**Digital signal processing**

W.D. Stanley, G.R. Dougherty and R. Dougherty

Reston, 1984, 514pp. £27.50

I like books with lots of worked examples as I usually refer to a text book if I have problems of my own and am looking for someone who has done the work before. I suspect that many university and college lecturers like books with unsolved problems for different reasons. We should both be well satisfied on that score.

Now for the material. In a world where, at low frequencies at least, digits and continuous-time systems are beginning to work hand in hand, we should both be well satisfied on that score. Perhaps wisely, the text confines itself to digital filtering and discrete Fourier transforms only and assumes that its readers have little or no mathematical background in discrete systems theory. The first author tackles the theory in the first two-thirds of the book. The remainder, in quite a different style, from that of the two other authors gives an interesting and easy to read, if rather superficial, review of a number of practical applications.

To summarise, the book gives a good indication of the variety of problems which may be attacked using modern digital processing components and techniques. It also provides enough of the theory of continuous time systems and discrete time systems to understand the design and operation of digital filters and FFT systems. On the other hand there is no mention of adaptive processing techniques which are becoming increasingly important, especially in telecommunications applications. Finally, anyone who is actively involved in designing digital filters would have to look elsewhere with such practical matters as system architecture, the choosing of A to D and arithmetic word lengths and predicting performance in such areas as signal to noise ratio.

DAVID DACK

**Insight into Management**

P.A. Lawrence and R.A. Lee

Oxford University Press, 1984, 200pp. £15

The introduction of 'management' training for engineering and science students has generated a need for suitable course material and texts. The authors of 'Insight into Management' have applied their own experience in industry to the preparation of a book which sets out to fill this need. To quote their own listed objectives in each chapter, their text is complete in itself but linked to texts on electronic engineering. Each chapter contains useful techniques in education, recording, calibration and analysis.

The flexibility of the technique is well exemplified in this second text of the series. Here, the author presents the principles of feedback circuits before passing on to operational amplifiers. It has also been written so that it is possible to follow the alternative strategy of introducing operational amplifiers first. A predominantly systems approach is adopted with sound and simply treated theory backed by practical insight. Teaching readable work, and I have no hesitation in commending it to you.

JOHN CLARKE

**Techniques of radar reflectivity measurement**

N.C. Currie

Artech, 1984, 480pp. £50

No practical radar group should be without a copy of this book. It fills a significant gap in the radar texts available and it has been a pleasure to review the work. Some nine specialists from the Georgia Institute of Technology along with three other authors have written this book under Currie's editorship. It is based on a lecture course at that institute. Following a sound presentation of basic definitions and concepts, there is a thorough treatment of data acquisition, recording, calibration and analysis. Subsequent chapters cover compact ranges, far-field ranges, scale models and ground truth measurements. Useful supplementary material on statistical properties of data and the organisation of test programmes has been included. The final, short, chapter is concerned with computer aids.

The fundamental importance of clutter reflectivity and target cross-section to radar performance is sufficient justification for this book. It is a practical text.

JOHN CLARKE