
Read Free Varieties Abelian Of Theory Analytic

Recognizing the artifice ways to get this book **Varieties Abelian Of Theory Analytic** is additionally useful. You have remained in right site to start getting this info. get the Varieties Abelian Of Theory Analytic join that we manage to pay for here and check out the link.

You could buy lead Varieties Abelian Of Theory Analytic or acquire it as soon as feasible. You could speedily download this Varieties Abelian Of Theory Analytic after getting deal. So, subsequent to you require the book swiftly, you can straight get it. Its correspondingly categorically easy and appropriately fats, isnt it? You have to favor to in this manner

KEY=THEORY - JORDAN HUNTER

Analytic Theory of Abelian Varieties

Cambridge University Press The study of abelian manifolds forms a natural generalization of the theory of elliptic functions, that is, of doubly periodic functions of one complex variable. When an abelian manifold is embedded in a projective space it is termed an abelian variety in an algebraic geometrical sense. This introduction presupposes little more than a basic course in complex variables. The notes contain all the material on abelian manifolds needed for application to geometry and number theory, although they do not contain an exposition of either application. Some geometrical results are included however.

Analytic Theory of Abelian Varieties Complex Abelian Varieties and Theta Functions

Springer Science & Business Media Abelian varieties are a natural generalization of elliptic curves to higher dimensions, whose geometry and classification are as rich in elegant results as in the one-dimensional case. The use of theta functions, particularly since Mumford's work, has been an important tool in the study of abelian varieties and invertible sheaves on them. Also, abelian varieties play a significant role in the geometric approach to modern algebraic number theory. In this book, Kempf has focused on the analytic aspects of the geometry of abelian varieties, rather

than taking the alternative algebraic or arithmetic points of view. His purpose is to provide an introduction to complex analytic geometry. Thus, he uses Hermitian geometry as much as possible. One distinguishing feature of Kempf's presentation is the systematic use of Mumford's theta group. This allows him to give precise results about the projective ideal of an abelian variety. In its detailed discussion of the cohomology of invertible sheaves, the book incorporates material previously found only in research articles. Also, several examples where abelian varieties arise in various branches of geometry are given as a conclusion of the book.

Introduction to Abelian Varieties

American Mathematical Soc. The book represents an introduction to the theory of abelian varieties with a view to arithmetic. The aim is to introduce some of the basics of the theory as well as some recent arithmetic applications to graduate students and researchers in other fields. The first part contains proofs of the Abel-Jacobi theorem, Riemann's relations and the Lefschetz theorem on projective embeddings over the complex numbers in the spirit of S. Lang's book *Introduction to algebraic and abelian functions*. Then the Jacobians of Fermat curves as well as some modular curves are discussed. Finally, as an application, Faltings' proof of the Mordell conjecture and its intermediate steps, the Tate conjecture and the Shafarevich conjecture, are sketched. -- H. Lange for MathSciNet

80 Years of Zentralblatt MATH

80 Footprints of Distinguished Mathematicians in Zentralblatt

Springer Science & Business Media Founded in 1931 by Otto Neugebauer as the printed documentation service "Zentralblatt für Mathematik und ihre Grenzgebiete", Zentralblatt MATH (ZBMATH) celebrates its 80th anniversary in 2011. Today it is the most comprehensive and active reference database in pure and applied mathematics worldwide. Many prominent mathematicians have been involved in this service as reviewers or editors and have, like all mathematicians, left their footprints in ZBMATH, in a long list of entries describing all of their research publications in mathematics. This book provides one review from each of the 80 years of ZBMATH. Names like Courant, Kolmogorov, Hardy, Hirzebruch, Faltings and many others can be found here. In addition to the original reviews, the book offers the authors' profiles indicating their co-authors, their favorite journals and the time span of their publication activities. In addition to this, a generously illustrated essay by Silke Göbel describes the history of ZBMATH.

Primality Testing and Abelian Varieties Over Finite Fields

Lecture Notes in Mathematics From Gauss to G|del, mathematicians have sought an efficient algorithm to distinguish prime numbers from composite numbers. This book presents a random polynomial time algorithm for the problem. The methods used are from arithmetic algebraic geometry, algebraic number theory and analytic number theory. In particular, the theory of two dimensional Abelian varieties over finite fields is developed. The book will be of interest to both researchers and graduate students in number theory and theoretical computer science.

Regulators in Analysis, Geometry and Number Theory

Springer Science & Business Media "This work is an outgrowth of a conference held at the Hebrew University in Jerusalem on Regulators in Analysis, Geometry and Number Theory, and should appeal to a broad audience of graduate students and research mathematicians."--BOOK JACKET.

Abelian Varieties

Amer Mathematical Society

Introduction to Abelian Varieties

American Mathematical Soc. This book presents an elementary and self-contained approach to Abelian varieties, a subject that plays a central role in algebraic and analytic geometry, number theory, and complex analysis. The book is based on notes from a course given at Concordia University and would be useful for independent study or as a textbook for graduate courses in complex analysis, Riemann surfaces, number theory, or analytic geometry. Murty works mostly over the complex numbers, discussing the theorem of Abel-Jacobi and Lefschetz's theorem on projective embeddings. After presenting some examples, Murty touches on Abelian varieties over number fields, as well as the conjecture of Tate (Faltings's theorem) and its relation to Mordell's conjecture. References are provided to guide the reader in further study.

Analytic Number Theory

American Mathematical Soc. Analytic Number Theory distinguishes itself by the variety of tools it uses to establish results. One of the primary attractions of this theory is its vast diversity of concepts and methods. The main goals of this book are to show the scope of the theory, both in classical and modern directions, and to exhibit its wealth and prospects, beautiful theorems, and powerful techniques. The book is written with graduate students in mind, and the authors nicely balance clarity, completeness, and generality. The exercises in each section serve dual purposes, some intended to improve readers' understanding of the subject and others providing additional information. Formal prerequisites for the major part of the book do not go beyond calculus, complex analysis, integration, and Fourier series and integrals. In later chapters automorphic forms become important, with much of the necessary information about them included in two survey chapters.

Collected Papers I

1954 – 1966

Springer Science & Business Media In 1996 the AMS awarded Goro Shimura the Steele Prize for Lifetime Achievement : " To Goro Shimura for his important and extensive work on arithmetical geometry and automorphic forms; concepts introduced by him were often seminal, and fertile ground for new developments, as witnessed by the many notations in number theory that carry his name and that have long been familiar to workers in the field.." 103 of Shimura's most important papers are collected in four volumes. Volume I contains his mathematical papers from 1954 to 1966 and some notes to the articles.

Number Theory, Analysis and Geometry

In Memory of Serge Lang

Springer Science & Business Media Serge Lang was an iconic figure in mathematics, both for his own important work and for the indelible impact he left on the field of mathematics, on his students, and on his colleagues. Over the course of his career, Lang traversed a tremendous amount of mathematical ground. As he moved from subject to subject, he found analogies that led to important questions in such areas as number theory,

arithmetic geometry, and the theory of negatively curved spaces. Lang's conjectures will keep many mathematicians occupied far into the future. In the spirit of Lang's vast contribution to mathematics, this memorial volume contains articles by prominent mathematicians in a variety of areas of the field, namely Number Theory, Analysis, and Geometry, representing Lang's own breadth of interest and impact. A special introduction by John Tate includes a brief and fascinating account of the Serge Lang's life. This volume's group of 6 editors are also highly prominent mathematicians and were close to Serge Lang, both academically and personally. The volume is suitable to research mathematicians in the areas of Number Theory, Analysis, and Geometry.

A Survey of the Hodge Conjecture Second Edition

American Mathematical Soc. This book provides an introduction to a topic of central interest in transcendental algebraic geometry: the Hodge conjecture. Consisting of 15 lectures plus addenda and appendices, the volume is based on a series of lectures delivered by Professor Lewis at the Centre de Recherches Mathematiques (CRM). The book is a self-contained presentation, completely devoted to the Hodge conjecture and related topics. It includes many examples, and most results are completely proven or sketched. The motivation behind many of the results and background material is provided. This comprehensive approach to the book gives it a "user-friendly" style. Readers need not search elsewhere for various results. The book is suitable for use as a text for a topics course in algebraic geometry; includes an appendix by B. Brent Gordon.

Complex Abelian Varieties

Springer Science & Business Media Abelian varieties are special examples of projective varieties. As such they can be described by a set of homogeneous polynomial equations. The theory of abelian varieties originated in the beginning of the nineteenth century with the work of Abel and Jacobi. The subject of this book is the theory of abelian varieties over the field of complex numbers, and it covers the main results of the theory, both classic and recent, in modern language. It is intended to give a comprehensive introduction to the field, but also to serve as a reference. The focal topics are the projective embeddings of an abelian variety, their equations and geometric properties. Moreover several moduli spaces of abelian varieties with additional structure are constructed. Some special results on Jacobians and Prym varieties allow applications to the theory of algebraic curves. The main tools for the proofs are the theta group of a line bundle, introduced by Mumford, and the characteristics, to be associated

to any nondegenerate line bundle. They are a direct generalization of the classical notion of characteristics of theta functions.

Harmonic Analysis, the Trace Formula, and Shimura Varieties

Proceedings of the Clay
Mathematics Institute, 2003
Summer School, the Fields Institute,
Toronto, Canada, June 2-27, 2003

American Mathematical Soc. Langlands program proposes fundamental relations that tie arithmetic information from number theory and algebraic geometry with analytic information from harmonic analysis and group representations. This title intends to provide an entry point into this exciting and challenging field.

Complex Tori and Abelian Varieties

American Mathematical Soc. This book takes the classical theory of complex tori and complex abelian varieties as a pretext to go through more modern aspects of complex algebraic and analytic geometry. Starting with complex elliptic curves, it moves on to the higher-dimensional case, giving characterizations from different points of view of those complex tori which are abelian varieties, i.e., those that can be holomorphically embedded in a projective space. This allows the author, on the one hand, to illuminate the computations of nineteenth century mathematicians, and on the other to familiarize the reader with more recent theories. Complex tori are ideal in this respect: one can perform "hands-on" computations, without the theory being totally trivial. Standard theorems about abelian varieties are proved, and moduli spaces are discussed. The last chapter includes recent results on the geometry and topology of some subvarieties of a complex torus. Each chapter is followed by a varying number of exercises.

Abelian Varieties, Theta Functions

and the Fourier Transform

Cambridge University Press Table of contents

Basic Algebraic Geometry 1

Springer Science & Business Media This book is a revised and expanded new edition of the first four chapters of Shafarevich's well-known introductory book on algebraic geometry. Besides correcting misprints and inaccuracies, the author has added plenty of new material, mostly concrete geometrical material such as Grassmannian varieties, plane cubic curves, the cubic surface, degenerations of quadrics and elliptic curves, the Bertini theorems, and normal surface singularities.

Arithmetic Geometry

Springer Science & Business Media This volume is the result of a (mainly) instructional conference on arithmetic geometry, held from July 30 through August 10, 1984 at the University of Connecticut in Storrs. This volume contains expanded versions of almost all the instructional lectures given during the conference. In addition to these expository lectures, this volume contains a translation into English of Faltings' seminal paper which provided the inspiration for the conference. We thank Professor Faltings for his permission to publish the translation and Edward Shipz who did the translation. We thank all the people who spoke at the Storrs conference, both for helping to make it a successful meeting and enabling us to publish this volume. We would especially like to thank David Rohrlich, who delivered the lectures on height functions (Chapter VI) when the second editor was unavoidably detained. In addition to the editors, Michael Artin and John Tate served on the organizing committee for the conference and much of the success of the conference was due to them-our thanks go to them for their assistance. Finally, the conference was only made possible through generous grants from the Vaughn Foundation and the National Science Foundation.

Rigid Geometry of Curves and Their Jacobians

Springer This book presents some of the most important aspects of rigid geometry, namely its applications to the study of smooth algebraic curves, of their Jacobians, and of abelian varieties - all of them defined over a complete non-archimedean valued field. The text starts with a survey of the foundation of rigid geometry, and then focuses on a detailed treatment of the applications. In the case of curves with split rational reduction there

is a complete analogue to the fascinating theory of Riemann surfaces. In the case of proper smooth group varieties the uniformization and the construction of abelian varieties are treated in detail. Rigid geometry was established by John Tate and was enriched by a formal algebraic approach launched by Michel Raynaud. It has proved as a means to illustrate the geometric ideas behind the abstract methods of formal algebraic geometry as used by Mumford and Faltings. This book should be of great use to students wishing to enter this field, as well as those already working in it.

Abelian Varieties and Number Theory

American Mathematical Soc. This book is a collection of articles on Abelian varieties and number theory dedicated to Gerhard Frey's 75th birthday. It contains original articles by experts in the area of arithmetic and algebraic geometry. The articles cover topics on Abelian varieties and finitely generated Galois groups, ranks of Abelian varieties and Mordell-Lang conjecture, Tate-Shafarevich group and isogeny volcanoes, endomorphisms of superelliptic Jacobians, obstructions to local-global principles over semi-global fields, Drinfeld modular varieties, representations of étale fundamental groups and specialization of algebraic cycles, Deuring's theory of constant reductions, etc. The book will be a valuable resource to graduate students and experts working on Abelian varieties and related areas.

Complex Multiplication

Springer Science & Business Media The small book by Shimura-Taniyama on the subject of complex multiplication is a classic. It gives the results obtained by them (and some by Weil) in the higher dimensional case, generalizing in a non-trivial way the method of Deuring for elliptic curves, by reduction mod p . Partly through the work of Shimura himself (cf. [Sh 1] [Sh 2], and [Sh 5]), and some others (Serre, Tate, Kubota, Ribet, Deligne etc.) it is possible today to make a more snappy and extensive presentation of the fundamental results than was possible in 1961. Several persons have found my lecture notes on this subject useful to them, and so I have decided to publish this short book to make them more widely available. Readers acquainted with the standard theory of abelian varieties, and who wish to get rapidly an idea of the fundamental facts of complex multiplication, are advised to look first at the two main theorems, Chapter 3, §6 and Chapter 4, §1, as well as the rest of Chapter 4. The applications of Chapter 6 could also be profitably read early. I am much indebted to N. Schappacher for a careful reading of the manuscript resulting in a number of useful suggestions. S. LANG Contents CHAPTER 1 Analytic Complex Multiplication 4 I. Positive Definite Involutions . . . 6 2.

CM Types and Subfields. . . . 8 3. Application to Abelian Manifolds. 4.
 Construction of Abelian Manifolds with CM 14 21 5. Reflex of a CM Type . . .
 . .

Vector Bundles

Universitätsverlag Göttingen

Rigid Analytic Geometry and Its Applications

Springer Science & Business Media Rigid (analytic) spaces were invented to describe degenerations, reductions, and moduli of algebraic curves and abelian varieties. This work, a revised and greatly expanded new English edition of an earlier French text by the same authors, presents important new developments and applications of the theory of rigid analytic spaces to abelian varieties, "points of rigid spaces," étale cohomology, Drinfeld modular curves, and Monsky-Washnitzer cohomology. The exposition is concise, self-contained, rich in examples and exercises, and will serve as an excellent graduate-level text for the classroom or for self-study.

Snowbird Lectures in Algebraic Geometry

Proceedings of an AMS-IMS-SIAM Joint Summer Research Conference on Algebraic Geometry : Presentations by Young Researchers, July 4-8, 2004

American Mathematical Soc. A significant part of the 2004 Summer Research Conference on Algebraic Geometry (Snowbird, UT) was devoted to lectures introducing the participants, in particular, graduate students and recent Ph.D.'s, to a wide swathe of algebraic geometry and giving them a working familiarity with exciting, rapidly developing parts of the field. One of the main goals of the organizers was to allow the participants to broaden their horizons beyond the narrow area in which they are

working. A fine selection of topics and a noteworthy list of contributors made the resulting collection of articles a useful resource for everyone interested in getting acquainted with the modern topic of algebraic geometry. The book consists of ten articles covering, among others, the following topics: the minimal model program, derived categories of sheaves on algebraic varieties, Kobayashi hyperbolicity, groupoids and quotients in algebraic geometry, rigid analytic varieties, and equivariant cohomology. Suitable for independent study, this unique volume is intended for graduate students and researchers interested in algebraic geometry.

Encyclopaedia of Mathematics

Volume 6: Subject Index — Author Index

Springer Science & Business Media This ENCYCLOPAEDIA OF MATHEMATICS aims to be a reference work for all parts of mathematics. It is a translation with updates and editorial comments of the Soviet Mathematical Encyclopaedia published by 'Soviet Encyclopaedia Publishing House' in five volumes in 1977-1985. The annotated translation consists of ten volumes including a special index volume. There are three kinds of articles in this ENCYCLOPAEDIA. First of all there are survey-type articles dealing with the various main directions in mathematics (where a rather fine subdivision has been used). The main requirement for these articles has been that they should give a reasonably complete up-to-date account of the current state of affairs in these areas and that they should be maximally accessible. On the whole, these articles should be understandable to mathematics students in their first specialization years, to graduates from other mathematical areas and, depending on the specific subject, to specialists in other domains of science, engineers and teachers of mathematics. These articles treat their material at a fairly general level and aim to give an idea of the kind of problems, techniques and concepts involved in the area in question. They also contain background and motivation rather than precise statements of precise theorems with detailed definitions and technical details on how to carry out proofs and constructions. The second kind of article, of medium length, contains more detailed concrete problems, results and techniques.

Complex Multiplication of Abelian

Varieties and Its Applications to Number Theory

Fewnomials

American Mathematical Soc. The ideology of the theory of fewnomials is the following: real varieties defined by "simple", not cumbersome, systems of equations should have a "simple" topology. One of the results of the theory is a real transcendental analogue of the Bezout theorem: for a large class of systems of k transcendental equations in k real variables, the number of roots is finite and can be explicitly estimated from above via the "complexity" of the system. A more general result is the construction of a category of real transcendental manifolds that resemble algebraic varieties in their properties. These results give new information on level sets of elementary functions and even on algebraic equations. The topology of geometric objects given via algebraic equations (real-algebraic curves, surfaces, singularities, etc.) quickly becomes more complicated as the degree of the equations increases. It turns out that the complexity of the topology depends not on the degree of the equations but only on the number of monomials appearing in them. This book provides a number of theorems estimating the complexity of the topology of geometric objects via the cumbersomeness of the defining equations. In addition, the author presents a version of the theory of fewnomials based on the model of a dynamical system in the plane. Pfaff equations and Pfaff manifolds are also studied.

Classification Theory of Algebraic Varieties and Compact Complex Spaces

Springer

Encyclopaedia of Mathematics

A-Integral — Coordinates

Springer

Encyclopedic Dictionary of Mathematics

MIT Press V.1. A.N. v.2. O.Z. Apendices and indexes.

Abelian Varieties

Martino Fine Books 2014 Reprint of 1959 Edition. Full facsimile of the original edition, not reproduced with Optical Recognition Software. In mathematics, particularly in algebraic geometry, complex analysis and number theory, an abelian variety is a projective algebraic variety that is also an algebraic group, i.e., has a group law that can be defined by regular functions. Abelian varieties are at the same time among the most studied objects in algebraic geometry and indispensable tools for much research on other topics in algebraic geometry and number theory. Serge Lang was a French-born American mathematician. He is known for his work in number theory and for his mathematics textbooks, including the influential Algebra. He was a member of the Bourbaki group.

Encyclopaedia of Mathematics (set)

Springer Science & Business Media The Encyclopaedia of Mathematics is the most up-to-date, authoritative and comprehensive English-language work of reference in mathematics which exists today. With over 7,000 articles from 'A-integral' to 'Zygmund Class of Functions', supplemented with a wealth of complementary information, and an index volume providing thorough cross-referencing of entries of related interest, the Encyclopaedia of Mathematics offers an immediate source of reference to mathematical definitions, concepts, explanations, surveys, examples, terminology and methods. The depth and breadth of content and the straightforward, careful presentation of the information, with the emphasis on accessibility, makes the Encyclopaedia of Mathematics an immensely useful tool for all mathematicians and other scientists who use, or are confronted by, mathematics in their work. The Encyclopaedia of Mathematics provides, without doubt, a reference source of mathematical knowledge which is unsurpassed in value and usefulness. It can be highly recommended for use in libraries of universities, research institutes, colleges and even schools.

Moduli of Abelian Varieties

Springer Verlag This is a book aimed at researchers and advanced graduate students in algebraic geometry, interested in learning about a promising direction of research in algebraic geometry. It begins with a

generalization of parts of Mumford's theory of the equations defining abelian varieties and moduli spaces. It shows through striking examples how one can use these apparently intractable systems of equations to obtain satisfying insights into the geometry and arithmetic of these varieties. It also introduces the reader to some aspects of the research of the first author into representation theory and invariant theory and their applications to these geometrical questions.

Integrable Systems in the realm of Algebraic Geometry

Springer Integrable systems are related to algebraic geometry in many different ways. This book deals with some aspects of this relation, the main focus being on the algebraic geometry of the level manifolds of integrable systems and the construction of integrable systems, starting from algebraic geometric data. For a rigorous account of these matters, integrable systems are defined on affine algebraic varieties rather than on smooth manifolds. The exposition is self-contained and is accessible at the graduate level; in particular, prior knowledge of integrable systems is not assumed.

Spectral Theory and Analytic Geometry over Non-Archimedean Fields

American Mathematical Soc. The purpose of this book is to introduce a new notion of analytic space over a non-Archimedean field. Despite the total disconnectedness of the ground field, these analytic spaces have the usual topological properties of a complex analytic space, such as local compactness and local arcwise connectedness. This makes it possible to apply the usual notions of homotopy and singular homology. The book includes a homotopic characterization of the analytic spaces associated with certain classes of algebraic varieties and an interpretation of Bruhat-Tits buildings in terms of these analytic spaces. The author also studies the connection with the earlier notion of a rigid analytic space. Geometrical considerations are used to obtain some applications, and the analytic spaces are used to construct the foundations of a non-Archimedean spectral theory of bounded linear operators. This book requires a background at the level of basic graduate courses in algebra and topology, as well as some familiarity with algebraic geometry. It would be of interest to research mathematicians and graduate students working in algebraic geometry, number theory, and p -adic analysis.

Selected Papers

On the Classification of Varieties and Moduli Spaces

Springer Science & Business Media Mumford is a well-known mathematician and winner of the Fields Medal, the highest honor available in mathematics. Many of these papers are currently unavailable, and the commentaries by Gieseker, Lange, Viehweg and Kempf are being published here for the first time.

Wolf Prize in Mathematics

World Scientific

New Spaces in Mathematics

Formal and Conceptual Reflections

Cambridge University Press After the development of manifolds and algebraic varieties in the previous century, mathematicians and physicists have continued to advance concepts of space. This book and its companion explore various new notions of space, including both formal and conceptual points of view, as presented by leading experts at the New Spaces in Mathematics and Physics workshop held at the Institut Henri Poincaré in 2015. The chapters in this volume cover a broad range of topics in mathematics, including diffeologies, synthetic differential geometry, microlocal analysis, topos theory, infinity-groupoids, homotopy type theory, category-theoretic methods in geometry, stacks, derived geometry, and noncommutative geometry. It is addressed primarily to mathematicians and mathematical physicists, but also to historians and philosophers of these disciplines.

Complex Multiplication and Lifting Problems

American Mathematical Soc. Abelian varieties with complex multiplication lie at the origins of class field theory, and they play a central role in the contemporary theory of Shimura varieties. They are special in characteristic 0 and ubiquitous over finite fields. This book explores the relationship between such abelian varieties over finite fields and over

arithmetically interesting fields of characteristic 0 via the study of several natural CM lifting problems which had previously been solved only in special cases. In addition to giving complete solutions to such questions, the authors provide numerous examples to illustrate the general theory and present a detailed treatment of many fundamental results and concepts in the arithmetic of abelian varieties, such as the Main Theorem of Complex Multiplication and its generalizations, the finer aspects of Tate's work on abelian varieties over finite fields, and deformation theory. This book provides an ideal illustration of how modern techniques in arithmetic geometry (such as descent theory, crystalline methods, and group schemes) can be fruitfully combined with class field theory to answer concrete questions about abelian varieties. It will be a useful reference for researchers and advanced graduate students at the interface of number theory and algebraic geometry.