

- 4.1. SCHLESINGER, S. I., SASHKIN, L., and REED, K. C. (1968). Two Analyst-Oriented Computer Languages: EASL, POSE. *ISEAM*, pp. 91-96.
5. **APL**
- 5.0 HELLERMAN, H. (1967). *Digital Computer System Principles*. McGraw-Hill, Inc., New York, N.Y.
- 5.1 IVERSON, K. E. (1962). *A Programming Language*. John Wiley and Sons, Inc., New York, N.Y.
- 5.2 PAKIN, S. (1968). *APL/360 Reference Manual*. SRA, Inc., Chicago, Ill.
6. **MARI**
- 6.0 BRANIN JR., F. H., HALL, L. V., SUEZ, J., CARLITZ, R. M., and CHEN, T. C. (1965). An Interpretive Program for Matrix Arithmetic. *IBM Systems Journal*, Vol. 4, pp. 2-24.
7. **ASP**
- 7.0 KALMAN, R. E., and ENGLAR, T. S. (1965). *A User's Manual for the Automatic Synthesis Program*. Clearinghouse, U.S. Department of Commerce, Springfield, Va., NASA CR-475.
8. **BURLEY**
- 8.0 BURLEY, H. T. (1967). A Programming Language for Linear Algebra. *The Computer Journal*, Vol. 10, pp. 69-73.
9. **MM**
- 9.0 NEWBOLD, P. M., and AGRAWLA, A. K. (1967). *Two Conversational Languages for Control-Theoretical Computations in the Time-Sharing Mode*. Clearinghouse, U.S. Department of Commerce, Springfield, Va., AD 664221.
10. **MATLAN**
- 10.0 *System/360 Matrix Language (MATLAN) Application Description*. H20-0479-0, International Business Machines, DATA Processing Division, White Plains, N.Y.
11. **MATRIX**
- 11.0 *MATRIX, A Conversational Matrix Operations Package for the Burroughs B5500 Time-Sharing System*. Burroughs Corporation, Detroit, Michigan.
12. **LINEAL**
- 12.0 ULERY, DANA L. (1972). *LINEAL-A Language-Oriented System for Solving Problems in Linear Algebra*. M.S. Thesis, U. of Delaware.
- 12.1 ULERY, D. L., and KHALIL, H. M. *LINEAL—A Programming System for Linear Algebra*. Unpublished Report.

Book reviews

Software for Control, conference publication 102, 1973; 168 pages. (Institution of Electrical Engineers, £7.00)

This is an interesting and also perhaps slightly specialist topic for those interested in computers. However, process control remains one of the pioneering areas of computer application and one of undoubted industrial significance.

There are several excellent papers here emanating from industrially-based groups who have had a long experience of the use of computers for control purposes and have been prepared to contribute the benefit of their experience. These accounts are most valuable and reveal certainly that they have come to feel the way has not been entirely smoothed but that in the end the influence of this effort on their mode of operations has been quite considerable. They would probably now agree that taken overall the investigation was justified; presumably those who do not agree are keeping mum!

Unlike the more settled realms of scientific and commercial applications where languages of staid maturity such as FORTRAN and COBOL have existed for many years, this area of on-line control (or perhaps one should say instantaneous on-line control for sake of distinction) has never reached a steady state of affairs. Thus it is that this conference's publication is particularly timely and reveals that the time cannot be long removed when the current ferment of discussion and development in the field will need to give rise to some practical recommendations for a degree of standardisation. There is a clear indication among the papers of a school of thought which feels that CORAL 66 is the language to standardise upon; at least five papers make mention of it. A school of thought with more advanced ideas is discernible among advocates of RTL/2. Two of the papers are specifically concerned with this; one outlining some aspects of specification and the other dealing with application of the language.

Today with the plummeting cost of basic electronics the economic horizon for control applications of computing devices is descending rapidly and a much broader range of applications are now acceptable economically speaking. This must ensure an increasing audience for this interesting volume which while being quite valuable to those in the trade, must surely be rated as compulsory reading for those contemplating taking the plunge. For these people the message comes through clearly: that the way is long, but the rewards are worthy of consideration.

J. H. WESTCOTT (London)

A Guide to Teaching about Computers in Secondary Schools, by D. D. Spencer, 1973; 152 pages, (Abacus Computer Corporation, Ormond Beach, Florida, \$12.95)

My initial reaction to this book was that it would have to be extraordinary good to justify a price of \$12.95 for 152 pages. I also feared that it would be loose and woolly in the style of so many 'Ways of teaching about...' books. As a result of having read it from cover to cover I am more enthusiastic about it. The author has clearly spent many years in the classroom. His feet are firmly on the ground and whilst his ideas and philosophies derive from the American educational system, many of them are equally applicable over here. Indeed much of the content of the book would be useful to first and second year teachers whether or not they are teaching computing science. Of course, most of the resource material and journals mentioned by the author are American, but I know from personal experience that quite a lot of this is worth ordering from the States. It can be applied very usefully in this country.

The book is divided into three parts. Part 1 considers computer science in the secondary school curriculum. Alas, the author only allocates 36 pages to this section—many of his ideas justify an expansion in more detail. Part 2: Methods of teaching computer science contains much advice which is relevant to all teachers in its first four chapters. Alas, Part 3, on the School administrative uses of the computer, whilst listing some useful applications, is far too brief to be of practical value to the teacher who is involved in designing administrative systems using a computer.

To summarise then, this book really is expensive, but it does contain a lot of valuable information and advice for new teachers, it should certainly find a place in college and university libraries and I hope that many Heads of Departments in schools would consider that they were investing their money wisely to have one to thrust into the hands of the slightly nervous probationer teacher.

W. R. BRODERICK (Romford)