INTRODUCTION TO FOURIER ANALYSIS

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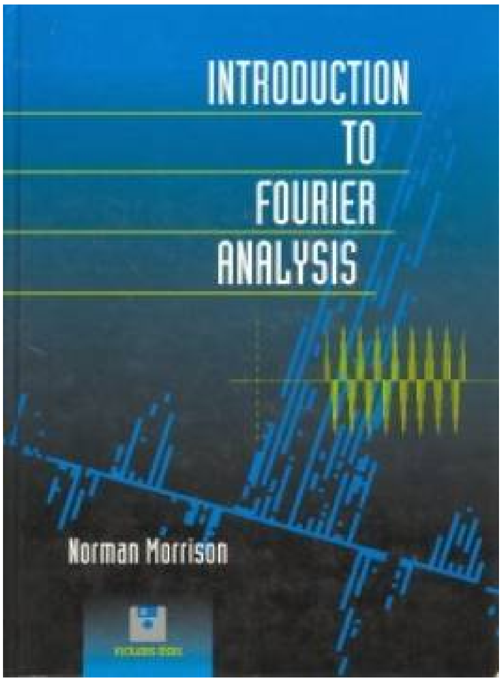
SUMMARY



Comprehensive, user friendly, and pedagogically structured

A fast, easy way to learn about the electrical engineer's most important mathematical tool

Based on a groundbreaking one-semester course originated by Professer Norman Morrison at the University of Cape Town, this book serves equally well as a course text and a self-study guide for professionals. Offering only relevant mathematics, it covers all the core principles of electrical engineering contained in Fourier analysis, including the time and frequency domains; the representation of waveforms in terms of complex exponentials and sinusoids; complex exponentials and sinusoids as the eigenfunctions ot linear systems; convolution; impulse response and the frequency transfer function; magnitude and phase spectra; and modulation and demodulation.

- Covers Fourier analysis exclusively for electrical engineering students and professionals
- Offers a complete FFT system Contained on the enclosed disks long for IBM compatibles, the other for Macintosh)
- Includes dozens of examples drawn from electrical engineering
- Packed with exercices, samples, and end-of-chapter problem sets

CONTENTS

PART 2 DISCRETE FOURIER ANALYSIS

PART 3 THE USER'S MANUAL FOR THE ACCOMPANYING DISKS

TOP

Appendix: Some Mathematical Niceties. A Quick Introduction to Fourier Analysis. August 31, 2018. Contents. 1 Introduction. 2. 2 The Dirac Delta Function 2.1 Denition and Properties . . .Â Finally, after all of these abstract and general considerations, we apply the Fourier trans-form to the solution of some equations. 3.4.1 Greenâ€™s Function for ODE. Suppose we are asked to solve the equation.