conferences at the University of Michigan and is concerned with the use of finite difference methods to solve linear, singular and nonlinear partial differential equations. The approach is essentially that of a survey, with emphasis being placed on problems which arise in mathematical physics. The value of the book is enhanced considerably by the inclusion of an extensive bibliography.

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Function theoretic methods in partial differential equations, by Robert P. Gilbert, Academic Press, New York, 1969. 311 pages. U.S. $17.50.

Probably one of the most frustrating and irritating fates to befall a mathematician is to make a significant discovery and then have it attributed to someone else. This is the situation in which the author of the monograph under review finds himself and hopefully this book will serve to set the record straight. The discovery in question is the "envelope method" first obtained by the author in 1958 and since then often attributed mistakenly to either Landau, Bjorken, or Polkinghorne and Screaton. This method is a generalization of Hadamard's Multiplication of Singularities Theorem to functions of several complex variables and with the author playing a leading role in its development has had wide applications to both the analytic theory of partial differential equations and to basic problems arising in the theory of potential scattering.

The book is divided into five chapters. Chapter One is devoted to an introduction to the theory of several complex variables and in particular the derivation of the "envelope method". In Chapter Two integral operator techniques in conjunction with the "envelope method" are used to study the analytic properties of harmonic functions of $(p + 2)$ variables. This material is designed to bridge the gap between traditional treatises on partial differential equations and the function theoretic approach. Chapter Three is a clear presentation of the elegant integral operator method developed by Bergman and Vekua to investigate linear elliptic partial differential equations with analytic coefficients. Extensions of this approach are made to the study of nonlinear elliptic equations satisfying generalized Goursat data. Chapter Four is devoted to the study of certain classes of singular elliptic partial differential equations which are related to Weinstein's generalized axially symmetric potential equation. The use of the author's "envelope method" plays a central role here in obtaining theorems concerning the location of singularities and growth conditions for entire solutions. The final chapter is concerned with illustrating how function theoretic methods (and in particular the "envelope method") may be used to study the scattering problems which arise in quantum mechanics and quantum field theory.

The book is clearly written and well organized. It should become a standard in the field along with Bergman's Integral Operators in the Theory of Linear Partial Differential Equations [Springer, 1961] and Vekua's New Methods for Solving Elliptic Equations [Wiley, 1967].

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