tion by polynomials. An example is the following theorem. Let $\sigma(t)$ be a nondecreasing function, $\sigma'(t)$ the derivative of its absolutely continuous part. Let $L^p(d\sigma)$ $(p\geqq 1)$ be the space of functions $f(t)$ $(0\leqq t<2\pi)$ with $\|f\|^p=\int_0^{2\pi}|f(t)|^p d\sigma(t)$. The set $\{1, e^{it}, e^{2it}, \cdots\}$ is total in $L^p(d\sigma)$ if and only if $\int_0^{2\pi}|\log \sigma'(t)|dt=\infty$.

The book is handsomely printed, but the list of typographical errors at the end is far from complete. In particular, the reader should be encouraged to read p. 233 before p. 232.

W. H. J. Fuchs

Brief Mention

Equazioni differenziali. By F. G. Tricomi. 2d ed. Torino, Einaudi, 1953. 353 pp. 4000 lire.

The revised edition of this book follows very closely the pattern of the first edition, which was reviewed in this Bulletin vol. 56 (1950) pp. 195–196. The most important cases of inclusion of new material are: (i) Chapter II has been augmented by an introduction to the subject of relaxation oscillations; (ii) Chapter IV has been revised considerably, to provide a more comprehensive treatment of the asymptotic character of solutions of differential equations of the form $y''+Q(x)y=0$.

Details of discussion have been altered in various instances, notably in Chapter IV in the treatment of the polynomials of Laguerre and Legendre. Material on the "method of Fubini" that formed an Appendix in the initial edition has been incorporated in Chapter IV; also, a number of new references have been added to the bibliography.

In this new edition the author has produced a commendable improvement of the highly interesting and valuable first edition.

W. T. Reid

Linear operators. Spectral theory and some other applications. By R. G. Cooke. London, Macmillan, 1953. 12+454 pp. $10.00.

This book contains an introductory chapter, and then a chapter on quantum mechanics. These are followed by a long section (three chapters) devoted to various proofs of the spectral theorem. For a textbook treatment of this, the reviewer prefers the snappy handling in [1]. A sixth chapter is concerned with "projective convergence and limit in matrix spaces and rings." Chapter 7, the final chapter, is a self-contained exposition of the elements of the theory of Banach algebras. The theory of Banach algebras without unit element is included (i.e. the theory involving adjunction of a unit element, with ideals defined in the larger ring). Applications are given, e.g. Wiener's theorem: If t is a real variable, the necessary and sufficient condition that the reciprocal of an absolutely convergent trigonometric series $\sum_{-\infty}^{\infty} a_n e^{int}$ should be expressible as an absolutely convergent trigonometric series is that $\sum$ never be 0. Representation theory for positive linear functionals also appears, and the chapter is on the whole a good exposition, and a good outline of the subject for the non-specialist.

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The German edition was reviewed in this Bulletin vol. 57 (1951) p. 190.

Contributions to the solution of systems of linear equations and the determination of eigenvalues. Ed. by O. Taussky. (National Bureau of Standards Applied Mathematics Series, vol. 39.) Washington, Government Printing Office, 1954. 4+139 pp. $2.00.

This volume contains 7 papers forming a sequel to vol. 29 of this series (this Bulletin vol. 60, p. 414).

Les fonctions de Bessel et leurs applications en physique. By G. Goudet. 2d ed. Paris, Masson, 1954. 4+90 pp. 600 fr.

The first edition appeared in 1943. This little book is a volume in the series Collection d'ouvrages de mathématiques à l'usage des physiciens.

Selected papers in statistics and probability. By A. Wald. Ed. for the Institute of Mathematical Statistics by T. W. Anderson and others. 10+702 pp. $8.00.

This volume collects almost all of Wald's work on statistics and probability except that which is covered by his books. It also contains a discussion of the papers and a bibliography.