Chapter 1 : Kodaira Kunihiko | Japanese mathematician | calendrierdelascience.com

Of importance to applications such as superstring theories in high-energy physics, the theory of complex manifolds and the deformation of complex structures are explained in great detail in this book by one of the major contributors to the subject.

Thus 5 is a complex manifold of dimension m. In this case, choosing Uj as in 2. For each point g G M",fixlocal coordinates Zq-. Consequently by Theorem 2. A topological manifold S endowed with a differentiable structure is called a differentiable manifold, whose differentiable structure is called the 38 2. Complex Manifolds differentiable structure of the difierentiable manifold 2. We may identify two mutually diffeomorphic differentiable manifolds. Suppose that a complex structure M is defined on a connected Hausdorff space S. Consequently 2 is a topological manifold, which is called the underlying topological manifold of M. This is called the underlying differentiable manifold of the complex manifold M Also we call M a complex structure on the differentiable manifold E. Conversely, let 2 be a Hausdorff space on which a differentiable structure is given, which makes 2 a differentiable manifold. Compact Complex Manifolds A complex manifold M is said to be compact if its underlying topological manifold S is compact. In this book we mainly treat compact complex manifolds. Let M be a compact complex manifold. Let Uj be the domain of Zj: As stated in Example 2. Thus an algebraic subset of P" is an analytic subset of P". An algebraic subset M which is a complex submanifold of P" is called a projective algebraic manifold. In general a complex submanifold of C" which is defined by a system of algebraic equations is called an affine algebraic manifold. A projective algebraic manifold is obviously compact. Compact Complex Manifolds 41 1, 2 ,. Hence the divisor of! Let P f and QiC be homogeneous polynomials of the same degree. Let M be an algebraic manifold, and qeM. By an automorphism of W, we mean a biholomorphic map of W onto itself. In other words, an automorphism is a map which does not alter the complex structure of W. Let G be a group of automorphisms of W. Two orbits Gp and Gq do not have a common element unless they coincide. Thus W is decomposed into the mutually disjoint orbits of G. Hence In the sequel we explain a method of constructing a compact complex manifold as a quotient space of a given complex manifold. Let g be an automorphism of W. We say that G is fixed point free if any ge G except the identity has no fixed point. Let G be a group of automorphisms of a complex manifold W.

Chapter 2 : Complex manifold - Wikipedia

"The author, who with Spencer created the theory of deformations of a complex manifold, has written a book which will be of service to all who are interested in this by now vast subject. Although intended for a reader with a certain mathematical maturity, the author begins at the beginning.

Chapter 3 : Download [PDF] complex manifolds and deformation of complex structures

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Parts of it could be used for a graduate complex manifolds course." J.A. Carlson in Mathematical Reviews, "There are many mathematicians, or even physicists, who would find this book useful and accessible, but its distinctive attribute is the insight it gives into a brilliant mathematician's work.

Chapter 5 : Sommese : Review: Kunihiko Kodaira, Complex manifolds and deformation of complex structur

The complex structure M is called the complex structure of M, and a system of local complex coordinates belonging to M is called a system of local complex coordinates of the complex manifold M. Two complex manifolds M and N are called complex analytically homeomorphic or biholomorphically equivalent if there is a biholomorphic map O from M onto N.

Chapter 6 : Complex Manifolds and Deformation of Complex Structures - PDF Free Download

Complex manifolds and deformation of complex structures. [Kunihiko Kodaira] -- In this title, the author, who with Spencer created the theory of deformations of a complex manifold, has written a book which should be of service to all who are interested in this by now vast.

Chapter 7 : Deformation theory - Wikipedia

Kunihiko Kodaira () worked in many areas including harmonic integrals, algebraic geometry and the classification of compact complex analytic surfaces.