

1. Record Nr.	UNINA9910779008403321
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Titolo	Antieigenvalue analysis [[electronic resource]] : with applications to numerical analysis, wavelets, statistics, quantum mechanics, finance and optimization / / Karl Gustafson
Pubbl/distr/stampa	Singapore, : World Scientific Pub. Co., 2012
ISBN	1-280-66966-7 9786613646590 981-4366-29-3
Descrizione fisica	1 online resource (259 p.)
Disciplina	519
Soggetti	Eigenvalues Mathematical analysis Numerical analysis Wavelets (Mathematics) Statistics Quantum theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Preface; 1. Introduction; Perspective; 1.1 A Recent Referee Speaks; 1.2 The Original Motivation; 1.3 The Essential Entities; 1.4 Simple Examples and a Picture; 1.5 Applications to-Date; 1.6 Organization of this Book; Commentary; 1.7 Exercises; 2. The Original Motivation: Operator Semigroups; Perspective; 2.1 Abstract Initial Value Problems; 2.2 The Hille-Yosida-Phillips-Lumer Theorem; 2.3 The Rellich-Kato-Nelson-Gustafson Theorem; 2.4 The Multiplicative Perturbation Theorem; 2.5 When are Positive Operator Products Positive?; 2.6 Nonnegative Contraction Semigroups; Commentary 2.7 Exercises3. The Essentials of Antieigenvalue Theory; Perspective; 3.1 Convexity Properties of Norm Geometry; 3.2 The Min-Max Theorem; 3.3 The Euler Equation; 3.4 Higher Antieigenvalues and Antieigenvectors; 3.5 The Triangle Inequality; 3.6 Extended Operator Trigonometry; Commentary; 3.7 Exercises; 4. Applications in Numerical Analysis; Perspective; 4.1 Gradient Descent: Kantorovich Bound is

Trigonometric; 4.2 Minimum Residual  $Ax = b$  Solvers; 4.3 Richardson Relaxation Schemes (e.g. SOR); 4.4 Very Rich Trigonometry Underlies ADI; 4.5 Domain Decomposition Multilevel Schemes  
4.6 Preconditioning and Condition NumbersCommentary; 4.7 Exercises; 5. Applications in Wavelets, Control, Scattering; Perspective; 5.1 The Time Operator of Wavelets; 5.2 Frame Operator Trigonometry; 5.3 Wavelet Reconstruction is Trigonometric; 5.4 New Basis Trigonometry; 5.5 Trigonometry of Lyapunov Stability; 5.6 Multiplicative Perturbation and Irreversibility; Commentary; 5.7 Exercises; 6. The Trigonometry of Matrix Statistics; Perspective; 6.1 Statistical Efficiency; 6.2 The Euler Equation versus the Inefficiency Equation; 6.3 Canonical Correlations and Rayleigh Quotients  
6.4 Other Statistics Inequalities6.5 Prediction Theory: Association Measures; 6.6 Antieigenmatrices; Commentary; 6.7 Exercises; 7. Quantum Trigonometry; Perspective; 7.1 Bell-Wigner-CHSH Inequalities; 7.2 Trigonometric Quantum Spin Identities; 7.3 Quantum Computing: Phase Issues; 7.4 Penrose Twistor; 7.5 Elementary Particles; 7.6 Trigonometry of Quantum States; Commentary; 7.7 Exercises; 8. Financial Instruments; Perspective; 8.1 Some Remarks on Mathematical Finance; 8.2 Quantos: Currency Options; 8.3 Multi-Asset Pricing: Spread Options; 8.4 Portfolio Rebalancing  
8.5 American Options with Random Volatility8.6 Risk Measures for Incomplete Markets; Commentary; 8.7 Exercises; 9. Other Directions; Perspective; 9.1 Operators; 9.2 Angles; 9.3 Optimization; 9.4 Equalities; 9.5 Geometry; 9.6 Applications; Commentary; 9.7 Exercises; Appendix A Linear Algebra; A.1 Matrix Analysis; A.2 Operator Theory; Appendix B Hints and Answers to Exercises; Chapter 1.; Chapter 2.; Chapter 3.; Chapter 4.; Chapter 5.; Chapter 6.; Chapter 7.; Chapter 8.; Chapter 9.; Bibliography; Index

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#### Sommario/riassunto

Karl Gustafson is the creator of the theory of antieigenvalue analysis. Its applications spread through fields as diverse as numerical analysis, wavelets, statistics, quantum mechanics, and finance. Antieigenvalue analysis, with its operator trigonometry, is a unifying language which enables new and deeper geometrical understanding of essentially every result in operator theory and matrix theory, together with their applications. This book will open up its methods to a wide range of specialists.

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## 2. Record Nr.

UNINA9910689563303321

## Titolo

Proposed change of Utah-Nevada state boundary; amendments to the New Hampshire-Vermont Interstate School Compact; and tax treatment of bonds issued by the government of American Samoa : hearing before the Subcommittee on Commercial and Administrative Law of the Committee on the Judiciary, House of Representatives, One Hundred Seventh Congress, second session, on H.R. 2054, H.R. 3180, and H.R. 1448, March 6, 2002

## Pubbl/distr/stampa

: Washington : U.S. G.P.O.

## Descrizione fisica

1 online resource (iii, 10 p.)

## Soggetti

School districts - Law and legislation - New Hampshire  
School districts - Law and legislation - Vermont  
Interstate agreements - New Hampshire  
Interstate agreements - Vermont  
Government securities - Taxation - Law and legislation - American Samoa  
Utah Boundaries Nevada  
Nevada Boundaries Utah

## Lingua di pubblicazione

Inglese

## Formato

Materiale a stampa

## Livello bibliografico

Monografia