

30[Z].—EDWARD F. MOORE, Editor, *Sequential Machines: Selected Papers*, Addison-Wesley Publishing Co., Inc., Reading, Mass., 1964, v + 266 p., 22 cm. Price \$7.50.

This book provides an excellent selection of major papers in the area of sequential machine theory which have appeared in diverse publications. Intended as a reference for research or for a course in this area, the collection fills the need for such very well. The papers included are:

D. A. Huffman, "The synthesis of sequential switching circuits".

M. O. Rabin and Dana Scott, "Finite automata and their decision problems".

J. C. Shepherdson, "The reduction of two-way automata to one-way automata".

M. O. Rabin, "Probabilistic automata".

J. Hartmanis, "Loop-free structure of sequential machines".

D. A. Huffman, "Canonical forms for information-lossless finite-state logical machines".

R. McNaughton and H. Yamada, "Regular expressions and state graphs for automata".

Irving M. Copi, Calvin C. Elgot & Jesse B. Wright, "Realization of events by logical nets".

Arthur W. Burks & Jesse B. Wright, "Theory of logical nets".

Edward F. Moore, "The firing squad synchronization problem".

Yu. T. Medvedev, "On the class of events representable in a finite automaton".

A. K. Kutti, "On a graphical representation of the operating regime of circuits".

An extensive bibliography is included, with good intention. The computer listing format, however, renders it virtually unreadable. Publishing of such material in a book of otherwise high quality (and price) is unfortunate.

J. W. THATCHER

Thomas J. Watson Research Center
International Business Machines Corporation
Yorktown Heights, New York

31[Z].—LOUISE SCHULTZ, *Digital Processing: A System Orientation*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1963, xii + 403 p., 24 cm. Price \$8.95.

In her preface, the author states that this is intended as a text for a general introductory course on digital computers. Part 1 gives general background material on number systems and arithmetic, not very thoroughly and at a very elementary level. Part 2 is a rather sketchy ad hoc description of computing devices of miscellaneous types. After this, Part 3 is something of a surprise, discussing, as it does at varying length, vacuum tubes, transistors, diodes, tunnel diodes, and phase-locked oscillators, not to mention flip-flops, cores, NRZ magnetic recording, Williams tubes, and a variety of other kinds of hardware. There is also a chapter on logical design and two chapters on computer programming.

Since the level and the degree of detail vary widely in the presentation of these diverse topics, the use of this book as an introductory text is open to some question. Although the author disclaims it, it would appear that her book might better serve as an introductory reference to the hardware aspects of computers.

E. K. BLUM