

# Contents

Preface	v
Fractional integration and fractional differentiation for $d$ -dimensional Jacobi expansions	
CRISTINA BALDERRAMA and WILFREDO O. URBINA R.	1
Sutherland-type trigonometric models, trigonometric invariants, and multivariate polynomials	
K. G. BORESKOV, A. V. TURBINER, and J. C. LÓPEZ VIEYRA	15
Polynomials associated with partitions: Asymptotics and zeros	
ROBERT P. BOYER and WILLIAM M. Y. GOH	33
A generating function for the $N$ -soliton solutions of the Kadomtsev–Petviashvili II equation	
SARBARISH CHAKRAVARTY and YUJI KODAMA	47
Asymptotics of the second Painlevé equation	
PETER A. CLARKSON	69
Evaluation of certain Mellin transformations in terms of the trigamma and polygamma functions	
MARK W. COFFEY	85
Conformal maps to generalized quadrature domains	
DARREN CROWDY and JONATHAN MARSHALL	105
Approximations for zeros of Hermite functions	
ÁRPÁD ELBERT and MARTIN E. MULDOON	117
Inequalities and bounds for elliptic integrals II	
HASEEB KAZI and EDWARD NEUMAN	127
P-symbols, Heun identities, and ${}_3F_2$ identities	
ROBERT S. MAIER	139
An iterative method for numerical integration of rational functions	
DANTE MANNA and VICTOR H. MOLL	161
A Taylor expansion theorem for an elliptic extension of the Askey–Wilson operator	
MICHAEL J. SCHLOSSER	175
Ramanujan’s symmetric theta functions in his Lost Notebook	
SEUNG H. SON	187

Integral representations for products of Airy functions and their fractional derivatives

VLADIMIR VARLAMOV

203