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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Trigonometric polynomials -- Function spaces on T^d -- Linear approximation -- Sampling recovery -- Entropy numbers -- Best m-term approximation -- Numerical integration -- Related problems -- High-dimensional approximation -- Appendix.
Sommario/riassunto	This book provides a systematic survey of classical and recent results on hyperbolic cross approximation. Motivated by numerous applications, the last two decades have seen great success in studying multivariate approximation. Multivariate problems have proven to be considerably more difficult than their univariate counterparts, and recent findings have established that multivariate mixed smoothness classes play a fundamental role in high-dimensional approximation. The book presents essential findings on and discussions of linear and nonlinear approximations of the mixed smoothness classes. Many of the important open problems explored here will provide both students and professionals with inspirations for further research.