

cussion of "singularity functions" (the δ -function and its derivatives) is given and the Poisson sum formula is derived. The last chapter of the first part treats numerical techniques and the uncertainty principle which states a relationship between a function and its Fourier transform. The second part of the book treats linear systems, low-pass and bandpass filters and spectrum analyzers. The third part shows the connection between the Laplace and Fourier transforms and discusses Hilbert and Wiener-Lee transforms. The last part treats positive functions and limit theorems, generalized harmonic analysis, correlation, and power spectra. Each part is followed by a collection of about twelve problems, to many of which the solutions are given. The first appendix treats the δ -function as a distribution function, and the second gives a summary account of the theory of analytic functions, ending with an account of the saddle-point method.

The book contains a great amount of useful information and is written in a readable, lively manner. The level of mathematical sophistication is lower than we like to see, the order of integration in a repeated infinite integral, for example, being cheerfully inverted without any mention of the restrictions this places upon the integrand. Doubtless the author feels that these matters properly belong to a parallel class in advanced calculus. If students of the book cover these finer points in such a class, or by private study, they should find the book very informing and rewarding.

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56[T, Z].—DONALD N. HANSON, JOHN H. DUFFIN, & GRAHAM F. SOMERVILLE, *Computation of Multistage Separation Processes*, Rheinhold Publishing Corp., New York, 1962, viii + 361 p., 22 cm. Price \$8.75.

In this book the authors present a discussion of the mathematics of multistage separation processes with application to vapor-liquid systems and liquid-liquid extraction. A large part of the book is devoted to a series of computer programs (written in Fortran) to solve a wide range of separation problems, including multiple-feed and multiple-product processes in distillation, absorption, stripping, and extraction. The authors state that the programs have been extensively checked in typical chemical engineering problems.

The general presentation of the mathematical background material seems to be very concise and clear. The description of the various computer programs is very good, although an acquaintance with Fortran would be very desirable for anyone actually planning to use the routines. It should be noted that most of the programs would have to be somewhat modified to run under the monitor systems used in most IBM-7090 computer installations. The changes necessary would be mostly in the read-write statements and in the avoidance of the use of sense switches.

In general, the book should prove to be a valuable contribution to the literature of separation processes, both as a textbook for an advanced course and as part of the working library of engineers concerned with problems in this area.

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