1. Record Nr. UNIORUON00510572

Autore	Calin, Ovidiu
Titolo	An informal introduction to stochastic calculus with applications / Ovidiu Calin
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Soggetti	CALCOLO DELLE PROBABILITA' - Fondamenti STOCASTICA
Lingua di pubblicazione	Inglese
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2. Record Nr. UNINA9911006700103321

Autore	Beckenbach Edwin F
Titolo	Modern Mathematics for the Engineer
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Livello bibliografico	Monografia

Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Halftitle; Title Page; Copyright Page; The Authors; Foreword to the 1956 Edition; Preface to the 1956 Edition; Contents; Introduction; PART 1. MATHEMATICAL MODELS; 1 Linear and Nonlinear Oscillations BY SOLOMON LEFSCHETZ; 1.1 Introduction; 1.2 Harmonic Oscillators; 1.3 Damped Oscillations; 1.4 Forced Oscillations; 1.5 Linear and Nonlinear Systems; 1.6 Certain Nonlinear Systems; 1.7 Nonlinear Oscillations in Conservative Systems; 1.8 Nonlinear Forced Oscillations; 1.9 Multivibrator Circuits; 1.10 Mathematical Treatment of Nonlinear Problems; 1.11 Methods of Approximation 1.12 Duffing's Method1.13 Poincare's Perturbation Method; 2 Equilibrium Analysis: The Stability Theory and Liapunov BY RICHARD BELLMAN; 2.1 Introduction; 2.2 The Stability Theory of Poincare and Liapunov; 2.3 Stability Theory of Linear Equations; 2.4 Differential-difference Equations; 2.5 The Heat Equation; 3 Exterior Ballistics BY JOHN W. GREEN; 3.1 Introduction; 3.2 Selection of Coordinate Systems; 3.3 Aerodynamic Forces on a Projectile; 3.4 The Equations of Motion; 3.5 Ballistic and Firing Tables; 3.6 Corrections for Small Effects; 3.7 Bombing from Airplanes 3.8 Effects of Aerodynamic Forces Other than Drag3.9 Conclusion and References; 4 Elements of the Calculus of Variations BY MAGNUS R. HESTENES; 4.1 Introduction; 4.2 Some Elementary Variational Problems; 4.3 General Statements of Problems; Necessary Conditions for a Minimum; 4.4 Derivation of the Euler Equations; 4.5 Special Cases; 4.6 Integrands of the Form f(x, y); 4.7 Hamilton's Principle; 4.8 Hamiltonians; 4.9 Isoperimetric Problems; 4.10 Variable End-point Problems; 4.11 Minima of Functions of Integrals; 4.12 Problem of Bolza; 4.13 Multiple-integral Problems 5 Hyperbolic Partial Differential Equations and Applications BY RICHARD COURANT5.1 Introduction; 5.2 Relation between Partial Differential Equations and Reality; 5.3 Statistical Processes and Partial Differential Equations; 5.4 Classification of Linear Partial Differential Equations; Plane Waves; 5.5 Initial-value Problem for the Wave Equation; 5.6 Nonlinear Hyperbolic Equations; 5.7 Finite-difference Methods; 6 Boundary-value Problems in Elliptic Partial Differential Equations BY MENAHEM M. SCHIFFER; 6.1 What Is a Properly Posed Problem in Partial Differential Equations? 6.2 Theory of Heat Conduction the Three Main Boundary-value Problems; 6.3 Fundamental Singularities and Green's Functions; 6.4 Maximum Principle, Kernel Function, and Dirichlet Integral; 6.5 Illustrations from Fluid Dynamics and Electrostatics; 6.6 Variation of the Green's Functions with the Domain; 6.7 Variation of the Green's Functions with the Coefficients of the Differential Equation; 7 The Elastostatic Boundary-value Problems BY IVAN S. SOKOLNIKOFF; Formulation of Problems; 7.1 Introduction; 7.2 Two Basic Types of Problems; 7.3 Characterization of Displacements; Strain 7.4 Characterization of the State of Stress
Sommario/riassunto	This volume and its successor were conceived to advance the level of mathematical sophistication in the engineering community. The books particularly focus on material relevant to solving the kinds of mathematical problems regularly confronted by engineers. Suitable as a text for advanced undergraduate and graduate courses as well as a reference for professionals, Volume One's three-part treatment covers mathematical models, probabilistic problems, and computational considerations. Contributions include chapters on linear and nonlinear oscillations by Solomon Lefschetz, on hyperbolic partial