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   Nota di contenuto   Front matter -- Contents -- Preface -- Chapter 1. Cones of Hermitian
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   Sommario/riassunto   Intensive research in matrix completions, moments, and sums of
                        Hermitian squares has yielded a multitude of results in recent decades.
                        This book provides a comprehensive account of this quickly developing
                        area of mathematics and applications and gives complete proofs of
                        many recently solved problems. With MATLAB codes and more than 200
                        exercises, the book is ideal for a special topics course for graduate or
                        advanced undergraduate students in mathematics or engineering, and
                        will also be a valuable resource for researchers. Often driven by
                        questions from signal processing, control theory, and quantum
                        information, the subject of this book has inspired mathematicians from
                        many subdisciplines, including linear algebra, operator theory, measure
                        theory, and complex function theory. In turn, the applications are being
                        pursued by researchers in areas such as electrical engineering,
                        computer science, and physics. The book is self-contained, has many
                        examples, and for the most part requires only a basic background in
                        undergraduate mathematics, primarily linear algebra and some

complex analysis. The book also includes an extensive discussion of the literature, with close to 600 references from books and journals from a wide variety of disciplines.