Part 2 contains five chapters, the first four of which are in parallel with the four chapters of part 1 (even with the same titles), but in the multivariate setting. The fifth chapter in part 2 deals with summability for the two-variable case using a method of Marcinkiewicz type. Several aspects of the theory of multiple trigonometric series, the existence and properties of the conjugates and Hilbert transforms, convergence (pointwise and in L^p), and summability are covered, very much in parallel with the development of the theory for one variable in part 1. However, special emphasis is placed on the new effects which arise when dealing with multiple series and which are not present in the one-variable case. Many results of the author are presented here, often with new proofs that were not published before.

All chapters follow the same pattern: first a brief survey of known results is given, then some deeper results are treated in more detail, and at the end of each chapter some unsolved problems are formulated. The latter makes this book a very useful source of research problems, recommended for new researchers in this area.

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ARTICLE NO. AT973149

Proceedings

Total Positivity and Its Applications, M. Gasca and C. A. Micchelli, Eds., Mathematics and Its Applications **359**, Kluwer, Dordrecht, 1996, x + 518 pp.

This volume contains the invited lectures and contributed talks presented at the meeting on *Total Positivity and Its Applications*, held at the University of Zaragoza in Jaca, Spain, during the week of September 26–30, 1994. The book is dedicated to S. Karlin, who had planned to attend the meeting but had to cancel his participation. However, he managed to prepare a few contributions for these proceedings. The book has 10 sections dealing with spline functions, matrix theory, geometric modeling, probability and mathematical biology, approximation theory, complex analysis, statistics, real analysis, combinatorics, and integral equations. In all there are 23 contributions.

ARTICLE NO. AT973150

Approximation Theory VIII, C. K. Chui and L. L. Schumaker, Eds., Series in Approximations and Decompositions **6**, World Scientific, Singapore, 1995, *Vol. I: Approximation and Interpolation*, xxxi + 604 pp., *Vol. II: Wavelets and Multilevel Approximation*, xxix + 452 pp.

This is the collection of the refereed papers presented at the 8th Texas *International Conference on Approximation Theory*, College Station, Texas, January 8–12, 1995. The first volume, *Approximation and Interpolation*, includes contributions of such important areas as qualitative approximations, interpolation theory, rational approximation, radial-basis functions, and splines. The second volume, *Wavelets and Multilevel Approximation*, focuses on topics related to wavelet analysis, including multiresolution analysis, multilevel approximation, subdivision schemes in computer aided geometric design, and applications.

ARTICLE NO. AT973151