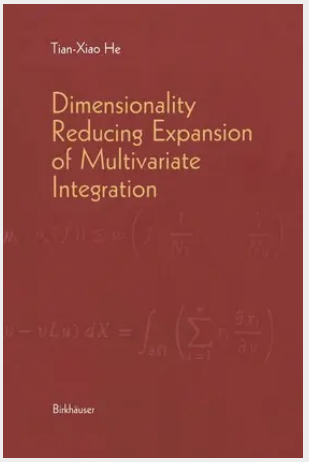
He

Dimensionality Reducing Expansion of Multivariate Integration



Multivariate integration has been a fundamental subject in mathematics, with broad connections to a number of areas: numerical analysis, approximation theory, partial differential equations, integral equations, harmonic analysis, etc. In this work the exposition focuses primarily on a powerful tool that has become especially important in our computerized age, namely, dimensionality reducing expansion (DRE). The method of DRE is a technique for changing a higher dimensional integration to a lower dimensional one with or without remainder. To date, there is no comprehensive treatment of this subject in monograph or textbook form.

Key features of this self-contained monograph include:

* fine exposition covering the history of the subject

* up-to-date new results, related to many fields of current research such as boundary element methods for solving PDEs and wavelet analysis

* presentation of DRE techniques using a broad array of examples

* good balance between theory and application

* coverage of such related topics as boundary type quadratures and asymptotic expansions of oscillatory integrals

* excellent and comprehensive bibliography and index

This work will appeal to a broad audience of students and researchers in pure and applied mathematics, statistics, and physics, and can be used in a graduate/advanced undergraduate course or as a standard reference text.

First self-contained, comprehensive treatment of the method of dimensionality reducing expansion (DRE), a powerful technique for changing a higher dimensional integration to a lower dimensional one with or without remainder. DRE has broad connections to a number of areas: numerical integration, pdes and Green's function, harmonic analysis, numerical analysis and approximation theory. Exposition covers the history of the subject and includes up-to-date new results, related to many fields of current research such as boundary element methods for solving pdes and wavelet analysis. Examples, comprehensive bibliography and index included. Useful text or self-study resource for graduate/advanced undergaduate students and researchers in pure and applied mathematics, statistics, and physics.

53,49 €
49,99 € (zzgl. MwSt.)

Nicht mehr lieferbar

Artikelnummer: 9780817641702
Medium: Buch
ISBN: 978-0-8176-4170-2
Verlag: Birkhauser Boston
Erscheinungstermin: 30.03.2001
Sprache(n): Englisch
Auflage: 2001. Auflage 2001
Produktform: Gebunden
Gewicht: 476 g
Seiten: 227
Format (B x H): 162 x 242 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)