



Solving Transcendental Equations: The Chebyshev Polynomial Proxy and Other Numerical Rootfinders, Perturbation Series, and Oracles

By John P. Boyd

Society for Industrial & Applied Mathematics, U.S. Paperback. Book Condition: new. BRAND NEW, Solving Transcendental Equations: The Chebyshev Polynomial Proxy and Other Numerical Rootfinders, Perturbation Series, and Oracles, John P. Boyd, Transcendental equations arise in every branch of science and engineering. While some of these equations are easy to solve, many are not. When confronted with such an equation, this book serves as an indispensable resource. The author's goal is to teach the art of finding the root of a single algebraic equation or a pair of such equations. This book is the first to describe the Chebyshev-proxy rootfinder, the most reliable way to find all zeros of a smooth function on an interval, and the spectrally enhanced Weyl bisection/marching triangles method for bivariate rootfinding. Unlike other books on numerical rootfinding, it includes three chapters on analytical methods - explicit solutions, regular perturbation expansions, and singular perturbation series (including hyperasymptotics). While this book is written for specialists in numerical analysis, it can be used for introductory and advanced numerical analysis classes, and as a reference for anyone working with difficult equations.



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This book is definitely worth acquiring. I have go through and so i am certain that i will likely to read through again in the future. Its been printed in an exceptionally basic way in fact it is only after i finished reading this publication in which actually altered me, change the way in my opinion.

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