



S.-s. Chern

## Complex Manifolds Without Potential Theory

(With an appendix on the geometry of characteristic classes)

Universitext

2nd edition 1979 V, 152 pages  
DM 25,-, approx US \$ 11.90  
ISBN 3-540-90422-0

This is a short introduction to complex manifolds, including sheaf theory, vector bundles, connections, curvature forms, and characteristic classes. The second edition contains a new appendix on the geometry of characteristic classes and a new treatment of the Chern-Simons invariants which is more adaptable to applications. Applications of Chern's concepts include gauge theory and Yau's proof of the Calabi conjecture.

## The Chern Symposium 1979

Proceedings of the International Symposium on Differential Geometry in honor of S.-s. Chern, held in Berkeley, California, June 1979

**Editors:** W.-Y. Hsiang, S. Kobayashi, I. M. Singer, A. Weinstein, J. Wolf, Hung-Hsi Wu

1980. VII, 259 pages  
Cloth DM 56,-; approx. US \$ 26.70  
ISBN 3-540-90537-5

### Contents:

*M. F. Atiyah:* Real and Complex Geometry in Four Dimensions. – *R. Bott:* Equivariant Morse Theory and the Yang-Mills Equation on Riemann Surfaces. – *E. Calabi:* Isometric Families of Kähler Structures. – *M. Green, P. Griffiths:* Two Applications of Algebraic Geometry to Entire Holomorphic Mappings. – *F. Hirzebruch:* The Canonical Map for Certain Hilbert Modular Surfaces. – *N. H. Kuiper:* Tight Embeddings and Maps. Submanifolds of Geometrical Class Three in  $E^N$ . – *J. Moser:* Geometry of Quadrics and Spectral Theory. – *L. Nirenberg:* Remarks on Nonlinear Problems. – *R. Ossermann:* Minimal Surfaces, Gauss Maps, Total Curvature, Eigenvalue Estimates, and Stability. – *W.-T. Wu:* de Rham-Sullivan Measure of Spaces and Its Calculability. – *C. H. Yang:* Fibre Bundles and the Physics of the Magnetic Monopole. – *S.-T. Yau:* The Total Mass and the Topology of an Asymptotically Flat Space-Time.

S.-s. Chern

## Selected Papers

1978 2 portraits XXI, 476 pages (34 pages in German, 36 pages in French)  
Cloth DM 57,-, approx. US \$ 27.20  
ISBN 3-540-90339-9

The papers in this volume comprise approximately a third of S.-s. Chern's total mathematical work to date. The selection has been made by the author himself, preference being given to his shorter and less accessible papers. In addition to the papers, the volume contains two articles by Phillip Griffiths and André Weil and a "Summary of My Scientific Life and Works" by Shiing-shen Chern himself.



Springer-Verlag Berlin Heidelberg New York