

<<数论IV:超越数>>

图书基本信息

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## &lt;&lt;数论IV:超越数&gt;&gt;

## 前言

要使我国的数学事业更好地发展起来,需要数学家淡泊名利并付出更艰苦地努力。

另一方面,我们也要从客观上为数学家创造更有利的发展数学事业的外部环境,这主要是加强对数学事业的支持与投资力度,使数学家有较好的工作与生活条件,其中也包括改善与加强数学的出版工作。

从出版方面来讲,除了较好较快地出版我们自己的成果外,引进国外的先进出版物无疑也是十分重要与必不可少的。

从数学来说,施普林格(Springer)出版社至今仍然是世界上最具权威的出版社。

科学出版社影印一批他们出版的好的新书,使我国广大数学家能以较低的价格购买,特别是在边远地区工作的数学家能普遍见到这些书,无疑是对推动我国数学的科研与教学十分有益的事。

这次科学出版社购买了版权,一次影印了23本施普林格出版社出版的数学书,就是一件好事,也是值得继续做下去的事情。

大体上分一下,这23本书中,包括基础数学书5本,应用数学书6本与计算数学书12本,其中有些书也具有交叉性质。

这些书都是很新的,2000年以后出版的占绝大部分,共计16本,其余的也是1990年以后出版的。

这些书可以使读者较快地了解数学某方面的前沿,例如基础数学中的数论、代数与拓扑三本,都是由该领域大数学家编著的“数学百科全书”的分册。

对从事这方面研究的数学家了解该领域的前沿与全貌很有帮助。

按照学科的特点,基础数学类的书以“经典”为主,应用和计算数学类的书以“前沿”为主。

这些书的作者多数是国际知名的大数学家,例如《拓扑学》一书的作者诺维科夫是俄罗斯科学院的院士,曾获“菲尔兹奖”和“沃尔夫数学奖”。

这些大数学家的著作无疑将会对我国的科研人员起到非常好的指导作用。

当然,23本书只能涵盖数学的一部分,所以,这项工作还应该继续做下去。

更进一步,有些读者面较广的好书还应该翻译成中文出版,使之有更大的读者群。

总之,我对科学出版社影印施普林格出版社的部分数学著作这一举措表示热烈的支持,并盼望这一工作取得更大的成绩。

## &lt;&lt;数论IV:超越数&gt;&gt;

## 内容概要

This book is a survey of the most important directions of research in transcendental number theory. The central topics in this theory include proofs of irrationality and transcendence of various numbers, especially those, that arise as the values of special functions. Questions of this sort go back to ancient times. An example is the old problem of squaring the circle, which Lindemann showed to be impossible in 1882, when he proved that  $\pi$  is a transcendental number. Euler's conjecture that the logarithm of an algebraic number to an algebraic base is transcendental was included in Hilbert's famous list of open problems; this conjecture was proved by Gel'fond and Schneider in 1934. A more recent result was Anery's surprising proof of the irrationality of  $\sqrt{3}$  in 1979. The quantitative aspects of the theory have important applications to the study of Diophantine equations and other areas of number theory. For a reader interested in different branches of number theory, this monograph provides both an overview of the central ideas and techniques of transcendental number theory, and also a guide to the most important results and references.

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## 书籍目录

Notation Introduction 0.1 Preliminary Remarks 0.2 Irrationality of 2 0.3 The Number  $e$  0.4 Transcendental Numbers 0.5 Approximation of Algebraic Numbers 0.6 Transcendence Questions and Other Branches of Number Theory 0.7 The Basic Problems Studied in Transcendental Number Theory 0.8 Different Ways of Giving the Numbers 0.9 Methods

Chapter 1 Approximation of Algebraic Numbers 1 Preliminaries 1.1 Parameters for Algebraic Numbers and Polynomials 1.2 Statement of the Problem 1.3 Approximation of Rational Numbers 1.4 Continued Fractions 1.5 Quadratic Irrationalities 1.6 Liouville's Theorem and Liouville Numbers 1.7 Generalization of Liouville's Theorem

2 Approximations of Algebraic Numbers and Thue's Equation 2.1 Thue's Equation 2.2 The Case  $n = 2$  2.3 The Case  $n > 3$  3 Strengthening Liouville's Theorem First Version of Thue's Method 3.1 A Way to Bound  $q$  3.2 Construction of Rational Approximations for 3.3 Thue's First Result 3.4 Effectiveness 3.5 Effective Analogues of Theorem 1.6 3.6 The First Effective Inequalities of Baker 3.7 Effective Bounds on Linear Forms in Algebraic Numbers

4 Stronger and More General Versions of Liouville's Theorem and Thue's Theorem 4.1 The Dirichlet Pigeonhole Principle 4.2 Thue's Method in the General Case 4.3 Thue's Theorem on Approximation of Algebraic Numbers 4.4 The Non-effectiveness of Thue's Theorems

5 Further Development of Thue's Method 5.1 Siegel's Theorem 5.2 The Theorems of Dyson and Gel'fond 5.3 Dyson's Lemma 5.4 Bombieri's Theorem

6 Multidimensional Variants of the Thue-Siegel Method 6.1 Preliminary Remarks 6.2 Siegel's Theorem 6.3 The Theorems of Schneider and Mahler

7 Roth's Theorem 7.1 Statement of the Theorem 7.2 The Index of a Polynomial 7.3 Outline of the Proof of Roth's Theorem 7.4 Approximation of Algebraic Numbers by Algebraic Numbers 7.5 The Number  $k$  in Roth's Theorem 7.6 Approximation by Numbers of a Special Type 7.7 Transcendence of Certain Numbers 7.8 The Number of Solutions to the Inequality (62) and Certain Diophantine Equations

8 Linear Forms in Algebraic Numbers and Schmidt's Theorem 8.1 Elementary Estimates 8.2 Schmidt's Theorem 8.3 Minkowski's Theorem on Linear Forms 8.4 Schmidt's Subspace Theorem

Chapter 2 Effective Constructions in Transcendental Number Theory

Chapter 3 Hilbert's Seventh Problem

Chapter 4 Multidimensional Generalization of Hilbert's Seventh Problem

Chapter 5 Values of Analytic Functions That Satisfy Linear Differential Equations

Chapter 6 Algebraic Independence of the Values of Analytic Functions That Have an Addition Law

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章节摘录

插图：

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### 编辑推荐

《数论4:超越数(影印版)》为《国外数学名著系列》丛书之一。  
该丛书是科学出版社组织学术界多位知名院士、专家精心筛选出来的一批基础理论类数学著作，读者对象面向数学系高年级本科生、研究生及从事数学专业理论研究的科研工作者。  
本册为《数论(超越数影印版)65》，《数论4:超越数(影印版)》是调查的最重要的研究方向在超越数论。

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