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Nota di contenuto	Intro -- Preface -- Contents -- 1 Philosophers, Mathematics and Motion -- 1.1 Motion Does Not Exist -- 1.2 Mathematics and the Idealist Tradition in Greek Philosophy -- 1.3 Mathematics and Motion -- 1.4 Aristotle Refutes Zeno -- 1.5 Zeno's Trick: Motion Is Interpreted as a Super-Task -- 1.6 The Neo-platonist Ontological Hierarchy -- 1.7 The Postulates 1 Through 3 in Neo-platonism: Proclus Solution -- 1.8 Zeuthen's Thesis -- 2 Motion Beyond the Elements -- 2.1 The Euclidean Construction Game -- 2.2 The Incompleteness of the Euclidean Construction Game -- 2.3 Archytas of Tarente -- 2.4 A Solution from Plato's Academy -- 2.5 Menaechmus and Conic Sections -- 2.6 A Remarkable Application and Heron's Solution -- 2.7 The Doubling of the Cube: Eratosthenes' Instrument -- 2.8 The Neusis-Construction and the Conchoids -- 2.9 Diocles' Cissoid -- 3 General Considerations and Kinematical Aspects of Motion -- 3.1 Pappus' Classification -- 3.2 Composition of Different Uniform Motions: The Quadratrix -- 3.3 Time-Dependent Kinematical Aspects of Motion -- 3.4 Composition of Uniform Motions and Paradoxes of Motion

in Mechanical Problems -- 3.5 A Remark on Methodology and a Theorem by Archimedes on Uniform Motion -- 3.6 Archimedes: Motion in Geometry -- 4 Kinematical Models in Astronomy -- 4.1 Plato and Astronomy -- 4.2 The Model in Plato's Timaeus -- 4.3 Eudoxus' Models -- 4.4 Apollonius' Epicycle Model -- 4.5 Hipparchus' Theory of the Motion of the Sun (About 150 BCE) -- 4.6 Ptolemy' Contributions -- 4.7 Ptolemy's Contributions Continued -- 4.8 Astronomy in the Islamic World: The Tusi-Couple -- 5 The Birth of Instantaneous Velocity -- 5.1 Introduction -- 5.2 Velocity Distributions in Space and Time -- 5.3 The Average Velocity of a Rotating Radius -- 5.4 The Average Velocity of a Rotating Disc -- 5.5 Bradwardine: Towards Instantaneous Velocity.
5.6 Dumbleton and the Merton Theorem -- 5.7 Giovanni Casali and Nicole Oresme -- 5.8 Acceleration: Euler and Newton's Second Law -- 6 The Parallelogram of Instantaneous Velocities -- 6.1 Introduction -- 6.2 Gilles Personne de Roberval: The Tangent as the Line of Instantaneous Advance -- 6.3 Isaac Newton on Tangents -- 6.4 D'Alembert on the Parallelogram of Instantaneous Velocities -- 6.5 A Philosophical Aside and Kant on the Parallelogram of Velocities -- 7 Napier, Fermat, Descartes -- 7.1 Introduction -- 7.2 John Napier's Kinematical Definition of the Logarithm and Torricelli's 'Logarithmica' -- 7.3 Pierre de Fermat and Motion in His Introduction to Plane and Solid Loci -- 7.4 René Descartes -- 7.5 Descartes' Ambitions and His New Compasses -- 7.6 Algebra Comes In -- 7.7 Pappus' Problem -- 7.8 An Example: The Turning Ruler and Moving Curve Procedure -- 7.9 Descartes' Solution of Pappus' 5-Line Problem -- 7.10 The Use of Strings -- 7.11 The Final Results -- 8 De Witt, van Schooten, Newton and Huygens -- 8.1 Frans van Schooten Junior -- 8.2 Jan de Witt -- 8.3 Frans van Schooten Junior: Mechanisms to Draw a Parabola -- 8.4 Frans van Schooten Junior: Mechanisms to Draw an Ellipse -- 8.5 Frans van Schooten Junior: Mechanisms to Draw a Hyperbola -- 8.6 Isaac Newton, Motion and the Fundamental Theorem of the Calculus -- 8.7 The Method of Fluxions -- 8.8 Circular Motion in the Work of Huygens and Newton -- 8.9 Huygens and Gear Trains -- 8.9.1 Leibniz and Transcendental Curves -- 9 Towards Theoretical Kinematics -- 9.1 The Instantaneous Center of Rotation, Descartes and Johann Bernoulli -- 9.2 The Cycloid -- 9.3 The Inflexion Circle -- 9.4 De La Hire's Proof -- 9.5 Elliptic Motion -- 9.6 Epicycloidal Gearing -- 9.7 The Euler-Savary Formula -- 9.8 Euler and the Euler-Savary Formula -- 9.9 The Instantaneous Axis of Rotation in Spherical Kinematics.
9.10 Giulio Mozzi and the Instantaneous Screw Axis -- 10 Theoretical Kinematics as a Subject in Its Own Right -- 10.1 Introduction -- 10.2 Augustin Louis Cauchy's 1827 Paper -- 10.3 Michel Chasles -- 10.4 Bobillier's Theorem -- 10.5 Jacques Antoine Charles Bresse -- 10.6 The Ball Points -- 11 Towards a New Theory of Machines -- 11.1 Introduction -- 11.2 Lazare Carnot -- 11.3 Collisions of Hard Bodies and Geometrical Movements -- 11.4 The First Fundamental Equation -- 11.5 The Second Fundamental Equation -- 11.6 Gaspard Monge -- 11.7 The Theory of Machines in France in the First Half of the Nineteenth Century -- 11.8 Coriolis' View of Machines -- 11.9 An Example of a Calculation -- 11.10 The Coriolis Force -- 11.11 Riccioli and Grimaldi Noticed the Coriolis-Effect in 1651 -- 12 The New Science Is Given a Name: Kinematics -- 12.1 A New Classification of the Sciences -- 12.2 Robert Willis' Principles of Mechanism -- 12.3 Henri Résal's Traité de Cinématique Pure -- 12.4 Kinematics as the Essence of Theoretical Mechanics -- 13 Developments in Kinematics of Mechanisms -- 13.1 Scheiner's Pantograph -- 13.2

The Year 1784 -- 13.3 Sweet Simplicity -- 13.4 Early Theoretical Interest in Watts Linkages -- 13.5 Peaucellier -- 13.6 Lipman Lipkin -- 14 The Work of English Mathematicians on Linkages during the Period 1869-1878 -- 14.1 Chebyshev's Role -- 14.2 Roberts' Work in Kinematics Before Sylvester's Lecture -- 14.3 Kempe's First Paper -- 14.4 Sylvester's Role -- 14.5 Roberts' Theorem -- 14.6 Some Remarks About Further Work -- 14.7 Concluding Remarks -- 15 Franz Reuleaux, Kinematics as the Essence of Mechanical Engineering -- 15.1 Introduction -- 15.2 Franz Reuleaux -- 15.3 The Central Idea: The Kinematical Chain -- 15.4 Incomplete Pairs and Chains -- 15.5 Higher Kinematical Pairs -- 15.6 Equivalent Mechanisms -- 15.7 Equivalent Rotary Engines.
15.8 Analysis Versus Synthesis -- 16 Ludwig Burmester, Kinematics as Part of Geometry -- 16.1 Introduction -- 16.2 Burmester's Work -- 16.3 The Lehrbuch der Kinematik: Its Contents -- 16.4 An Example: Stephenson's Motion -- 16.5 Martin Grübler -- 16.6 A Note on Chebyshev -- 16.7 Grübler on Classifying Kinematical Chains -- 16.8 The Burmester Theory and the Burmester Points -- 16.9 On the Reception of Burmester's Work -- 16.10 Reuleaux' Criticism of Burmester -- 16.11 Some Nineteenth Century Developments Elsewhere -- 17 Albert Einstein, the Kinematics of Special Relativity -- 17.1 Introduction -- 17.2 The Principle of Relativity -- 17.3 The Principle of the Constancy of Light and the Paradox -- 17.4 The Willingness to Give Up the Axiom of the Absoluteness of Time -- 17.5 Checking the Inspiration -- 17.6 The Technical Development in the 1905 Paper -- 17.7 Derivation of the Differential Equation for = (x, y, z, t) -- 17.8 The Determination of (x, y, z, t), (x, y, z, t) and (x, y, z, t) -- 17.9 Towards the Formulae of the Lorentz Transformation -- 17.10 The Twin Paradox -- 18 Minkowski: The Universe Is a 4-Dimensional Manifold -- 18.1 Empiricists and Rationalists -- 18.2 Developments in Geometry -- 18.3 Hilbert's Influence and Minkowski's Rationalism -- 18.4 Minkowski and Relativity -- 18.5 A 4-Dimensional Interpretation of Newtonian Mechanics -- 18.6 Special Relativity Deduced a Priori -- 18.7 The Twin Paradox -- 19 Kinematics in the 20th Century -- 19.1 The Twentieth Century -- 19.2 Institutionalization -- 19.3 Twentieth Century Mathematicians Working in Kinematics -- Bibliography -- Index.

Sommario/riassunto

This book covers the history of kinematics from the Greeks to the 20th century. It shows that the subject has its roots in geometry, mechanics and mechanical engineering and how it became in the 19th century a coherent field of research, for which Ampère coined the name kinematics. The story starts with the important Greek tradition of solving construction problems by means of kinematically defined curves and the use of kinematical models in Greek astronomy. As a result in 17th century mathematics motion played a crucial role as well, and the book pays ample attention to it. It is also discussed how the concept of instantaneous velocity, unknown to the Greeks, etc was introduced in the late Middle Ages and how in the 18th century, when classical mechanics was formed, kinematical theorems concerning the distribution of velocity in a solid body moving in space were proved. The book shows that in the 19th century, against the background of the industrial revolution, the theory of machines and thus the kinematics of mechanisms received a great deal of attention. In the final analysis, this led to the birth of the discipline.