Rosenthal / Radjavi

# Simultaneous Triangularization

A collection of matrices is said to be triangularizable if there is an invertible matrix S such that S1 AS is upper triangular for every A in the collection. This generalization of commutativity is the subject of many classical theorems due to Engel, Kolchin, Kaplansky, McCoy and others. The concept has been extended to collections of bounded linear operators on Banach spaces: such a collection is defined to be triangularizable if there is a maximal chain of subspaces of the Banach space, each of which is invariant under every member of the collection. Most of the classical results have been generalized to compact operators, and there are also recent theorems in the finite-dimensional case. This book is the first comprehensive treatment of triangularizability in both the finite and infinite-dimensional cases. It contains numerous very recent results and new proofs of many of the classical theorems. It provides a thorough background for research in both the linear-algebraic and operator-theoretic aspects of triangularizability and related areas. More generally, the book will be useful to anyone interested in matrices or operators, as many of the results are linked to other topics such as spectral mapping theorems, properties of spectral radii and traces, and the structure of semigroups and algebras of operators. It is essentially self-contained modulo solid courses in linear algebra (for the first half) and functional analysis (for the second half), and is therefore suitable as a text or reference for a graduate course.

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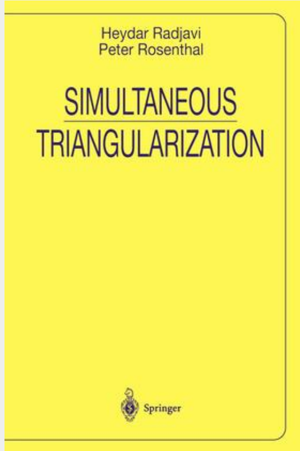


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