else (neither in Dynkin's treatise, nor in my own Lecture Notes volume). Thus every mathematician interested in time continuous Markov processes should know this book.

P. A. MEYER

Algebraic topology by Edwin H. Spanier. McGraw Series in Higher Mathematics, McGraw-Hill, New York, 1966. xiv+528 pp. $15.00.

This book is designed to be a text for a year or longer graduate course in algebraic topology. It also is a reference work for the subject. Like most books that serve both of these purposes, this one has its good and bad properties. Before stating some of the good properties, let me remark that overall I feel the book is an excellent one and the best book on the subject to date. One of the best features of this book over others is the excellent choice of topics covered. All of them are important topics which should be known by those students who wish to work in algebraic topology or to use algebraic topology in other fields. The organization is excellent and well thought-out; it is not a collection of individual topics as some books are. Furthermore, the notation is good and conforms to current usage. The fine set of exercises also helps the organization of the book as some of them lead the reader into material to be covered later.

Some of the disadvantages of using this book as a text stem from its reference work attributes. For example, in some places the topics are covered too thoroughly and this means the reader can become bogged down in some theorems of only technical interest. It also means that the chapter on homology, the most basic concept of algebraic topology, does not begin until p. 154. To counteract the abundance of material and to make sure which are the most important theorems, the reader is advised to read carefully the first paragraph of each section which is a guide to the important results. Another problem is that the book is quite difficult for many students to read, especially on their own. Its use should be accompanied by lectures which have lots of examples and which point out which results proven in the book can be skipped. Another somewhat negative observation is that the book basically only contains ideas that were developed before the mid 1950's. However, a reader who has mastered this book is in a good position to tackle later developments such as K-theory and applications of algebraic topology to differential topology. If the reader is interested in a book which avoids the abundance of material and which is easier to read on one's own, he should try to obtain the lecture notes for 2 courses the author gave at the University of Chicago in 1955 from which this book developed.

The chaper headings, which are self-explanatory, are: (1) Homotopy and the fundamental group; (2) Covering spaces and fibrations; (3) Polyhedra; (4) Homology; (5) Products; (6) General cohomology theory and duality; (7) Homotopy theory; (8) Obstruction theory; and (9) Spectral sequences and homotopy groups of spheres.

As a reviewer, I surely do not wish to suggest that editors be allowed to change or reject invited reviews. However, the review of this book which appeared in Mathematical Reviews was so unfair that the editors of that journal should have published a second review. A reform which might help would be for editors not to invite reviews from persons who have written a book which competes or pretends to compete with the book under review.

F. P. PETERSON

Value distribution theory by Leo Sario and Kiyoshi Noshiro. Van Nostrand, Princeton, N. J., 1966. xi+256 pp. $7.50.

This book is directed to the study of regular mappings from a Riemann surface R into a Riemann surface S, particularly to the distribution of values of such mappings. Naturally, except for the simplest cases, R will be open, S may be closed or open. A priori, distribution of values might be construed in many ways but in analogy to the classical Nevanlinna pattern, where R is the plane, S the Riemann sphere, it has here the following context: R is to be exhausted by a family of finite Riemann surfaces with smooth boundaries, on S there is assigned a function to measure proximity of pairs of points and a related measure of area; the primary result is that for each value on S the sum of terms representing the frequency with which this value is taken in an exhausting surface and the proximity of the values on its boundary to this value is equal to the integrated value of areas covered by the Riemann covering image over S. This is followed by a main theorem which represents an analogue of Nevanlinna's Second Fundamental Theorem.

The first two chapters are devoted to the explicit implementation of this program in the respective cases where S is closed or open. The exhaustion of R is obtained by starting with a parametric disc R_0 with boundary β_0, taking a finite Riemann subsurface Ω of R with smooth boundary $\beta_0 \cup \beta_\Omega$ not containing R_0 and taking the harmonic function u on Ω with boundary values 0 on β_0, $k(\Omega)$ on β_Ω such that $\int_{\beta_0} du^* = 1$. Further β_h denotes the level line $u = h$, Ω_h the subset of Ω on which $0 < u < h(\leq k(\Omega))$ and $R_h = \overline{R}_0 \cup \Omega_h$. The construction of the proximity function on S begins with the choice of points ζ_0, ζ_1 there together with corresponding fixed local uniformizing parameters.