# Session B2

# Teaching Probability and Statistics Through Modelling

*Organiser:* Marcel Neuts (Tucson, Arizona, USA)

*Invited Speakers:* Marcel Neuts (Tucson, Arizona, USA)
Charles Pearce (Adelaide, Australia)
Alan Rogerson (Melbourne, Australia)

*Short Presentations:* Makio Ishiguro (Tokyo, Japan)
Afonso Varzea Tavares (Lisbon, Portugal)

## Introduction

Session B2 was a lively, well-attended session during which communications were presented by Marcel F Neuts, Charles E M Pearce, and Alan Rogerson. All three speakers emphasised the role of modelling and problem-solving in undergraduate and early postgraduate education in probability. Neuts stressed the importance of a lively imagination in the education of probability and argued that this is essential in nurturing the skills needed both by the academic researcher and the industrial user of probability models. Pearce used a challenging combinatorial problem to illustrate the understanding and clarity of thinking that can be developed by the use of such problems in undergraduate courses. Rogerson described how many problems of a probabilistic or statistical nature arise in geophysical modelling. He stressed, among other points, the technical skills needed to make efficient use of the computer in the exploration of such models.

The three papers that follow elaborate on the ideas presented by the speakers who gave oral communications. Two additional short articles by Makio Ishiguro and Alfonso Varzea Tavares deal respectively with the use of data analytic methods, contemporary teaching aids and new approaches in statistics courses, and with the use of algorithmic methods to illustrate classical topics in undergraduate probability courses.