

problems (enumeration and choice) as well as the requirements of mathematical statistics, including finite projective geometries, incidence matrices etc. It may be noted that the article has been completed before the publication of Riordan's recent book on Combinatorial Analysis. Hewitt's "Abstract Harmonic Analysis" (pp. 107-168, with a bibliography of about 300 references) aims at a description of the present state of such parts of the theory which are not extensively treated in Loomis' work; the algebra of integrable functions on a locally compact group; the algebra of Radon measures on a locally compact or a compact group; the spaces L_p ($p > 1$) on such groups, and a few sidelines. Finally R. Fortet "Recent Advances in Probability" (pp. 171-240, with a bibliography of 42 items) begins with a short chapter on Foundations (4 pp.). The titles of the following chapters are the following: sums of independent random variables; functionals of random functions; theorems of Kolmogorov - Smirnov; tests and estimations related to stochastic processes.

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Group Theory and its Application to the Quantum Mechanics of Atomic Spectra, by Eugene P. Wigner, translated from the German by J.J. Griffin, Academic Press, New York and London, 1959. 372 pages. \$8.80.

The greater part of this book is an English translation of Wigner's "Gruppentheorie und ihre Anwendung auf die Quantenmechanik der Atomspektren" published in 1931. Despite the advances made in quantum mechanics since the publication of that book, the subject matter is far from obsolete, and the translation will be welcomed by English-speaking mathematicians and physicists.

For mathematicians the book provides a lucid and rigorous account of the theory of representations of finite groups and of the three-dimensional orthogonal and unitary groups. This exposition alone will make the book a valuable addition to the library of a mathematician whether or not he is interested in quantum mechanics. For physicists concerned with the structure of the atom the book provides group-theoretic methods of establishing the rules of spectroscopy.

The English edition includes three chapters not in the original German. These deal with time inversion, coupling coefficients, and representation coefficients.

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