subjects, conditional expectations and Markovian kernels, and martingales. The last chapter is concerned with the elements of stochastic processes: the construction of the distribution of a process in some space of sample functions, the case of continuous sample functions, the definition of Markov processes and processes with independent increments, the Brownian motion and the Poisson process.

The book is extremely clearly and elegantly written, but sometimes slightly condensed. It seems to be very well suited for anyone with some experience in modern mathematics wishing to learn about either measure or probability theory.

K. Krickeberg

Functions of a complex variable (Constructive theory), by V.I. Smirnov and N.A. Lebedev. Iliffe Books Ltd., London. ix + 488 pages. U.K. 95 s. (net).

This book is an English translation of the Russian original Konstructivnaya Teoria Komplexnovo Premennovo, and is a welcome addition to the literature. Although there are many books in English on complex function theory, there are very few books in English known to the reviewer with similar subject matter. In particular we mention Walsh's book, Interpolation and Approximation by Rational Functions in the Complex Domain, [Colloq. Publ. A.M.S. Vol. 20, 2nd Edition, 1956].

The present work is divided into five chapters. Chapter I deals with the problem of uniform approximation of functions by polynomials and rational functions with special emphasis on those which interpolate a given function at certain suitable points. The Fekete points and Chebyshev points are introduced naturally at the proper place. It is refreshing to see a proof of Fejer's oft-quoted theorem that if f is regular and analytic in $|z| < 1$, continuous in $|z| \leq 1$, then the sequence of Lagrange interpolation polynomials on equidistant abscissae on $|z| = 1$ diverges at $z = 1$. The chapter closes with the proofs of well-known theorems of Mergelyan and Vitushkin. A brief mention of the names of American mathematicians Bishop, Vermer and Rudin, is also made.

Chapter II is devoted to the study of Faber polynomials and to the problem of representing a given function regular in a closed set B of the z-plane whose complement is a simply-connected domain. Chapter III treats mean square approximation on a domain and is devoted to a study of analytic functions which are orthogonal with respect to a domain. In Chapter IV the authors deal with functions which are orthogonal with respect to the boundary of a bounded simply connected domain, the boundary itself being a rectifiable Jordan curve.

The last chapter is concerned with problems of best uniform approximation and contains several interesting results which are generally spread out in Soviet journals.

Each chapter closes with a short note on "Supplemental Literature". In the list of references the titles of books and papers are translated into English leading the reader to believe that the books or papers were in English. Wherever such books or papers are available in English, a little effort on the part of the publishers to find this and to include this information in the references would have increased the value of the book. Thus Natanson's Constructive Theory of Functions has been included in the references, but its English translation is not mentioned. Also a reference of the A.M.S. translations of several results could be more helpful.

On the whole, the book is very readable and the printing is pleasant and

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free from obvious misprints. It should prove valuable to all workers in the field.

A. Sharma, University of Alberta

A second course in complex analysis, by William A. Veech. W.A. Benjamin, Inc. 1967. ix + 246 pages. U.S. $8.75.

This is, as the title indicates, a text designed for students who have had at least a semester of elementary complex function theory; in addition, the author presupposes in the reader a fair knowledge of point set topology. The book begins with a treatment of the logarithmic function and analytic continuation is studied in some detail. Chapter two deals with geometric principles, including linear fractional transformations, Schwarz's Lemma and symmetry. Chapter three concerns conformal mapping, presenting among other things, the Riemann Mapping Theorem without using normal families and the theorem of Fejér on radial limits of analytic functions on the unit disc. In Chapter four a brief treatment of the modular function leads to the Lindelöf approach to the Picard Theorems; Koebe's Distortion Theorem and the existence of Bloch's constant also result. The last two chapters are largely independent of the foregoing ones, the one dealing with representation of entire functions as products and the final one with the Wiener-Ikehara proof of the Prime Number Theorem.

The emphasis during the first four chapters is topological, leaning heavily on the notions of covering map and covering space. As a result there is little hard-core analysis except in the last two chapters. The treatment is always thoughtful and thorough; occasionally one feels that there is too much painstaking detail. In general, however, this is the book's only limitation aside from the restricted choice of subject matter, which is, of course, unavoidable in a text of this nature.

W.J. Harvey, Columbia University

Theory of functions of a complex variable, Vol. III, by A.I. Markushevich. Translated from the Russian by R.A. Silverman. Prentice-Hall, London, 1967. xi + 360 pages. 5.4 s.

This is the final volume of a series of books by Professor Markushevich based on courses given at Moscow University. The first two volumes provide a careful grounding in the elementary theory of analytic and meromorphic functions in the plane; the present one extends into the orthodox advanced fields of complex analysis.

The approach is thorough and modern. The Riemann Mapping Theorem for plane domains is proved using Koebe's method. A study of prime ends introduces the section on boundary behavior of conformal mappings of Jordan domains, which leads into the theory of approximation by the methods of Runge and others. Elliptic functions are treated in some detail with both the Weierstrass and the Jacobi approach included. An abstract definition of Riemann surface is then given, and the concept of interior mapping is used to introduce the concrete Riemann surfaces of meromorphic functions from Stöilow's topological viewpoint. An examination of analytic continuation facilitates the construction of the Riemann surface of an algebraic function, done here in rare detail. Finally, the Schwartz reflection principle is used to construct the modular function, thus leading to the two Picard Theorems.

The style of writing is easy to read, and the printing and presentation of the