

# Calculus One And Several Variables Complex Variables Differential Equations Supplement

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[A Friendly Approach to Complex Analysis](#) - Sara Maad Sasane 2013-12-24

The book constitutes a basic, concise, yet rigorous course in complex analysis, for students who have studied calculus in one and several variables, but have not previously been exposed to complex analysis. The textbook should be particularly useful and relevant for undergraduate students in joint programmes with mathematics, as well as engineering students. The aim of the book is to cover the bare bones of the subject with minimal prerequisites. The core content of the book is the three main pillars of complex analysis: the Cauchy Riemann equations, the Cauchy Integral Theorem, and Taylor and Laurent series expansions. Each section contains several problems, which are not purely drill exercises, but are rather meant to reinforce the fundamental concepts. Detailed solutions to all the exercises appear at the end of the book, making the book ideal also for self-study. There are many figures illustrating the text.

*Complex Variables* - Robert B. Ash 2007-01-01

This text on complex variables is geared toward graduate students and undergraduates who have taken an introductory course in real analysis. It is a substantially revised and updated edition of the popular text by Robert B. Ash, offering a concise treatment that provides careful and complete explanations as well as numerous problems and solutions. An introduction presents basic definitions, covering topology of the plane, analytic functions, real-differentiability and the Cauchy-Riemann equations, and exponential and harmonic functions. Succeeding chapters examine the elementary theory and the general Cauchy theorem and its applications, including singularities, residue theory, the open mapping theorem for analytic functions, linear fractional transformations, conformal mapping, and analytic mappings of one disk to another. The Riemann mapping theorem receives a thorough treatment, along with factorization of analytic functions. As an application of many of the ideas and results appearing in earlier chapters, the text ends with a proof of the prime number theorem.

**Calculus: One and Several Variables, 10th Edition** - Saturnino L. Salas 2006-11-10

Wiley is proud to publish a new revision of this successful classic text known for its elegant writing style, precision and perfect balance of theory and applications. The Tenth Edition is refined to offer students an even clearer understanding of calculus and insight into mathematics. It includes a wealth of rich problem sets which makes calculus relevant for students. Salas/Hille/Etgen is recognized for its mathematical integrity, accuracy, and clarity.

[Mathematical Analysis](#) - Mariano Giaquinta 2010-07-25

This superb and self-contained work is an introductory presentation of basic ideas, structures, and results of differential and integral calculus for functions of several variables. The wide range of topics covered include the differential calculus of several variables, including differential calculus of Banach spaces, the relevant results of Lebesgue integration theory, and systems and stability of ordinary differential equations. An appendix highlights important mathematicians and other scientists whose contributions have made a great impact on the development of theories in analysis. This text motivates the study of the analysis of several variables with examples, observations, exercises, and illustrations. It may be used in the classroom setting or for self-study by advanced undergraduate and graduate students and as a valuable reference for researchers in mathematics, physics, and engineering.

[An Introduction to Complex Analysis in Several Variables](#) - L. Hormander 1973-02-12

An Introduction to Complex Analysis in Several Variables

**Methods of the Theory of Functions of Many Complex Variables** - Vasilij Sergejevich Vladimirov 2007-01-01

This systematic exposition outlines the fundamentals of the theory of single sheeted domains of holomorphy. It further illustrates applications to quantum field theory, the theory of functions, and differential equations with constant coefficients. Students of quantum field theory will find this text of particular value. The text begins with an introduction that defines the basic concepts and elementary propositions, along with the more salient facts from the theory of functions of real variables and the theory of generalized functions. Subsequent chapters address the theory of plurisubharmonic functions and pseudoconvex domains, along with characteristics of domains of holomorphy. These explorations are further examined in terms of four types of domains: multiple-circular, tubular, semitubular, and Hartogs' domains. Surveys of integral representations focus on the Martinelli-Bochner, Bergman-Weil, and Bochner representations. The final chapter is devoted to applications, particularly those involved in field theory. It employs the theory of generalized functions, along with the theory of functions of several complex variables.

**Complex Variables** - Francis J. Flanigan 1983-01-01

Contents include calculus in the plane; harmonic functions in the plane; analytic functions and power series; singular points and Laurent series; and much more. Numerous problems and solutions. 1972 edition.

*Advanced Calculus of Several Variables* - C. H. Edwards 2014-05-10

Advanced Calculus of Several Variables provides a conceptual treatment of multivariable calculus. This book emphasizes the interplay of geometry, analysis through linear algebra, and approximation of nonlinear mappings by linear ones. The classical applications and computational methods that are responsible for much of the interest and importance of calculus are also considered. This text is organized into six chapters. Chapter I deals with linear algebra and geometry of Euclidean  $n$ -space  $R_n$ . The multivariable differential calculus is treated in Chapters II and III, while multivariable integral calculus is covered in Chapters IV and V. The last chapter is devoted to venerable problems of the calculus of variations. This publication is intended for students who have completed a standard introductory calculus sequence.

*Complex Variables and Analytic Functions: An Illustrated Introduction* - Bengt Fornberg 2019-12-23

At almost all academic institutions worldwide, complex variables and analytic functions are utilized in courses on applied mathematics, physics, engineering, and other related subjects. For most students, formulas alone do not provide a sufficient introduction to this widely taught material, yet illustrations of functions are sparse in current books on the topic. This is the first primary introductory textbook on complex variables and analytic functions to make extensive use of functional illustrations. Aiming to reach undergraduate students entering the world of complex variables and analytic functions, this book utilizes graphics to visually build on familiar cases and illustrate how these same functions extend beyond the real axis. It covers several important topics that are omitted in nearly all recent texts, including techniques for analytic continuation and discussions of elliptic functions and of Wiener-Hopf methods. It also presents current advances in research, highlighting the subject's active and fascinating frontier. The primary audience for this textbook is undergraduate students taking an introductory course on complex variables and analytic functions. It is also geared toward graduate students taking a second semester course on these topics, engineers and physicists who use complex variables in their work, and students and researchers at

any level who want a reference book on the subject.

**Notions of Convexity** - Lars Hörmander 2007-06-25

The first two chapters of this book are devoted to convexity in the classical sense, for functions of one and several real variables respectively. This gives a background for the study in the following chapters of related notions which occur in the theory of linear partial differential equations and complex analysis such as (pluri-)subharmonic functions, pseudoconvex sets, and sets which are convex for supports or singular supports with respect to a differential operator. In addition, the convexity conditions which are relevant for local or global existence of holomorphic differential equations are discussed.

**Complex Variables** - Joseph L. Taylor 2011

"The text covers a broad spectrum between basic and advanced complex variables on the one hand and between theoretical and applied or computational material on the other hand. With careful selection of the emphasis put on the various sections, examples, and exercises, the book can be used in a one- or two-semester course for undergraduate mathematics majors, a one-semester course for engineering or physics majors, or a one-semester course for first-year mathematics graduate students. It has been tested in all three settings at the University of Utah. The exposition is clear, concise, and lively. There is a clean and modern approach to Cauchy's theorems and Taylor series expansions, with rigorous proofs but no long and tedious arguments. This is followed by the rich harvest of easy consequences of the existence of power series expansions. Through the central portion of the text, there is a careful and extensive treatment of residue theory and its application to computation of integrals, conformal mapping and its applications to applied problems, analytic continuation, and the proofs of the Picard theorems. Chapter 8 covers material on infinite products and zeroes of entire functions. This leads to the final chapter which is devoted to the Riemann zeta function, the Riemann Hypothesis, and a proof of the Prime Number Theorem." -- Publisher.

**Functions of a Complex Variable** - Hemant Kumar Pathak 2015-10-14

Functions of a Complex Variable provides all the material for a course on the theory of functions of a complex variable at the senior undergraduate and beginning graduate level. Also suitable for self-study, the book covers every topic essential to training students in complex analysis. It also incorporates special topics to enhance students' understanding of the subject, laying the foundation for future studies in analysis, linear algebra, numerical analysis, geometry, number theory, physics, thermodynamics, or electrical engineering. After introducing the basic concepts of complex numbers and their geometrical representation, the text describes analytic functions, power series and elementary functions, the conformal representation of an analytic function, special transformations, and complex integration. It next discusses zeros of an analytic function, classification of singularities, and singularity at the point of infinity; residue theory, principle of argument, Rouché's theorem, and the location of zeros of complex polynomial equations; and calculus of residues, emphasizing the techniques of definite integrals by contour integration. The authors then explain uniform convergence of sequences and series involving Parseval, Schwarz, and Poisson formulas. They also present harmonic functions and mappings, inverse mappings, and univalent functions as well as analytic continuation.

**Complex Analysis** - Jerry R. Muir, Jr. 2015-05-04

A thorough introduction to the theory of complex functions emphasizing the beauty, power, and counterintuitive nature of the subject. Written with a reader-friendly approach, *Complex Analysis: A Modern First Course in Function Theory* features a self-contained, concise development of the fundamental principles of complex analysis. After laying groundwork on complex numbers and the calculus and geometric mapping properties of functions of a complex variable, the author uses power series as a unifying theme to define and study the many rich and occasionally surprising properties of analytic functions, including the Cauchy theory and residue theorem. The book concludes with a treatment of harmonic functions and an epilogue on the Riemann mapping theorem. Thoroughly classroom tested at multiple universities, *Complex Analysis: A Modern First Course in Function Theory* features: Plentiful exercises, both computational and theoretical, of varying levels of difficulty, including several that could be used for student projects. Numerous figures to illustrate geometric concepts and constructions used in proofs. Remarks at the conclusion of each section that place the main concepts in context, compare and contrast results with the calculus of real functions, and provide historical notes. Appendices on the basics of sets and

functions and a handful of useful results from advanced calculus. Appropriate for students majoring in pure or applied mathematics as well as physics or engineering, *Complex Analysis: A Modern First Course in Function Theory* is an ideal textbook for a one-semester course in complex analysis for those with a strong foundation in multivariable calculus. The logically complete book also serves as a key reference for mathematicians, physicists, and engineers and is an excellent source for anyone interested in independently learning or reviewing the beautiful subject of complex analysis.

**Complex Variables for Scientists and Engineers** - John D. Paliouras 2014-02-20

Outstanding undergraduate text provides a thorough understanding of fundamentals and creates the basis for higher-level courses. Numerous examples and extensive exercise sections of varying difficulty, plus answers to selected exercises. 1990 edition.

**A Basic Course in Complex Variables** - David C. Kay 2014-09-02

Complex variables are arbitrary complex numbers, and you need to know how they work if you want to learn an important area of mathematics. David C. Kay, a longtime college professor who has written several books geared for college students, explains what complex variables are and how to use them in this textbook written for those with a working knowledge of algebra and calculus. You'll review basic concepts from calculus and gradually discover more sophisticated ideas, such as differentiation and integration in complex variables, which are clearly explained with numerical examples. Other topics include infinite series of complex variables, uniform convergence, the Taylor and Laurent series, and methods for evaluating difficult integrals. Charts, tables, and drawings throughout the book make even tough concepts easy to understand, and problems have been carefully crafted to cover the main concepts while maintaining your interest. Whether you're an educator seeking to provide an additional resource for your students or a student seeking a self-help guide to understand complex variables, this basic course is a refreshing treatment that can be a stand-alone tutorial or companion guide to another textbook.

**A Collection of Problems on Complex Analysis** - Lev Izrailevich Volkovyski? 1991-01-01

Over 1500 problems on theory of functions of the complex variable; coverage of nearly every branch of classical function theory. Topics include conformal mappings, integrals and power series, Laurent series, parametric integrals, integrals of the Cauchy type, analytic continuation, Riemann surfaces, much more. Answers and solutions at end of text. Bibliographical references. 1965 edition.

**Elementary Theory of Analytic Functions of One Or Several Complex Variables** - Henri Cartan 1995-01-01

Basic treatment of the theory of analytic functions of a complex variable, touching on analytic functions of several real or complex variables as well as the existence theorem for solutions of differential systems where data is analytic. Also included is a theory of abstract complex manifolds of one complex dimension; holomorphic functions; Cauchy's integral, more. Exercises. 1973 edition.

**A Guide To Complex Variables** - Steven G. Krantz 2020-07-31

This is a book about complex variables that gives the reader a quick and accessible introduction to the key topics. While the coverage is not comprehensive, it certainly gives the reader a solid grounding in this fundamental area. There are many figures and examples to illustrate the principal ideas, and the exposition is lively and inviting. An undergraduate wanting to have a first look at this subject or a graduate student preparing for the qualifying exams, will find this book to be a useful resource.

**Several Complex Variables** - Raghavan Narasimhan 1971

Drawn from lectures given by Raghavan Narasimhan at the University of Geneva and the University of Chicago, this book presents the part of the theory of several complex variables pertaining to unramified domains over  $\mathbb{C}$ . Topics discussed are Hartogs' theory, domains in holomorphy, and automorphism of bounded domains.

**Several Complex Variables VII** - H. Grauert 1994-07-12

The first survey of its kind, written by internationally known, outstanding experts who developed substantial parts of the field. The book contains an introduction written by Remmert, describing the history of the subject, and is very useful to graduate students and researchers in complex analysis, algebraic geometry and differential geometry.

**Mathematical Analysis** - Mariano Giaquinta 2012-12-06

For more than two thousand years some familiarity with mathematics has been regarded as an indispensable part of the intellectual equipment of every cultured person. Today the traditional place of mathematics in education is in grave danger. Unfortunately, professional representatives of mathematics share in the responsibility. The teaching of mathematics has sometimes degenerated into empty drill in problem solving, which may develop formal ability but does not lead to real understanding or to greater intellectual independence. Mathematical research has shown a tendency toward overspecialization and over-emphasis on abstraction. Applications and connections with other fields have been neglected . . . But . . . understanding of mathematics cannot be transmitted by painless entertainment any more than education in music can be brought by the most brilliant journalism to those who never have listened intensively. Actual contact with the content of living mathematics is necessary. Nevertheless technicalities and detours should be avoided, and the presentation of mathematics should be just as free from emphasis on routine as from forbidding dogmatism which refuses to disclose motive or goal and which is an unfair obstacle to honest effort. (From the preface to the first edition of *What is Mathematics?* by Richard Courant and Herbert Robbins, 1941.)

[Introduction to Complex Analysis in Several Variables](#) - Volker Scheidemann 2005-12-27

This book provides a comprehensive introduction to complex analysis in several variables. One major focus of the book is extension phenomena alien to the one-dimensional theory (Hartog's Kugelsatz, theorem of Cartan-Thullen, Bochner's theorem). The book primarily aims at students starting to work in the field of complex analysis in several variables and teachers who want to prepare a university lecture. Therefore, the book contains more than 50 examples and more than 100 supporting exercises.

[Functions of Several Complex Variables and Their Singularities](#) - Wolfgang Ebeling 2007

The book provides an introduction to the theory of functions of several complex variables and their singularities, with special emphasis on topological aspects. The topics include Riemann surfaces, holomorphic functions of several variables, classification and deformation of singularities, fundamentals of differential topology, and the topology of singularities. The aim of the book is to guide the reader from the fundamentals to more advanced topics of recent research. All the necessary prerequisites are specified and carefully explained. The general theory is illustrated by various examples and applications.

**Complex Variables with Applications** - A. David Wunsch 2004

The third edition of this unique text remains accessible to students of engineering, physics and applied mathematics with varying mathematical backgrounds. Designed for a one or two-semester course in complex analysis, there is optional review material on elementary calculus. Complex Numbers; The Complex Function and its Derivative; The Basic Transcendental Functions; Integration in the Complex Plane; Infinite Series Involving a Complex Variable; Residues and Their Use in Integration; Laplace Transforms and Stability of Systems; Conformal Mapping and Some of Its Applications; Advanced Topics in Infinite Series and Products For all readers interested in complex variables with applications.

[An Introduction to Complex Analysis and Geometry](#) - John P. D'Angelo 2010

Provides the reader with a deep appreciation of complex analysis and how this subject fits into mathematics. The first four chapters provide an introduction to complex analysis with many elementary and unusual applications. Chapters 5 to 7 develop the Cauchy theory and include some striking applications to calculus. Chapter 8 glimpses several appealing topics, simultaneously unifying the book and opening the door to further study.

**Tasty Bits of Several Complex Variables** - Jiri Lebl 2016-05-05

This book is a polished version of my course notes for Math 6283, Several Complex Variables, given in Spring 2014 and Spring 2016 semester at Oklahoma State University. The course covers basics of holomorphic function theory, CR geometry, the  $\bar{\partial}$  problem, integral kernels and basic theory of complex analytic subvarieties. See <http://www.jirka.org/scv/> for more information.

**Several Complex Variables and the Geometry of Real Hypersurfaces** - John P. D'Angelo 1993-01-06

*Several Complex Variables and the Geometry of Real Hypersurfaces* covers a wide range of information from basic facts about holomorphic functions of several complex variables through deep results such as subelliptic estimates for the  $\bar{\partial}$ -Neumann problem on pseudoconvex domains with a real analytic boundary. The book focuses on describing the geometry of a real hypersurface in a complex vector space by

understanding its relationship with ambient complex analytic varieties. You will learn how to decide whether a real hypersurface contains complex varieties, how closely such varieties can contact the hypersurface, and why it's important. The book concludes with two sets of problems: routine problems and difficult problems (many of which are unsolved). Principal prerequisites for using this book include a thorough understanding of advanced calculus and standard knowledge of complex analysis in one variable. *Several Complex Variables and the Geometry of Real Hypersurfaces* will be a useful text for advanced graduate students and professionals working in complex analysis.

**Complex Analysis in one Variable** - NARASIMHAN 2012-12-06

This book is based on a first-year graduate course I gave three times at the University of Chicago. As it was addressed to graduate students who intended to specialize in mathematics, I tried to put the classical theory of functions of a complex variable in context, presenting proofs and points of view which relate the subject to other branches of mathematics. Complex analysis in one variable is ideally suited to this attempt. Of course, the branches of mathematics one chooses, and the connections one makes, must depend on personal taste and knowledge. My own leaning towards several complex variables will be apparent, especially in the notes at the end of the different chapters. The first three chapters deal largely with classical material which is available in the many books on the subject. I have tried to present this material as efficiently as I could, and, even here, to show the relationship with other branches of mathematics. Chapter 4 contains a proof of Picard's theorem; the method of proof I have chosen has far-reaching generalizations in several complex variables and in differential geometry. The next two chapters deal with the Runge approximation theorem and its many applications. The presentation here has been strongly influenced by work on several complex variables.

**Applied Complex Variables** - John W. Dettman 2012-05-07

Fundamentals of analytic function theory — plus lucid exposition of 5 important applications: potential theory, ordinary differential equations, Fourier transforms, Laplace transforms, and asymptotic expansions. Includes 66 figures.

*Function Theory of One Complex Variable* - Robert Everist Greene 2006

Complex analysis is one of the most central subjects in mathematics. It is compelling and rich in its own right, but it is also remarkably useful in a wide variety of other mathematical subjects, both pure and applied. This book is different from others in that it treats complex variables as a direct development from multivariable real calculus. As each new idea is introduced, it is related to the corresponding idea from real analysis and calculus. The text is rich with examples and exercises that illustrate this point. The authors have systematically separated the analysis from the topology, as can be seen in their proof of the Cauchy theorem. The book concludes with several chapters on special topics, including full treatments of special functions, the prime number theorem, and the Bergman kernel. The authors also treat  $H^p$  spaces and Painleve's theorem on smoothness to the boundary for conformal maps. This book is a text for a first-year graduate course in complex analysis. It is an engaging and modern introduction to the subject, reflecting the authors' expertise both as mathematicians and as expositors.

**Complex Variables** - Carlos A. Berenstein 2012-12-06

Textbooks, even excellent ones, are a reflection of their times. Form and content of books depend on what the students know already, what they are expected to learn, how the subject matter is regarded in relation to other divisions of mathematics, and even how fashionable the subject matter is. It is thus not surprising that we no longer use such masterpieces as Hurwitz and Courant's *Funktionentheorie* or Jordan's *Cours d'Analyse* in our courses. The last two decades have seen a significant change in the techniques used in the theory of functions of one complex variable. The important role played by the inhomogeneous Cauchy-Riemann equation in the current research has led to the reunification, at least in their spirit, of complex analysis in one and in several variables. We say reunification since we think that Weierstrass, Poincare, and others (in contrast to many of our students) did not consider them to be entirely separate subjects. Indeed, not only complex analysis in several variables, but also number theory, harmonic analysis, and other branches of mathematics, both pure and applied, have required a reconsideration of analytic continuation, ordinary differential equations in the complex domain, asymptotic analysis, iteration of holomorphic functions, and many other subjects from the classic theory of functions of one complex variable. This

ongoing reconsideration led us to think that a textbook incorporating some of these new perspectives and techniques had to be written.

*Function Theory of Several Complex Variables* - Steven George Krantz 2001

Emphasizing integral formulas, the geometric theory of pseudoconvexity, estimates, partial differential equations, approximation theory, inner functions, invariant metrics, and mapping theory, this title is intended for the student with a background in real and complex variable theory, harmonic analysis, and differential equations.

*Banach Algebras and Several Complex Variables* - John Wermer 2013-06-29

During the past twenty years many connections have been found between the theory of analytic functions of one or more complex variables and the study of commutative Banach algebras. On the one hand, function theory has been used to answer algebraic questions such as the question of the existence of idempotents in a Banach algebra. On the other hand, concepts arising from the study of Banach algebras such as the maximal ideal space, the Silov boundary, Gleason parts, etc. have led to new questions and to new methods of proof in function theory. Roughly one third of this book is concerned with developing some of the principal applications of function theory in several complex variables to Banach algebras. We presuppose no knowledge of several complex variables on the part of the reader but develop the necessary material from scratch. The remainder of the book deals with problems of uniform approximation on compact subsets of the space of  $n$  complex variables. For  $n > 1$  no complete theory exists but many important particular problems have been solved. Throughout, our aim has been to make the exposition elementary and self-contained. We have cheerfully sacrificed generality and completeness all along the way in order to make it easier to understand the main ideas.

**Introduction to Analysis in Several Variables: Advanced Calculus** - Michael E. Taylor 2020-07-27

This text was produced for the second part of a two-part sequence on advanced calculus, whose aim is to provide a firm logical foundation for analysis. The first part treats analysis in one variable, and the text at hand treats analysis in several variables. After a review of topics from one-variable analysis and linear algebra, the text treats in succession multivariable differential calculus, including systems of differential equations, and multivariable integral calculus. It builds on this to develop calculus on surfaces in Euclidean space and also on manifolds. It introduces differential forms and establishes a general Stokes formula. It describes various applications of Stokes formula, from harmonic functions to degree theory. The text then studies the differential geometry of surfaces, including geodesics and curvature, and makes contact with degree theory, via the Gauss-Bonnet theorem. The text also takes up Fourier analysis, and bridges this with results on surfaces, via Fourier analysis on spheres and on compact matrix groups.

*Analytic Combinatorics in Several Variables* - Robin Pemantle 2013-05-31

This book is the result of nearly fifteen years of work on developing analytic machinery to recover, as effectively as possible, asymptotics of the coefficients of a multivariate generating function. It is the first

book to describe many of the results and techniques necessary to estimate coefficients of generating functions in more than one variable.

*Complex Analysis in One Variable* - Raghavan Narasimhan 2000-12-21

The original edition of this book has been out of print for some years. The appearance of the present second edition owes much to the initiative of Yves Nievergelt at Eastern Washington University, and the support of Ann Kostant, Mathematics Editor at Birkhauser. Since the book was first published, several people have remarked on the absence of exercises and expressed the opinion that the book would have been more useful had exercises been included. In 1997, Yves Nievergelt informed me that, for a decade, he had regularly taught a course at Eastern Washington based on the book, and that he had systematically compiled exercises for his course. He kindly put his work at my disposal. Thus, the present edition appears in two parts. The first is essentially just a reprint of the original edition. I have corrected the misprints of which I have become aware (including those pointed out to me by others), and have made a small number of other minor changes.

**Several Complex Variables** - H. Grauert 2012-12-06

The present book grew out of introductory lectures on the theory of functions of several variables. Its intent is to make the reader familiar, by the discussion of examples and special cases, with the most important branches and methods of this theory, among them, e.g., the problems of holomorphic continuation, the algebraic treatment of power series, sheaf and cohomology theory, and the real methods which stem from elliptic partial differential equations. In the first chapter we begin with the definition of holomorphic functions of several variables, their representation by the Cauchy integral, and their power series expansion on Reinhardt domains. It turns out that, in contrast to the theory of a single variable, for  $n > 1$  there exist domains  $G \subset \mathbb{C}^n$  to which each function holomorphic in  $G$  has a continuation on  $G$ . Domains  $G$  for which such a  $G$  does not exist are called domains of holomorphy. In Chapter 2 we give several characterizations of these domains of holomorphy (theorem of Cartan-Thullen, Levi's problem). We finally construct the holomorphic hull  $H(G)$  for each domain  $G$ , that is the largest (not necessarily schlicht) domain over  $\mathbb{C}^n$  into which each function holomorphic on  $G$  can be continued.

**Functions of Several Variables** - Wendell Fleming 2012-12-06

This new edition, like the first, presents a thorough introduction to differential and integral calculus, including the integration of differential forms on manifolds. However, an additional chapter on elementary topology makes the book more complete as an advanced calculus text, and sections have been added introducing physical applications in thermodynamics, fluid dynamics, and classical rigid body mechanics. *Elementary Theory of Analytic Functions of One or Several Complex Variables* - Henri Cartan 2013-04-22

Basic treatment includes existence theorem for solutions of differential systems where data is analytic, holomorphic functions, Cauchy's integral, Taylor and Laurent expansions, more. Exercises. 1973 edition.

*Complex Variables: Harmonic and Analytic Functions* - Francis J. Flanigan 1972