



## AN INTRODUCTION TO COMPUTING

*Title* Computers and Their Uses

*Author* William H. Desmonde

*Publisher* Prentice-Hall, Inc., 1964

*Pages* xi plus 285

*Price* \$10.00

*Contains index and numerous charts*

*Reviewer* Ward Sangren

This book is a pleasant and informative introduction to the computer field. The author has a style which is easy to read and comprehend. The numerous examples with pictures and graphs generally illustrate effectively the subjects under discussion. This is not a book for the computer specialist or someone who desires deeper knowledge of a particular aspect of computing. Rather, the well-attained objective of the book is to expose the uninitiated person to a general knowledge of computers and their use.

The first seven chapters are concerned mainly with describing machines and their associated components. Although the discussion would hardly satisfy a design engineer, the discussion does appear to answer the customary questions of intelligent novices. Included in the discussion are comments concerning the evolution of data processing, punched-card machines, information representation, machine logic, electronic circuits, machine arithmetic and the algebra of automata.

The next three chapters deal with the programming of computers. Again, although this is not a sufficient introduction for a future programmer, it does cover the elements and techniques of programming, including the use of tapes in an adequate manner for the layman.

Chapters 11, 12, 13 and 14 are concerned with the numerous and varied applications of computers. It has become difficult even to classify all the applications of computers, although the author has attempted with some success to mention the present major uses. Here, as elsewhere, the predominance of an IBM exposure and background is apparent.

The final two chapters deal with the theory of automata and intelligence in the cosmos. The comments dealing with entropy and living beings (or society) should cause even the social scientist considerable thought.

One of the desirable aspects of this book is that the chapters can be read independently and in almost any order. This book can be recommended to a broad audience of

both technical and non-technical people as an introduction to computing.

*Ward Sangren, a Vice President of Computer Applications, Inc., is, himself, the author of a book on computers: Digital Computers and Nuclear Reactor Calculations (Wiley, 1960). Prior to his present position he served as a mathematician with General Atomic, Curtiss-Wright, and Oak Ridge National Laboratory, and was an Assistant Professor of mathematics at Miami University. His Ph.D. (mathematics, 1950) and M.A. degrees were received from the University of Michigan and his A.B. degree from Princeton. Active in the ANS Mathematics and Computations Division since its founding, he was its chairman in 1964.*

## IN THE WORLD OF POLYMERS

*Title* The Nature and Chemistry of High Polymers

*Author* K. F. O'Driscoll

*Publisher* Reinhold Publishing Corp., 1964

*Pages* 123

*Price* \$1.95

*Reviewer* Donald J. Metz

The audience to which this book is directed—" . . . those chemists, student or graduate, who may be interested in polymers, but have not had formal training in the subject . . ." should benefit from this brief, concise and illuminating introduction to the subject. The author has succeeded in presenting the elements of the nature, preparation, properties and some uses of polymers in a readable and enjoyable fashion.

The selected readings given at the end of the book afford a reasonably good basic bibliography. I feel that several works are omitted that are just as important as some of those listed, but admit that this may be merely a reflection of personal prejudices. Since, however, the reader of this review will probably be interested in the effects of high-energy radiation on both the polymerization process and the physical properties of formed polymers in nuclear applications, I must point out that the reader of this book will have to search elsewhere for this type of information. The one reference to radiation modification of polymers by graft copolymerization in Chapter 2 deals specifically with a sensitized ultraviolet light reaction.

There are several technical points that can be raised. In his treatment of kinetics of polycondensation reactions in Chapter 1, the author gives a distribution curve in Figure 1-2, showing the expected distribution of molecular weight