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Titolo	Fundamentals of Biomechanics : Equilibrium, Motion, and Deformation // by Nihat Özkaya, Dawn Leger, David Goldsheyder, Margareta Nordin
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ISBN	3-319-44738-6
Edizione	[4th ed. 2017.]
Descrizione fisica	1 online resource (XV, 454 p. 554 illus., 4 illus. in color.)
Disciplina	612.76
Soggetti	Human physiology Sports medicine Biomedical engineering Orthopedics Rehabilitation Human Physiology Sports Medicine Biomedical Engineering and Bioengineering Biomedical Engineering/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Preface -- 1. Introduction -- 2. Force Vector -- 3. Moment And Torque Vectors -- 4. Statics: Systems in Equilibrium -- 5. Applications of Statics to Biomechanics -- 6. Introduction to Dynamics -- 7. Linear Kinematics -- 8. Linear Kinetics -- 9. Angular Kinematics -- 10. Angular Kinetics -- 11. Impulse and Momentum -- 12. Introduction to Deformable Body Mechanics -- 13. Stress & Strain -- 14. Multiaxial Deformations & Stress Analyses -- 15. Mechanical Properties of Biological Tissues -- Appendix A. Plane Geometry -- Appendix B. Vector Algebra -- Appendix C. Calculus -- Index.
Sommario/riassunto	This textbook integrates the classic fields of mechanics—statics, dynamics, and strength of materials—using examples from biology and medicine. The book is excellent for teaching either undergraduates in biomedical engineering programs or health care professionals studying biomechanics at the graduate level. Extensively revised from a

successful third edition, Fundamentals of Biomechanics features a wealth of clear illustrations, numerous worked examples, and many problem sets. The book provides the quantitative perspective missing from more descriptive texts, without requiring an advanced background in mathematics. It will be welcomed for use in courses such as biomechanics and orthopedics, rehabilitation and industrial engineering, and occupational or sports medicine. This book:

- Introduces the fundamental concepts, principles, and methods that must be understood to begin the study of biomechanics
- Reinforces basic principles of biomechanics with repetitive exercises in class and homework assignments given throughout the textbook
- Includes over 100 new problem sets with solutions and illustrations.
