

unately, the fairly high price of this book may well preclude the desirable, widespread distribution which it deserves.

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**26[Z].**—L. BOLLIET, N. GASTINEL & P. J. LAURENT, *Algol*, Hermann, Paris, 1964, 196 p., 23 cm. Paperbound. Price 36 Fr.

This is a tutorial discussion of the programming language ALGOL 60, of a type which was badly needed a year or two ago. In contrast to the formal style of the ALGOL 60 report [1], it presents both informal explanations of the various features of the language, and illustrations of the ways in which they may be applied. The discussion of the potentialities of the *for* statement is particularly illuminating. The informal description of the syntax is supplemented by extensive use of syntactic charts, both for individual syntactic elements, and for the entire language.

In addition, the volume contains appendices on: 1. Hardware representations; 2. Examples of Input-Out procedures; 3. Compilation processes; 4. The ALGOL 60 Report [1], as revised at the 1962 Rome meeting; 5. A chart of ALGOL basic symbols. In addition, it includes a listing of Algorithms published in Communications of the Association for Computing Machinery through August 1963, and a bibliography of 137 items on ALGOL 60 and its implementation.

Unfortunately, there are many typographical errors, some of which might confuse the novice. The printing of digits in bold face, while letters are in normal type is also distracting. The paper binding appears unusually flimsy for a volume which will have extensive use.

The present availability of a variety of tutorial presentations of ALGOL 60 in English will restrict the value of this work outside of French-speaking regions. This is particularly so because of the decision to transcribe the ALGOL basic symbols into French, so that the language is incompatible with most translators. It is of interest, however, for the information which it contains on French implementation of ALGOL, and the convenient reference material in the appendices.

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1. P. NAUR (Ed.), "Revised report on the algorithmic language ALGOL 60," *Comm. ACM*, v. 6, 1963, p. 1-17.

**27[Z].**—D. G. BURNETT-HALL, L. A. G. DRESEL & P. A. SAMET, *Computer Programming and Autocodes*, Van Nostrand Company, Inc., Princeton, New Jersey, 1964, viii + 106 p., 24 cm. Price \$4.50.

The preface states that "this book is intended to serve as an introduction to the programming of automatic computers." The first 24 pages present such an introduction, apparently assuming that this is the reader's first contact with a stored-program digital computer.

Part II, which makes up about 60 percent of this short volume, consists of three chapters, each of which describes a different autocode. The word "autocode" as used in England corresponds roughly to "compiler language" in the United States. The authors apparently consider an autocode to be machine-dependent, in contrast to a "universal computing language" like Algol, which is machine independent. The three autocodes discussed are for the Pegasus-Sirius, the Elliott 803, and the Ferranti Mercury. The machines themselves are not described here in any detail. They are all rather small machines, and are not of very great general interest. Unfortunately, the same is true of their autocodes. The Mercury autocode is treated at greatest length and in greatest detail. It is an interesting system, but its interest is now mostly historical, illustrating some of the early work of Brooker and his colleagues at Manchester. Most of the material in this book will be of interest only to the devoted specialist and perhaps to the historian in the field of computer languages.

A final section of the book presents a 14-page discussion of Algol. It is a good but very brief resumé of the language.

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**28[Z].**—IRVING ALLEN DODES, *IBM 1620 Programming for Science and Mathematics*, Haden Publishing Company, Inc., New York, 1963, ix + 276 p., 24 cm. Price \$9.95.

This is a very thorough and carefully written text on programming the IBM 1620. The author is chairman of the mathematics department of the Bronx High School of Science, where a course in numerical analysis has been given successfully to seniors. The course includes learning to program the 1620. This text is an outgrowth of a manual used in that course. The general style is obviously influenced by the high-school audience for which it was first intended, but this should not be construed to mean that the book is limited to such an audience. Rather, one could recommend it as a text for any audience unfamiliar with the programming of modern computers and wishing to learn something about this by using the 1620 as a specific machine.

There are four parts. Part 1 is a somewhat elementary treatment of number systems and numerical methods. Part 2 is an extensive discussion of 1620 machine programming. Part 3 describes the symbolic programming system (SPS), and part 4 treats Fortran with Format.

There are numerous exercises and illustrative examples. The material is well-organized and presented with great care.

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**29[Z].**—SEYMOUR GINSBURG, *An Introduction to Mathematical Machine Theory*, Addison-Wesley Publishing Co., Inc., Reading, Mass., 1962, ix + 148 p., 23 cm. Price \$8.75.