material are excellent. A major feature of the book is the wealth of good problems illustrating and expanding the subject matter. Two possible criticisms appear, however. The frequency with which the author quotes results from the previous volumes without giving details makes it a practical necessity to possess them too. Finally, a large number of footnotes permeate the book, causing irritating breaks in the continuity sometimes. The points made are often of great relevance and should, one feels, be incorporated into the main text. All in all, these are minor points hardly marring a book which is definitely to be recommended.

W. J. Harvey, Columbia University

Les fonctions de plusieurs variables complexes et leur application à la théorie quantique des champs, by V.S. Vladimirov. Translated from Russian by N. Lagowski. Dunod, Paris, 1967. xvii + 356 pages. 88 F.

This book should meet the long-felt need for a comprehensive text on the theory of several complex variables intended for the applied mathematician and the theoretical physicist interested in quantum theory. Material of this kind could be found until now only in lecture-notes form, e.g., A.S. Wightman, Analytic Functions of Several Complex Variables (in Relations de dispersion et particules élementaires, edited by C. de Witt and R. Omnes, Hermann, Paris).

The book by V.S. Vladimirov has many of the desirable features, common to Russian texts: it is well-organized, quite self-contained without being bulky, and written in a lucid manner, intended to attract rather than discourage the non-expert in the field. Its informal style, in which definitions, theorems and proofs of the theorems are an integral part of the text rather than separated under appropriate headings, is probably a good compromise for a text which is intended for the mathematician as well as the scientist.

The exposition starts with a survey of the basic concepts and results of the theory of integration, theory of distributions and the theory of analytic functions in several complex variables. In the following three chapters the author deals with the theory of subharmonic functions, pseudo-convex domains, holomorphy domains and envelopes, and various integral representations of analytic functions. The last chapter, which constitutes one-third of the book, deals with applications of the introduced mathematics to quantum field theory and dispersion relations in physics. Distributions are treated as limits of analytic functions. The frequently quoted "edge-of-the-wedge" Theorem and the Jost-Lehmann-Dyson integral representation are given special attention. The mathematically rigorous treatment of these subjects will be very welcome by quantum theoreticians who desire a good understanding of their subject.

E. Prugovecki, University of Toronto

Introduction à l'étude topologique des singularités de Landau, by F. Pham. Paris, Gauthier-Villars Editeur, 1967. 142 pages. 30 F.

The aim of this book is twofold: 1) to show how a certain problem occurring in Elementary Particle Physics can be put into a more general mathematical framework; 2) to introduce the reader to the necessary theory. The problem referred to is to study the singularities of analytic functions of several complex variables defined by integrals of certain differential forms. The forms are supposed to have singularities of polar type and are possibly "ramified" as are therefore the integrals of these forms. The study of these problems seems to have been started in Elementary Particle Physics by the well-known physicist L.D. Landau in 1959.

The author of this book shows that the appropriate mathematical theories to be used in this context are J. Leray's theory of residues, Thom's Isotopy Theorem and the Picard-Lefschetz formulae. This means a lot of algebraic topology, differentiable manifold theory, differential topology, homology of algebraic varieties, and of course, analysis. It is the author's intention to introduce even a "non-mathematical" reader to these theories and to show him their use. By "non-mathematical" reader, he obviously means a theoretical physicist. It is clear to anybody only slightly familiar with the mentioned theories, the author's aims cannot be achieved in a booklet of 140 pages. But the reviewer admits with admiration, that the author has nevertheless done an excellent job. After reading through this book, one certainly has got the "feeling" for the subject. The bibliography at the end makes possible a detailed study. The reviewer believes, therefore, that the book is a guide to exciting parts of modern mathematics useful for physicists and mathematicians at the same time.

Table of contents: I. Differentiable Manifolds. II. Homology and Cohomology on Manifolds. III. Leray's Theory of Residues. IV. Thom's Isotopy Theorem. V. Ramification along Landau Varieties. VI. Analyticity of Integrals depending on Parameters. VII. Ramification of an Integral with a Ramified Integrand. Notes. Sources. Bibliography.

E. Stamm, University of Toronto

Formalisme Lagrangien et Lois de Symétrie, par M. Gourdin. Gordon and Breach, Paris, 150 Fifth Avenue, New York, 1968. vii + 99 pages. Cloth: U.S. $10 (prepaid U.S. $8); paper: U.S. $6 (prepaid U.S. $4.80).

This is one of the monographs in the useful new series Cours et Documents de Mathématiques et de Physique, published simultaneously in French and English. It would be more correct to say that this is a series of lecture notes; hence the rather concise and collection-of-formulae aspect of the present book. But, as mentioned in the preface, the series is not meant to replace textbooks; rather its aim is to provide graduate students with scientific information in a rapid and fairly inexpensive way. In this spirit, the author has assembled here the relevant facts about Lagrangian formalism, canonical commutation laws Poincaré group, continuous transformations, parity, charge conjugation, time reflection and strong reflection. The appendix consists of relevant formulae on quantisation of free fields.

D.K. Sen, University of Toronto

Élasticité Linéaire, par L. Solomon, Masson et Cie., Paris, 1968. xix + 742 pages, 122 fig. 150 F.

In the history of Mathematics and Mechanics, certain books stand out from time to time as monuments of erudition and scholarship, compiling and presenting in a stylish and balanced manner existing knowledge on a certain topic and bringing the reader to the very frontier of learning. The great Cambridge treatises of the late 19th and early 20th Centuries, by Lamb, Love, Jeans, Whittaker and Watson, spring readily to mind. It is now 76 years since the first edition of Love's Mathematical Theory of Elasticity was published, and over 40 years since the fourth and last. It is no exaggeration to say that Élasticité Linéaire, by Monsieur L. Solomon, Maître de Conférences in the University of Bucharest, ranks with such illustrious predecessors and satisfies an urgent need of the present day.