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<<线性与非线性积分方程>>

图书基本信息

书名：<<线性与非线性积分方程>>

13位ISBN编号：9787040316940

10位ISBN编号：7040316943

出版时间：2011-6

出版时间：高等教育出版社

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页数：639

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内容概要

本书是一本同时介绍线性和非线性积分方程的教材，分成两部分，各部分自成体系。
第一部分主要对第一类、第二类线性积分方程进行了系统、深入的分析并提供各种解法；第二部分主要讲述非线性积分方程求解及其应用，针对不适定fredholm问题、分歧点和奇异点等问题进行了系统的分析，并提供易于理解的处理方法。

本书通过大量的例子讲述线性与非线性积分方程最新发展起来的高效解法，无须要求读者对抽象理论本身有很深的理解，同时也讨论了某些经典方法一些有价值的改进。
书中对这些方法都给出了很好的解释，并通过对这些方法进行对比，使得读者能够快速地掌握并选择可行且高效的方法。
本书提供了大量的习题，并在书后附有答案。

本书可作为应用数学、工程学及其相关专业的高年级本科生和研究生教材，也可供相关领域的工程师参考。

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章节摘录

版权页：插图：Integral equations and in tegro-differential equations will be classified in to distinct types according to the limits of integration and the kernel K（x, t）.Alltypes of integral equations and in tegro differential equations will be classifiedand investigated in the forthcoming chapters. In this chapter, we will review the most important concepts needed to study integral equations. The traditional methods, such as Taylor seriesmethod and the Laplace transform method, will be used in this text. More-over, the recently developed methods, that will be used thoroughly in this text, will determine the solution in a power series that will converge to an exact solution if such a solution exists. However, if exact solution does not exist, we use as many terms of the obtained series for numerical purposes to approximate the solution.

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《线性与非线性积分方程:方法及应用》：关键词：线性与非线性Volterra方程，线性与非线性Fredholm方程，线性与非线性奇异方程，积分方程组。
Nonlinear Physical Science focuses on the recent a dvances of fundamental theories and principles, analytical and symbolic approaches, as well as computational techniques in nonlinear physical science and nonlinear mathematics with engineering applications.

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