

1. Record Nr.	UNINA9910300129103321
Autore	Saichev Alexander I
Titolo	Distributions in the Physical and Engineering Sciences, Volume 1 : Distributional and Fractal Calculus, Integral Transforms and Wavelets / / by Alexander I. Saichev, Wojbor Woyczynski
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2018
ISBN	3-319-97958-2
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XX, 336 p. 62 illus.)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5009
Disciplina	510
Soggetti	Mathematical models Applied mathematics Engineering mathematics Fourier analysis Physics Mathematical Modeling and Industrial Mathematics Applications of Mathematics Fourier Analysis Mathematical Methods in Physics Engineering Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	I Distributions and their Basic Applications -- 1 Basic Definitions and Operations -- 2 Basic Applications: Rigorous and Pragmatic -- II Integral Transforms and Divergent Series -- 3 Fourier Transform -- 4 Asymptotics of Fourier Transforms -- 5 Stationary Phase and Related Method -- 6 Singular Integrals and Fractal Calculus -- 7 Uncertainty Principle and Wavelet Transforms -- 8 Summation of Divergent Series and Integrals -- A Answers and Solutions -- A.1 Chapter 1. Definitions and operations -- A.2 Chapter 2. Basic applications -- A.3 Chapter 3. Fourier transform -- A.4 Chapter 4. Asymptotics of Fourier transforms -- A.5 Chapter 5. Stationary phase and related methods -- A.6 Chapter 6. Singular integrals and fractal calculus -- A.7 Chapter 7. Uncertainty principle and wavelet transform -- A. 8 Chapter 8. Summation of

divergent series and integrals -- B Bibliographical Notes.

Sommario/riassunto

Distributions in the Physical and Engineering Sciences is a comprehensive exposition on analytic methods for solving science and engineering problems which is written from the unifying viewpoint of distribution theory and enriched with many modern topics which are important to practitioners and researchers. The goal of the book is to give the reader, specialist and non-specialist usable and modern mathematical tools in their research and analysis. This new text is intended for graduate students and researchers in applied mathematics, physical sciences and engineering. The careful explanations, accessible writing style, and many illustrations/examples also make it suitable for use as a self-study reference by anyone seeking greater understanding and proficiency in the problem solving methods presented. The book is ideal for a general scientific and engineering audience, yet it is mathematically precise. .
