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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.