

utility theory under these results is still to be written, but perhaps this was not the intention of the authors.

In any case, this is a book that should not be missing from any personal or institutional library of those involved, theoretically or practically, with multicriteria decision analysis. So if you never had the opportunity to buy this book do so now. It is always worthwhile.

ALEXIS TSOUKIAS

**Practice of Petri Nets in Manufacturing**

F. DICESARE, G. HARHALAKIS, J. M. PROTH, M. SILVA and F. B. VERNADAT  
*Chapman and Hall, London, 1993. viii + 295 pp. £35.00*  
ISBN 0 412 41230 6

Petri nets, first developed in the early 1960s, have recently gained acceptance as a technique for modelling the dynamics of complex systems; finding application in the fields of computer science, information systems and manufacturing systems. Whilst the average operational researcher is likely to be unaware of Petri nets, the diagrammatic representations of Petri nets will probably look surprisingly familiar, having much similarity with Activity Cycle Diagrams (ACDs) used in building discrete event simulation models (whilst ACDs are a much used technique in the UK, they are, however, relatively unknown in the USA). There are, of course, significant differences, the most important of which is that, unlike ACDs, Petri nets have rigorous mathematical definitions.

The book consists of a sequence of chapters by a range of authors from Europe and the USA. Unlike many such multi-author books, the chapters fit together well and add up to a book that gives an excellent overview of Petri net modelling and its application to manufacturing systems. The initial chapter 'Introducing Petri nets' is, I believe, one of the best introductions to the subject, steering a very readable line between the rigorous and pragmatic. Following this, 'Principles of system modelling' shows how Petri nets can be used to build models of typical manufacturing systems; starting with simple systems and showing how various features such as materials handling, production control and tool maintenance can be represented. Many readers could find this directly relevant to their simulation modelling via the translation from Petri nets to ACDs.

The rest of the chapters are somewhat more specialized, but they are equally well written (if rather technical) and demonstrate the potential of Petri nets as a rigorous modelling approach.

Whilst the book is certainly likely to be of use to academics working in discrete event simulation, it may also be of interest to those practising the art of simulation who would like, out of curiosity, to find out a little about this rather more formal approach to discrete event modelling.

SIMON PECK

**Statistical Techniques in Business and Economics (8th Edition)**

ROBERT D. MASON and DOUGLAS A. LIND  
*Irwin, Homewood, Illinois, 1993. xxiv + 872 pp. £24.95*  
ISBN 0 256 10811 0

This is the 8th edition of a long established text on basic statistics for business and economics, which was originally written by Mason alone, and first published in 1967. Indeed, I still have a copy of the first edition on my bookshelf, although it is a long time since it was used in anger! The latest edition bears little resemblance to the first edition in presentation, although the list of contents seems to have changed relatively little over the years. Some of the original chapters have been sub-divided, amalgamated or re-ordered, but on a superficial comparison, the 8th edition seems to cover almost exactly the same subject matter as the 1st edition. I have not re-read in detail any of the material in the 1st edition, but it is somewhat surprising that the topics covered have changed so little in structure and content over almost 30 years.