L. GORNEY
Queueing Theory: A Problem Solving Approach
Petrocelii, New York and Princeton, distributed by Van Nostrand Reinhold, 1982. 184 pp. £17.00.

This book is a disgrace. It is far worse than any textbook that I have ever seen.

We learn on page 142 that if customers arrive exactly 10 minutes apart and it takes exactly 5 minutes to serve each of them then there is a 50% chance of a customer having to join a queue. This is nonsense. If, instead, the customers were to arrive according to a Poisson process at a rate of one every 10 minutes (in which case they will sometimes arrive at intervals of less than 5 minutes) then we learn on page 136 that there is never any waiting in a queue. These are not isolated examples. I have noted hundreds of others.

RODNEY COLEMAN
London

K. L. CLARK AND S. A. TARNLUND (EDITORS)
Logic Programming
Academic Press, London, 1982. 366 pp. £16.80.

This book is a collection of papers in the field of Logic Programming, most of them taken from the proceedings of an International Workshop held in 1980. It is not suitable as an introduction to the field, but contains much material of value to those with the background of, for example, Kowalski's book, 'Logic for Problem Solving', or Clocksin's and Mellish's 'Programming in Prolog'.

The papers are diverse in subject matter: some survey applications of Logic Programming; others deal with implementation techniques or with the mathematical theory. Some papers concentrate on the popular Prolog language, whilst others point the way to new languages which generalize Prolog by providing alternative search strategies, or by allowing concurrent execution of goals and clauses. This diversity is the source both of the book's strengths and of its weaknesses.

Among the strengths are some good survey papers, which will increase the appeal of the book to a wide audience. Bruynooghe's excellent paper on the run-time structures of Prolog implementations provides a useful overview for users of the language, who might be reluctant to tackle a lengthier and more specialized treatment. The paper of Santare-Toth and Szeredi on 'Prolog Applications in Hungary' gives an impressive catalogue of advanced projects, and the papers on other logic programming languages, including IC-PROLOG, LOGLISP and QLOG, provide a timely reminder that Prolog is not the last word.

The book, however, tends towards disjointedness: it is difficult to identify a pervasive theme, and the papers sometimes overlap, whilst at other times seeming to leave gaps uncovered. Although the editors have grouped the papers into sections, this grouping sometimes seems arbitrary. I would have liked to see a more extensive editorial introduction and summary for each section than the single paragraph at the start of the book. Another weakness is the inconsistency of notation among the papers: basic definitions are repeated with distracting regularity, and the terminology differs from one paper to the next.

The book is reproduced from camera-ready typescript, but this is well done, and the text is uniformly clear and legible. A comprehensive bibliography and index enhance the value of a useful collection of papers.

J. M. SPIVEY
Oxford

H. J. SCHNEIDER AND A. I. WASSERMAN
Automated Tools for Information Systems Design
North-Holland, Amsterdam, 1982. 259 pp. $39.50.

This collection of papers resulting from the work of IFIP Technical Committee TC 8.1, represents a worthwhile contribution to the emerging techniques for analysis, specification and evaluation of information systems.

The papers range over techniques for supporting structured analysis, tools for data analysis and design, as well as some useful contributions on application development systems.

For the researcher, the book represents a broad survey of current development approaches and contains a wealth of references to earlier work. For the practitioner it will provide a worthwhile introduction to the directions in which systems development methodology is going.

PETER HAINE
Coventry

J. L. ENCARNACAO, O. F. F. TORRES AND E. A. WARMAN (EDITORS)
CAD/CAM as a Basis for the Development of Technology in Developing Nations
North-Holland, Amsterdam, 1982. 437 pp. $76.50.

This book is the proceedings of the IFIP WG 5.2 Working Conference held in Sao Paulo, Brazil, 21–23 October, 1981. Part I consists of conference papers commencing with the Key Address on the Reality of Computer Aided Design by J. Vlietstra and followed by seven sessions on Principles and Techniques, Graphics Standards, CAD in Civil Engineering, CAD in Mechanical Engineering, CAD for Digital Systems Design, CAD/CAM Practice and Promotion, and CAD/CAM and Technology Transfer. Part II consists of Tutorials on Computer Graphics, Survey of CAD/CAM Training and Educational Aspects, CAD/CAM Systems, and Economic Aspects of CAD/CAM.

The book is well presented and has a great deal of information related to CAD and CAM of interest, both to the specialist in this field, and to those peripherally interested. Much of the material will be valuable for reference purposes to the CAD/CAM specialist, but there must be some question over the relevance of much of the material to the development of technology in developing nations.

The first 17 papers make virtually no reference to developing nations. In section 6, however, the developing nations theme is explored and indeed the risks of introducing high technology too quickly is appraised.

The final session on CAD/CAM and Technology Transfer is mainly concerned with the transfer of technology to companies rather than from nation to nation. The two papers emanate from France and Finland and therefore give valuable contrasting views of that problem.

Overall, the book creates an impression of excellent technical presentations on a wide range of subjects, but missing the fundamental theme of the conference. Part of the problem is that really only the newly industrialized nations amongst developing countries have as yet a significant place for CAD/CAM applications. Seven of the speakers come from Brazil (the host nation), one from Mexico, three from the United States and 17 from Europe. One would have hoped to have on this subject speakers from the less developed countries describing the problems that they are experiencing. Perhaps their absence indicates that the CAD/CAM is not a *basis* for the development of technology in developing nations, but is a consequence of that development arising for other reasons.

J. L. BOGOD
London

P. CALINGAERT
Operating System Elements—A User Perspective
Prentice-Hall, Englewood Cliffs, New Jersey, 1982. 240 pp. £17.95.

The author emphasizes resource management as the central function, and takes pains to distinguish management policies from the mechanisms used to implement them. The focus is on principles rather than on example systems, the approach is descriptive rather than analytic and practical rather than formal. This book is designed for third and fourth year undergraduates who wish to know what an operating system does rather than how to design one. Any other reader who knows something of hardware structure and is familiar with queues and stacks, and with reading ALGOL, will find this book helpful. Queueing theory is left entirely to the short description of books for further study that follows each chapter. These cover European and American sources up to 1980. Most chapters are followed by a set of exercises to stimulate deeper thought on the material. The book does not cover computer networks because communication subsystems need to be studied first. Their influence on control programs makes this essential.

The book is well produced and clearly laid out and is strongly recommended. Unfortunately its price will tend to discourage students from purchasing their own copy.

P. GILES
Stirling