

1. Record Nr.	UNINA9910254089403321
Autore	Bede Barnabas
Titolo	Approximation by max-product type operators / / by Barnabás Bede, Lucian Coroianu, Sorin G. Gal
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-34189-8
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XV, 458 p. 12 illus., 1 illus. in color.)
Disciplina	511.4
Soggetti	Approximation theory Operator theory Information theory Measure theory Approximations and Expansions Operator Theory Information and Communication, Circuits Measure and Integration
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1. Introduction and Preliminaries -- 2. Approximation by Max-Product Bernstein Operators -- 3. Approximation by Max-Product Favard-Szász-Mirakjan Operators -- 4. Approximation by Max-Product Baskakov Operators -- 5. Approximation by Max-Product Bleimann-Butzer-Hahn Operators -- 6. Approximation by Max-Product Meyer-König and Zeller Operators -- 7. Approximation by Max-Product Interpolation Operators -- 8. Approximations by Max-Product Sampling Operators -- 9. Global Smoothness Preservation Properties -- 10. Possibilistic Approaches of the Max-Product Type Operators -- 11. Max-Product Weierstrass Type Functions -- References -- Index.
Sommario/riassunto	This monograph presents a broad treatment of developments in an area of constructive approximation involving the so-called "max-product" type operators. The exposition highlights the max-product operators as those which allow one to obtain, in many cases, more valuable estimates than those obtained by classical approaches. The

text considers a wide variety of operators which are studied for a number of interesting problems such as quantitative estimates, convergence, saturation results, localization, to name several. Additionally, the book discusses the perfect analogies between the probabilistic approaches of the classical Bernstein type operators and of the classical convolution operators (non-periodic and periodic cases), and the possibilistic approaches of the max-product variants of these operators. These approaches allow for two natural interpretations of the max-product Bernstein type operators and convolution type operators: firstly, as possibilistic expectations of some fuzzy variables, and secondly, as bases for the Feller type scheme in terms of the possibilistic integral. These approaches also offer new proofs for the uniform convergence based on a Chebyshev type inequality in the theory of possibility. Researchers in the fields of approximation of functions, signal theory, approximation of fuzzy numbers, image processing, and numerical analysis will find this book most beneficial. This book is also a good reference for graduates and postgraduates taking courses in approximation theory.
