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Autore	McGrayne Sharon Bertsch
Titolo	The theory that would not die [[electronic resource]] : how Bayes' rule cracked the enigma code, hunted down Russian submarines, and emerged triumphant from two centuries of controversy / / Sharon Bertsch McGrayne
Pubbl/distr/stampa	New Haven [Conn.], : Yale University Press, 2011
ISBN	1-283-10192-0 9786613101921 0-300-17509-4
Descrizione fisica	1 online resource (288 p.)
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Soggetti	Bayesian statistical decision theory - History Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	pt. 1. Enlightenment and the Anti-Bayesian reaction -- pt. 2. Second World War era -- pt. 3. The glorious revival -- pt. 4. To prove its worth -- pt. 5. Victory 211.
Sommario/riassunto	"Bayes' rule appears to be a straightforward, one-line theorem: by updating our initial beliefs with objective new information, we get a new and improved belief. To its adherents, it is an elegant statement about learning from experience. To its opponents, it is subjectivity run amok. In the first-ever account of Bayes' rule for general readers, Sharon Bertsch McGrayne explores this controversial theorem and the human obsessions surrounding it. She traces its discovery by an amateur mathematician in the 1740s through its development into roughly its modern form by French scientist Pierre Simon Laplace. She reveals why respected statisticians rendered it professionally taboo for 150 years--at the same time that practitioners relied on it to solve crises involving great uncertainty and scanty information, even breaking Germany's Enigma code during World War II, and explains how the advent of off-the-shelf computer technology in the 1980s proved to be a game-changer. Today, Bayes' rule is used everywhere from DNA

	de-coding to Homeland Security. Drawing on primary source material and interviews with statisticians and other scientists, The Theory That Would Not Die is the riveting account of how a seemingly simple theorem ignited one of the greatest controversies of all time"--

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Autore	Datta Biswa Nath
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ISBN	1-281-03275-1 9786611032753 1-4356-0808-9 0-08-053788-X
Descrizione fisica	1 online resource (736 p.)
Disciplina	629.8/32
Soggetti	Control theory System analysis Linear control systems Electronic books.
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
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Nota di contenuto	Front Cover; Numerical Methods For Linear Control Systems: Design and Analysis; Copyright Page; Contents; Preface; Acknowledgments; About the Author; List of Algorithms; Notations and Symbols; CHAPTER 1. INTRODUCTION AND OVERVIEW; 1.1 Linear and Numerical Linear Algebra (Chapter 2 and Chapters 3 and 4); 1.2 System Responses (Chapter 5); 1.3 Controllability and Observability problems (Chapter 6); 1.4 Stability and Inertia (Chapter 7); 1.5 Lyapunov, Sylvester, and Algebraic Riccati Equations (Chapters 8 and 13); 1.6 Realization and Identification (Chapter 9) 2.2 Orthogonality of Vectors and Subspaces2.3 Matrices; 2.4 Some Special Matrices; 2.5 Vector and Matrix Norms; 2.6 Norm Invariant

Properties Under Unitary Matrix Multiplication; 2.7 Kronecker Product, Kronecker Sum, and Vec Operation; 2.8 Chapter Notes and Further Reading; References; CHAPTER 3. SOME FUNDAMENTAL TOOLS AND CONCEPTS FROM NUMERICAL LINEAR ALGEBRA; 3.1 Introduction; 3.2 Floating Point Numbers and Errors in Computations; 3.3 Conditioning, Efficiency, Stability, and Accuracy; 3.4 LU Factorization; 3.5 Numerical Solution of the Linear System Ax=b; 3.6 The QR Factorization
3.7 Orthonormal Bases and Orthogonal Projections Using QR Factorization3.8 The Least-Squares Problem; 3.9 The Singular Value Decomposition (SVD); 3.10 Summary and Review; 3.11 Chapter Notes and Further Reading; References; CHAPTER 4. CANONICAL FORMS OBTAINED VIA ORTHOGONAL TRANSFORMATIONS; 4.1 Importance and Significance of Using Orthogonal Transformations; 4.2 Hessenberg Reduction of a Matrix; 4.3 The Real Schur Form of A: The QR Iteration Method; 4.4 Computing the Singular Value Decomposition (SVD); 4.5 The Generalized Real Schur Form: The QZ algorithm
4.6 Computing of the Eigenvectors of the Pencil A - B4.7 Summary and Review; 4.8 Chapter Notes and Further Reading; References; PART II: CONTROL SYSTEMS ANALYSIS; CHAPTER 5. LINEAR STATE-SPACE MODELS AND SOLUTIONS OF THE STATE EQUATIONS; 5.1 Introduction; 5.2 State-Space Representations of Control Systems; 5.3 Solutions of a Continuous-Time System: System Responses; 5.4 State-Space Solution of the Discrete-Time System; 5.5 Transfer Function and Frequency Response; 5.6 Some Selected Software; 5.7 Summary and Review; 5.8 Chapter Notes and Further Reading; Exercises; References
CHAPTER 6. CONTROLLABILITY, OBSERVABILITY, AND DISTANCE TO UNCONTROLLABILITY

Sommario/riassunto

Numerical Methods for Linear Control Systems Design and Analysis is an interdisciplinary textbook aimed at systematic descriptions and implementations of numerically-viable algorithms based on well-established, efficient and stable modern numerical linear techniques for mathematical problems arising in the design and analysis of linear control systems both for the first- and second-order models. MATLAB-based software is included for implementing all of the major algorithms from the book.* Unique coverage of modern mathematical concepts such as parallel computations, second-order system