

1. Record Nr.	UNINA9910450557103321
Autore	Steele J. Michael
Titolo	The Cauchy-Schwarz master class : an introduction to the art of mathematical inequalities // J. Michael Steele [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2004
ISBN	1-316-09932-6 1-107-15043-4 9786613329264 0-511-21311-5 0-511-21134-1 1-283-32926-3 0-511-81710-X 0-511-21492-8 0-511-21671-8 0-511-56706-5
Descrizione fisica	1 online resource (x, 306 pages) : digital, PDF file(s)
Collana	MAA problem books series
Disciplina	512.9/7
Soggetti	Inequalities (Mathematics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. 292-301) and index.
Nota di contenuto	Cover; Half-title; Series-title; Title; Copyright; Contents; Preface; 1 Starting with Cauchy; 2 Cauchy's Second Inequality: The AM-GM Bound; 3 Lagrange's Identity and Minkowski's Conjecture; 4 On Geometry and Sums of Squares; 5 Consequences of Order; 6 Convexity - The Third Pillar; 7 Integral Intermezzo; 8 The Ladder of Power Means; 9 Holder's Inequality; 10 Hilbert's Inequality and Compensating Difficulties; 11 Hardy's Inequality and the Flop; 12 Symmetric Sums; 13 Majorization and Schur Convexity; 14 Cancellation and Aggregation; Solutions to the Exercises; Chapter Notes; References; Index
Sommario/riassunto	This lively, problem-oriented text, first published in 2004, is designed to coach readers toward mastery of the most fundamental mathematical inequalities. With the Cauchy-Schwarz inequality as the initial guide, the reader is led through a sequence of fascinating

problems whose solutions are presented as they might have been discovered - either by one of history's famous mathematicians or by the reader. The problems emphasize beauty and surprise, but along the way readers will find systematic coverage of the geometry of squares, convexity, the ladder of power means, majorization, Schur convexity, exponential sums, and the inequalities of Holder, Hilbert, and Hardy. The text is accessible to anyone who knows calculus and who cares about solving problems. It is well suited to self-study, directed study, or as a supplement to courses in analysis, probability, and combinatorics.

---