

presented in 58 pages of tables.

The aim of the book is to present design information for engineers who have to deal e.g. with concrete-filled caissons which are only partially submerged. For this purpose, the material contained in the tables and the theory pertaining thereto are well presented.

Adrian E. Scheidegger, University of Illinois

An Introduction to Computer Programming, by Henry Mullish. Gordon and Breach, New York, 1966. x + 244 pages.

This book provides a detailed introduction to FORTRAN II programming presented through selected problems not requiring extensive mathematical knowledge. The choice of FORTRAN II as a programming language is difficult to appreciate since in most computer installations FORTRAN IV is now used and there are already available many books describing the latter language.

An appendix summarizing the FORTRAN language would have been most desirable for reference purposes.

W.D. Thorpe, McGill University

1965 Brandeis University Summer Institute in Theoretical Physics. M. Chretien, S. Deser, Editors. - Vol. I: Axiomatic Field Theory, xi + 516 pages, \$32.50. Vol. II: Particle Symmetries, xii + 691 pages, \$35.00. Gordon and Breach, Publ., New York, 1966.

These are lecture note volumes; however, this somewhat derogatory term should not be taken too seriously since the "notes" are in fact carefully prepared and highly polished. They contain material ranging from the phenomenology of the unstable particles of modern high energy physics, the mesons in particular, to axiomatic field theory. Much of the application of mathematics to modern physics may be divided into two broad fields both of which are well represented and discussed here with extensive references to the literature. One field is concerned with constructing theories of particles in accordance with observed symmetries. This is a program with a long tradition, exemplified by the characterization of atomic states according to the irreducible representations of a symmetry group, $O(3)$. Volume I, along with parts of Volume II, is largely devoted to recent attempts to perceive and make use of more subtle symmetries of nature which may lead to a useful classification of elementary particles according to the irreducible representations of some group, perhaps $SU(6)$. The other main thrust of mathematics in modern physics is in the direction of discovering the analyticity properties of the Green's functions, essentially, which describe scattering processes. This aspect is investigated in great depth, particularly in the axiomatic field theory lectures of Volume II. These are two most