers concerned with the teaching of econometrics.

The papers fall into two groups. The contributed papers are chiefly reports of teaching experiments in a variety of individual subjects. The invited papers take a broader view, each proposing an expository approach that will serve well when used consistently in teaching an entire course in statistics or econometrics.

The three invited papers have the following themes. Fisher makes a case for a coordinate-free approach, which can capitalise powerfully on the intuitive appeal of a geometric line of argument. Florens and Mouchart review some of the merits of a Bayesian approach to statistical inference applied to economic data. Sowe emphasises the value of teaching coherently, that is, by identifying relationships of every kind among the elements of the discipline and explaining the elements in a way that highlights the relationships.

Three principal themes emerge from the contributed papers. If a statistics subject for non-specialists in statistics is to be inviting, functional, and up-to-date, it must:

- (i) have a syllabus that ties in closely with the students' disciplinary major and/or personal experiences. This is stressed, in three different contexts, by Clayson, Iacono, and Wong and Soon.
- (ii) structure numerical problems and assignments around real-world data and focus on interpretation, not just analysis. The papers of Bressand, and Horgan and Walsh bring out this point.
- (iii) give students hands-on experience in computer analysis of data, using a statistical package that is easy to master and properly suited to the needs of the analyst. All the writers just mentioned concur in this. So do Boyle and Mortensen, who offer an interesting alternative perspective.

Authors of the contributed papers published here are mostly concerned with discipline-related aspects of teaching. King, Shah and van Garderen, by contrast, take up a more general point of classroom technique, namely how to enhance the contribution that tutors can make to the successful conduct of tutorials.

Seeing that the majority of papers submitted for presentation within this session made some mention of computing issues, the Session Organisers thought it would be appealing to open the subject more broadly to audience discussion. Accordingly, a symposium was arranged jointly with Session B3 on the theme "using the computer in an introductory statistics course at tertiary level". A summary of the discussion is published here. Audience involvement was such that the 90 minutes allocated to the symposium proved all too short!