is the result of extensive analyses carried out by the authors and others. Devoted, as it is, primarily to special-purpose network analyzers, its audience is a somewhat limited one. Nonetheless, the authors are to be commended for their contributions to a complex subject, and for their constant attention to the theoretical as well as to the practical aspects of their analogues.

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45[P, Z].—HELLMUT GOLDE, *Fortran* II *and* IV *for Engineers and Scientists*, The Macmillan Company, New York, 1966, xvi + 224 pp., 28 cm. Price $4.50.

"Primarily a text for beginning students in engineering and science on the college level," this book represents, with a few exceptions, a complete treatment of the subject matter in a clear and lucid style. After the usual introductory material, the elements of the FORTRAN language are presented in Chapters 3–9. The dialect is that of level one of the proposed American Standard for FORTRAN. The FORTRAN IV extension is discussed in Chapter 10. A presentation of the elements of the language is motivated by means of one or more coding problem(s) in each chapter. Examples of correct and incorrect coding are given throughout the text. Basic numerical problems associated with fixed precision floating point quantities and the necessary programming to avoid these difficulties are also discussed. Complete statistics are available concerned with the characteristics of the compilers for various computers (appendices A and B).

Although the overall treatment of the subject matter is good, there are a few weaknesses. Scanty material is presented on the generation and review of binary information stored peripherally, an important aspect of many large scientific problems. A discussion of the computed GØ TØ statement and EQUIVALENCE statement is left for the concluding Chapter 11. Thus, the frequent use of these statements, which occurs in everyday situations, is not reflected in the coding problems of the text. A glossary of terms is not included.

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46[S].—B. L. MOISEIWITSCH, *Variational Principles*, John Wiley & Sons, New York, 1966, x + 310 pp., 24 cm. Price $14.00.

Variational principles have long played two major roles in mathematical physics; one as great unifying principles through which the different equations can be expressed in elegantly simple form, and the other as remarkably useful computational tools for the accurate determination of discrete eigenvalues such as the vibration frequencies of classical systems and the bound state energies of quantum mechanical systems. In the latter role, variational principles represent a small triumph of man over nature. The fractional error in the quantity to be determined, the "output," is proportional to the square of the fractional error in the "input" information,