as, principal-factor and related solutions, Minres solution, maximum likelihood solution, and multiple-group solution. Part 3 presents the derived solutions such as different solutions in common-factor space, oblique multiple-factor solution: orthogonal and oblique cases. Part 4 deals with factor measurements and Part 5 gives problems and exercises.

In this revised edition a chapter on Mires method and a section on the Direct Oblimin Method of transformation to oblique factors are added, a more consistent matrix notation is used and the bibliography is updated.

A basic knowledge of Linear Algebra is essential in understanding the material presented in this book. The basic materials are presented in a nutshell in the early chapters just to assist the reader to recall some results which are used later. The book is easily readable even for a beginner but too much explanation in popular language often makes a reader forget the topic when he finishes reading it. Chapter 6 is typical in this respect. The different methods discussed in the book are illustrated by interesting examples from different fields especially from Psychology. These include such examples as Burt's papers on the eight emotional traits and Gonsnell's discussion of eight political variables, and so on. For a mathematician it may be amusing to read about the factor analysis of emotional traits in one of these examples. "Since wonder and anger are indicative of an egocentric personality and tenderness is indicative of timidity, the factor characterizing these two opposing emotions may be called 'Egocentricity' (*E*). If it is desired to change the signs of all the coefficients, then the factor may be called 'Timidity'. In Burt's discussion fear and sorrow are classed with tenderness and in the present analysis each of these traits has a coefficient of -0.14. These values have some statistical significance and help substantiate the interpretation of the second factor."

"Primarily the work is an exposition and not a formal mathematical development." A mathematician may appreciate the book better if it is condensed to one-fifth of the present size. In the reviewer's opinion the book serves the purpose for which it is written, namely, "to serve as a reference treatise on factor analysis in the current stage of advancement of the subject."

A. M. Mathai,
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Generalized Integral Transformations. By A. H. Zemanian. Wiley, New York (1968). xvi+300 pp.

This book is a treatment of the theory of integral transformations of distributions, a theory to which the author and his students have made large contributions. The book includes a brief but thorough treatment of distribution theory. Chapter titles are: 1. Countably multinormed spaces, countable union spaces, and their

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duals; 2. Distributions and generalized functions; 3. The two-sided Laplace transformation; 4. The Mellin transformation; 5. The Hankel transformation; 8. The convolution transformation; 9. Transformations arising from orthogonal series.

The level of the book is that of the mature graduate student, though he would be greatly helped by some knowledge of the classical theory of integral transformations. While the book is primarily for mathematicians, almost all applied mathematicians could read it profitably, for there are many results for which they could find immediate use, and a number of illustrative applications are given.

P. G. ROONEY,
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Formes différentielles. BY HENRI CARTAN. Hermann, Paris (1967). 188 pp.

This book belongs to the series edited newly by Professors H. Cartan, J. Dieudonné and J. P. Serre for the purpose of providing upper undergraduates with somewhat modern mathematics. Chapter I is devoted to characterize the notion of differential form of degree r, and it is defined to be a morphism ω; $U \to \mathscr{A}_r(E, F)$ where U is an open subset of Banach space and F another Banach space. After inquiring the condition for an element ω of differential forms $\Omega_r^{(n)}(U, F)$ to be exact by means of exterior derivation, the classical Frobenius theorem is proved in a refined fashion. Chapter II can rather be regarded as being subsidiary to what follows in Chapter III. Curvilinear integral and variation calculus are formulated in terms of $\Omega_r^{(n)}(U, F)$, $2 \geq r \geq 1$. Chapter III reveals the role that differential forms play in differential geometry by limiting the objectives to those on surfaces in E^3. The canonical 1-forms ω_i associated to the moving frame field and the connection forms ω_{ij} are shown to agree with all the definition and properties of Ω's stated in Chapter I. The formula of Gauss curvature is derived from the structure equations that are composed with ω_i and ω_{ij} with respect to the orthonormal frames, and by using the Green theorem so-called Gauss–Bonnet formula is presented. The readers will then know that $\Omega_r^{(n)}(U, F)$ serves to connect differential geometry with homology.

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Foundations of Differential Geometry, II. BY S. KOBAYASHI AND K. NOMIZU. Interscience Publication, Wiley, New York (1969).

This book is a continuation of Volume I of the authors' "Foundation of Differential Geometry". The chapter numbers continue from Volume I and the same notations are preserved whenever it is possible. The topic opens with Chapter

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