

Editorial Introduction

This volume is dedicated to the 70th anniversary of the outstanding Russian mathematician Igor Borisovich Simonenko. He studied and worked all his life at the Rostov State University in Southern Russia. I.B. Simonenko is the founder and head of the widely known mathematical school at Rostov University. His ideas and methods have been successfully used and developed by many mathematicians in other scientific centers of the former Soviet Union and many other countries of the world. We, his colleagues, are especially indebted for his outstanding Theory of Operators of Local Type with the contributions to the theory of singular integral, convolution, and pseudodifferential operators as well as his Averaging Method in Hydrodynamics Problems. These contributions certainly enriched analysis and its applications.

The book consists of a selection of 15 papers written by leading experts in modern operator theory and its applications. The topics reflect the wide range and rich variety of areas of interest, achievement and influence of I.B. Simonenko. Also included are a description of the life and work of I.B. Simonenko and the list of his publications. The articles are related to functional, Toeplitz and Toeplitz plus Hankel, local and nonlocal, singular integral and convolution operators, and to continual analogs of resultant operators. They analyze and solve problems of factorization, irreducibility, asymptotics of determinants, finite sections, and index problems for different types of operators. The applications concern problems in financial mathematics and in hydrodynamics.

We wish Igor Borisovich health and success in his post-seventies.

The Editors