

1.	Record Nr.	UNICAMPANIAVAN00264397
	Titolo	Community Ecology : A Workshop held at Davis, CA, April 1986 / edited by Alan Hastings
	Pubbl/distr/stampa	Berlin, : Springer, 1988
	Descrizione fisica	vii, 131 p. : ill. ; 24 cm
	Soggetti	92-XX - Biology and other natural sciences [MSC 2020] 92D40 - Ecology [MSC 2020]
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
2.	Record Nr.	UNICAMPANIAVAN00133085
	Titolo	Europa umana : scritti in onore di Paulo Pinto De Albuquerque / a cura di Davide Galliani, Emilio Santoro
	Pubbl/distr/stampa	Pisa, : Pacini giuridica, 2020
	ISBN	978-88-337-9291-0
	Descrizione fisica	808 p. ; 24 cm.
	Lingua di pubblicazione	Italiano
	Formato	Materiale a stampa
	Livello bibliografico	Monografia

3. Record Nr.	UNINA9911020350103321
Titolo	Orthogonal sets and polar methods in linear algebra : applications to matrix calculations, systems of equations, inequalities, and linear programming / / Enrique Castillo ... [et al.]
Pubbl/distr/stampa	New York, : Wiley, c1999
ISBN	9786613306234 9781283306232 1283306239 9781118032893 1118032896 9781118031148 1118031148
Descrizione fisica	1 online resource (440 p.)
Collana	Pure and applied mathematics
Altri autori (Persone)	CastilloEnrique <1946->
Disciplina	512.5
Soggetti	Algebras, Linear Orthogonalization methods
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 (p. 415-418) and index.
Nota di contenuto	Orthogonal Sets and Polar Methods in Linear Algebra: Applications to Matrix Calculations, Systems of Equations, Inequalities, and Linear Programming; Contents; Part I Linear Spaces and Systems of Equations; 1 Basic Concepts; 1.1 Introduction; 1.2 Linear space; 1.3 The Euclidean Space $E_n$ ; 1.4 Orthogonal Sets and Decompositions; 1.5 Matrices; 1.6 Systems of Linear Equations; Exercises; 2 Orthogonal Sets; 2.1 Introduction and Motivation; 2.2 Orthogonal Decompositions; 2.3 The Orthogonalization Module; 2.4 Mathematica Program; Exercises; 3 Matrix Calculations Using Orthogonal Sets 3.1 Introduction3.2 Inverting a Matrix; 3.3 The Rank of a Matrix; 3.4 Calculating the Determinant of a Matrix; 3.5 Algorithm for Matrix Calculations; 3.6 Complexity; 3.7 Inverses and Determinants of Row-Modified Matrices; 3.8 Inverses of Symbolic Matrices; 3.9 Extensions to Partitioned Matrices; 3.10 Inverses of Modified Matrices; 3.11 Mathematica Programs; Exercises; 4 More Applications of Orthogonal

Sets; 4.1 Intersection of Two Linear Subspaces; 4.2 Reciprocals Images in Linear Transformations; 4.3 Other Applications; 4.4 Mathematica Programs; Exercises

5 Orthogonal Sets and Systems of Linear Equations 5.1 Introduction; 5.2 Compatibility of a System of Linear Equations; 5.3 Solving a System of Linear Equations; 5.4 Complexity; 5.5 Checking Systems Equivalence; 5.6 Solving a System in Some Selected Variables; 5.7 Modifying Systems of Equations; 5.8 Applications; 5.9 Mathematica Programs; Exercises; Appendix: Proof of Lemma 5.2; Part II Cones and Systems of Inequalities; 6 Polyhedral Convex Cones; 6.1 Introduction; 6.2 Convex Sets; 6.3 Types of Linear Combinations; 6.4 Polyhedral Convex Cones; 6.5 The  $\epsilon$ -Process; 6.6 The Complete  $\epsilon$ -Algorithm

6.7 Mathematica Program Exercises; 7 Polytopes and Polyhedra; 7.1 Introduction; 7.2 Polytopes; 7.3 Polyhedra; Exercises; 8 Cones and Systems of Inequalities; 8.1 Introduction; 8.2 A Discussion of Linear Systems; 8.3 Solving Linear Systems; 8.4 Applications to Linear Programming; Exercises; Part III Linear Programming; 9 An Introduction to Linear Programming; 9.1 Introduction; 9.2 Problem Statement and Basic Definitions; 9.3 Linear Programming Problem in Standard Form; 9.4 Basic Solutions; 9.5 Duality; Exercises; 10 The Exterior Point Method; 10.1 Introduction; 10.2 The Exterior Point Method

10.3 Making the EPM More Efficient 10.4 Complexity; 10.5 Recovering the Final Tableau from the Solution; 10.6 Modifying a Linear Programming Problem; Exercises; Part IV Applications; 11 Applications; 11.1 Introduction; 11.2 Matrix Analysis of Engineering Structures; 11.3 The Transportation Problem; 11.4 Production-Scheduling Problems; 11.5 The Input-Output Tables; 11.6 The Diet Problem; 11.7 Network Flow Problems; Exercises; Part V Appendices; Appendix A: A Java Application; A.I How to Use the Program; Appendix B: List of Notation; References; Index

## Sommario/riassunto

A unique, applied approach to problem solving in linear algebra Departing from the standard methods of analysis, this unique book presents methodologies and algorithms based on the concept of orthogonality and demonstrates their application to both standard and novel problems in linear algebra. Covering basic theory of linear systems, linear inequalities, and linear programming, it focuses on elegant, computationally simple solutions to real-world physical, economic, and engineering problems. The authors clearly explain the reasons behind the analysis of different structures and concept