

Measure and Integral

An Introduction to Real Analysis, Second Edition

Now considered a classic text on the topic, *Measure and Integral: An Introduction to Real Analysis* provides an introduction to real analysis by first developing the theory of measure and integration in the simple setting of Euclidean space, and then presenting a more general treatment based on abstract notions characterized by axioms and with less geometric content. Published nearly forty years after the first edition, this long-awaited Second Edition also:

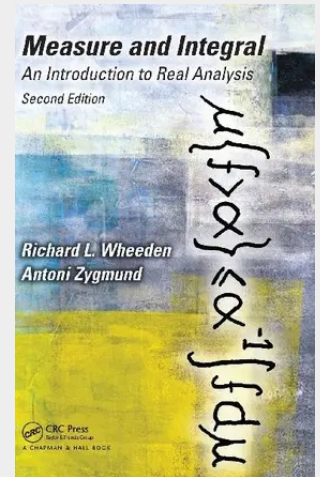
- Studies the Fourier transform of functions in the spaces L^1 , L^2 , and L^p , $1 < p < 2$
- Shows the Hilbert transform to be a bounded operator on L^2 , as an application of the L^2 theory of the Fourier transform in the one-dimensional case
- Covers fractional integration and some topics related to mean oscillation properties of functions, such as the classes of Hölder continuous functions and the space of functions of bounded mean oscillation
- Derives a subrepresentation formula, which in higher dimensions plays a role roughly similar to the one played by the fundamental theorem of calculus in one dimension
- Extends the subrepresentation formula derived for smooth functions to functions with a weak gradient
- Applies the norm estimates derived for fractional integral operators to obtain local and global first-order Poincaré–Sobolev inequalities, including endpoint cases
- Proves the existence of a tangent plane to the graph of a Lipschitz function of several variables
- Includes many new exercises not present in the first edition

This widely used and highly respected text for upper-division undergraduate and first-year graduate students of mathematics, statistics, probability, or engineering is revised for a new generation of students and instructors. The book also serves as a handy reference for professional mathematicians.

Now considered a classic text on the topic, *Measure and Integral: An Introduction to Real Analysis* provides an introduction to real analysis by first developing the theory of measure and integration in the simple setting of Euclidean space, and then presenting a more general treatment based on abstract notions characterized by axioms and with less geometric content. Published nearly forty years after the first edition, this long-awaited Second Edition also:

- Studies the Fourier transform of functions in the spaces L^1 , L^2 , and L^p , $1 < p < 2$
- Shows the Hilbert transform to be a bounded operator on L^2 , as an application of the L^2 theory of the Fourier transform in the one-dimensional case
- Covers fractional integration and some topics related to mean oscillation properties of functions, such as the classes of Hölder continuous functions and the space of functions of bounded mean oscillation
- Derives a subrepresentation formula, which in higher dimensions plays a role roughly similar to the one played by the fundamental theorem of calculus in one dimension
- Extends the subrepresentation formula derived for smooth functions to functions with a weak gradient
- Applies the norm estimates derived for fractional integral operators to obtain local and global first-order Poincaré–Sobolev inequalities, including endpoint cases
- Proves the existence of a tangent plane to the graph of a Lipschitz function of several variables
- Includes many new exercises not present in the first edition

This widely used and highly respected text for upper-division undergraduate and first-year graduate students of mathematics, statistics, probability, or engineering is revised for a new generation of students and instructors. The book also serves as a handy reference for professional mathematicians.



173,00 €

173,00 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781498702898

Medium: Buch

ISBN: 978-1-4987-0289-8

Verlag: Chapman and Hall/CRC

Erscheinungstermin: 24.04.2015

Sprache(n): Englisch

Auflage: 2. Auflage 2015

Serie: Chapman & Hall/CRC Pure and Applied Mathematics

Produktform: Gebunden

Gewicht: 1150 g

Seiten: 536

Format (B x H): 161 x 240 mm

