1. Record Nr. UNINA9910886065703321

Autore	Moslehian Mohammad Sal <1966->
Titolo	Advanced Techniques with Block Matrices of Operators / / by Mohammad Sal Moslehian, Hiroyuki Osaka
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Birkhäuser, , 2024
ISBN	3-031-64546-4
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (226 pages)
Collana	Frontiers in Mathematics, , 1660-8054
Disciplina	512.9434
Soggetti	Operator theory Operator Theory Matrius (Matemàtica) Teoria d'operadors Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1 Matrices and Hilbert Space Operators -- 2 Block Matrices of Operators -- 3 Operator Monotone Functions and Positive Maps -- 4 Operator Variance and Covariance -- 5 Nonlinear Positive Maps -- Bibliography.
Sommario/riassunto	This book introduces several powerful techniques and fundamental ideas involving block matrices of operators, as well as matrices with elements in a C*-algebra. These techniques allow for the solution of problems that may be difficult to treat. Specifically, 2×2 operator matrices yield significant mathematical inequalities in various fields of operator theory and matrix analysis. The authors employ block matrices to simplify complicated problems. Operator matrices have garnered attention for their applications in quantum information and computing theories. Each chapter concludes with a diverse set of exercises and problems for readers, along with references to relevant literature. Some problems pose open questions, while others challenge readers and provide suggestions for future research. This book is suitable for an advanced undergraduate or graduate course and can be used in the classroom. It also serves as a valuable resource for researchers and students in mathematics and physics who have a basic

understanding of linear algebra, functional analysis, and operator theory.