

Musculoskeletal Models and Techniques

BIOMECHANICAL SYSTEMS
TECHNIQUES AND APPLICATIONS

VOLUME III

EDITED BY
CORNELIUS LEONDES



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Preface

Because of rapid developments in computer technology and computational techniques, advances in a wide spectrum of technologies, and other advances coupled with cross-disciplinary pursuits between technology and its applications to human body processes, the field of biomechanics continues to evolve. Many areas of significant progress can be noted. These include dynamics of musculoskeletal systems, mechanics of hard and soft tissues, mechanics of bone remodeling, mechanics of implant-tissue interfaces, cardiovascular and respiratory biomechanics, mechanics of blood and air flow, flow-prosthesis interfaces, mechanics of impact, dynamics of man-machine interaction, and more.

Needless to say, the great breadth and significance of the field on the international scene require several volumes for an adequate treatment. This is the third in a set of four volumes, and it treats the area of musculoskeletal models and techniques.

The four volumes constitute an integrated set that can nevertheless be utilized as individual volumes. The titles for each volume are

- Computer Techniques and Computational Methods in Biomechanics
- Cardiovascular Techniques
- Musculoskeletal Models and Techniques
- Biofluid Methods in Vascular and Pulmonary Systems

The contributions to this volume clearly reveal the effectiveness and significance of the techniques available and, with further development, the essential role that they will play in the future. I hope that students, research workers, practitioners, computer scientists, and others on the international scene will find this set of volumes to be a unique and significant reference source for years to come.

The Editor

Cornelius T. Leondes, B.S., M.S., Ph.D., Emeritus Professor, School of Engineering and Applied Science, University of California, Los Angeles has served as a member or consultant on numerous national technical and scientific advisory boards. Dr. Leondes served as a consultant for numerous Fortune 500 companies and international corporations. He has published over 200 technical journal articles and has edited and/or co-authored more than 120 books. Dr. Leondes is a Guggenheim Fellow, Fulbright Research Scholar, and IEEE Fellow as well as a recipient of the IEEE Baker Prize award and the Barry Carlton Award of the IEEE.

Contributors

Eihab Muhammed Abdel-Rahman, Ph.D.

Virginia Polytechnic Institute
Blacksburg, VA

Ali E. Engin, Ph.D.

University of South Alabama
Mobile, AL

Vijay K. Goel, Ph.D.

University of Iowa
Iowa City, IA

Nicole M. Grosland, B.S.E.

University of Iowa
Iowa City, IA

Robert D. Harten, Jr., Ph.D.

New Jersey Medical School
Newark, NJ

David Hawkins, Ph.D.

University of California at Davis
Davis, CA

Mohamed Samir Hefzy, Ph.D., P.E.

The University of Toledo
Toledo, OH

J. Lawrence Katz, Ph.D.

Case Western Reserve University
Cleveland, OH

Phyllis Kristal

Harborview Medical Center
Seattle, WA

Roderic S. Lakes, Ph.D.

University of Wisconsin at Madison
Madison, WI

Alain Meunier, Ph.D.

L'Hopital St. Louis
Paris, France

Chimba Mkandawire, B.Sc.

Harborview Medical Center
Seattle, WA

Barry S. Myers, M.D., Ph.D.

Duke University
Durham, NC

Sheu-Jane Shieh, Ph.D.

Wayne State University
Detroit, MI

Allan F. Tencer, Ph.D.

Harborview Medical Center
Seattle, WA

Chris Van Ee, Ph.D.

University of Michigan
Ann Arbor, MI

Mark C. Zimmerman, Ph.D.

Johnson & Johnson Corp.
Somerville, NJ

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