

<<亚纯函数值分布理论>>

图书基本信息

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前言

This book is devoted to the study of value distribution of functions which are mero-morphic on the complex plane or in an angular domain with vertex at the origin. We characterize such meromorphic functions in terms of distribution of some of their value points. The study, together with certain related topics, is known as theory of value distribution of meromorphic functions. The theory is too vast to be justified within a single work. Therefore we selected and organized the content based on their significant importance to our understanding and interests in this book. I gladly acknowledge my indebtedness in particular to the books of M. Tsuji, A. A. Goldberg and I. V. Ostrovskii, Yang L. and the papers of A. Eremenko. An outline of the book is provided below. The introduction of the Nevanlinna characteristic to the study of meromorphic functions is a new starting symbol of the theory of value distribution. The Nevanlinna characteristic is powerful, and its thought has been used to produce various characteristics such as the Nevanlinna characteristic and Tsuji characteristic for an angular domain. And from geometric point of view, namely the Ahlfors theory of covering surfaces, the Ahlfors-Shimizu characteristic have also been introduced. These characteristics are real-valued functions defined on the positive real axis. Therefore, in the first chapter, we collect the basic results about positive real functions that are often used in the study of mero-morphic function theory. Some of these results are distributed in other books, some in published papers, and some have been newly established in order to serve our specific objectives in the book.

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内容概要

本书共7章，研究在复平面上或在以原点为顶点的角域上亚纯的函数的值分布，即通过某些值点来刻画亚纯函数。

前两章研究各类特征函数及这样的实函数的性质。

第3、4章放在新引入的奇异方向——T方向，包括存在性、分布，与其他方向的关系上，T方向与分布值和亏值总数的关系。

射线分布值确定亚纯函数的增长性的问题在第5章详细研究。

第6章研究亚纯函数对应的Riemann曲面，逆函数的奇异性及其与不动点的关系。

最后一章介绍具有重要地位的ENevanlinna猜想的Eremenko应用位势论的证明。

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编辑推荐

《亚纯函数值分布理论》：Value Distribution of Meromorphic Functions focuses on functions meromorphic in an angle or on the complex plane, T directions, deficient values, singular values, potential theory in value distribution and the proof of the celebrated Nevanlinna conjecture. The book introduces various characteristics of meromorphic functions and their connections, several aspects of new singular directions, new results on estimates of the number of deficient values, new results on singular values and behaviour of subharmonic functions which are the foundation for further discussion on the proof of the Nevanlinna conjecture. The independent significance of normality of subharmonic function family is emphasized. This book is designed for scientists, engineers and post graduated students engaged in Complex Analysis and Meromorphic Functions.

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