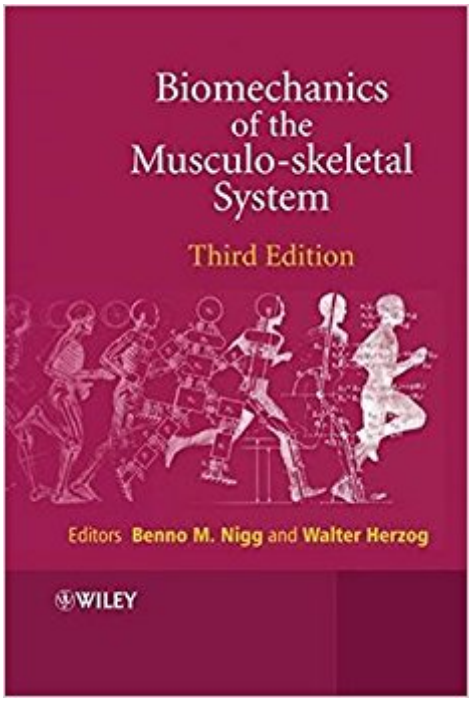
Biomechanics Of The Musculo-skeletal System



Synopsis

The latest edition of this well organised and authoritative book provides a comprehensive account of the mechanics of the neuro-musculo-skeletal system. Covering the key areas including the properties of biomaterials, common measuring techniques and modelling, Biomechanics of the Musculo-skeletal System, Third Edition also integrates historical aspects thus building a bridge between old and familiar knowledge and the latest developments in biomechanics. As with the previous edition there are numerous applications and extensive questions and answers at the end of sections. Specific changes for this edition include: Major revision of the section on biological materials including bone, cartilage, ligament, tendon, muscle and joints and new discussion of failure and healing Extensive updating ofÃ Â material covering force, pressure distribution, optical methods and simulation Increase in the number and type of applications across a broad range of disciplines Biomechanics of the Musculo-skeletal System, Third Edition is an invaluable resource for all students, professionalsÃ Â and researchers concerned with biomechanical aspects of the human or animal body.

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Customer Reviews

The latest edition of this classic in the field presents a unique and comprehensive account of the mechanics of the neuro-musculo-skeletal system. Written for students and researchers of biomechanics, the book covers key areas including the properties of biomaterials, common measuring techniques and modeling. As with the previous edition there are numerous applications and extensive questions and answers at the end of sections. Specific changes for this edition

include: Major revision of the section on biological materials including bone, cartilage, ligament, tendon, muscle and joints and new discussion of failure and healing Extensive updating ofÃ Â material covering force, pressure distribution, optical methods and simulation An increase in the number and type of applications across a broad range of disciplines Biomechanics of the Musculo-skeletal System, Third Edition will prove invaluable for undergraduate students in mechanics and physics; medical students and graduate students in engineering, exercise and sport science and kinesiology; and for all those with an interest in the biomechanical aspects of the human or animal body.

Professor Benno NiggÃ Â and Professor Walter Herzog. Human Performance Laboratory, Faculty of Kinesiology, The University of Calgary, Calgary, Alberta T2N 1N4, Canada. Two distinguished researchers and teachers with an international reputation who have published numerous books and articles in the area of biomechanics.

Although the front and the back cover are both clean and strong as a new book should be, the spine is sort of "weak" which makes me think that the book was put in the wrong place for a while.

Very helpful book for understanding how the body can be related to dynamic processes. It can sometimes be really basic, and then go into extreme detail. It’s still a good book to have for reading or for building a foundation for biomechanics!

Excellent

There is a good bit of valuable information in this book. At the same time, it is mostly a survey of the topic. Most of the information here can be found on the internet, and there aren’t any great example problems, or cool case studies.If the book is required, I would split it with a classmate. If you are just looking for a good source of information most of this is on Wikipedia. Get yourself a copy of the table of contents and go searching.

Simply the best book on biomechanics. It has evolved to a much better version in this third edition providing novel information on biological tissues.

This one of my two all-time favorite general textbooks on biomechanics; the other being

Fundamentals of Biomechanics: Equilibrium, Motion, and Deformation by Ozkaya and Nordin. I generally recommend both to my students as strong foundational starting points.Nigg and Herzog's exploration of the roots of this relatively new field of science was intriguing and unique. Their strong and clear emphasis on the "bio" aspect of biomechanics is particularly important for students whose background leans more towards physics and engineering. It is important to remember that human beings and animals are composed of living tissue that is a composite of complex tissues. Unlike aluminum or plastic, living tissue has non-linear and viscoelastic material properties, is anisotropic, and nonhomogenous. Moreover, unlike inert building materials, living tissue ages, degenerates, and is capable, to some degree, of healing. These properties are all variable throughout the body.For my more medically-oriented students who are already quite familiar with human anatomy, histology, and pathology, I nudge them more toward Ozkaya and Nordin, whose approach is almost entirely mechanical. Both are excellent books and highly recommended.

Biomechanics of the Musculo-skeletal System St Mary's BSc Sports Science Bundle: Physiology and Biomechanics: Introduction to Sports Biomechanics: Analysing Human Movement Patterns [Paperback] [2007] (Author) Roger Bartlett An Introductory Text to Bioengineering (Advanced Series in Biomechanics) (Advanced Series in Biomechanics (Paperback)) Kinesiology: The Skeletal System and Muscle Function, 2e The Muscular System Manual: The Skeletal Muscles of the Human Body, 3e The Skeletal System Anatomical Chart Kinesiology: The Skeletal System and Muscle Function, 3e Skeletal System (Quickstudy: Academic) Canine Skeletal System Anatomical Chart Basic Biomechanics of the Musculoskeletal System SmartClip Self-Ligating Appliance System: Concept and Biomechanics, 1e The Biology of Skeletal Metastases (Cancer Treatment and Research) Fibromyalgia, Chronic Fatigue Syndrome, and Repetitive Strain Injury: Current Concepts in Diagnosis, Management, Disability, and Health Economics (Journal of Skeletal Pain, Vol 3, No 2) Skeletal Imaging: Atlas of the Spine and Extremities, 2e Essentials of Skeletal Radiology (2 Vol. Set) Essentials of Skeletal Radiology Volume 2 Spare Scenes: 60 Skeletal Scenes for Acting and Directing Imaging Skeletal Trauma E-Book You Control It: Skeletal Hand (SmartLAB) Fetal and Perinatal Skeletal Dysplasias: an Atlas of Multimodality Imaging