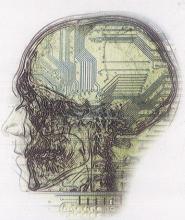
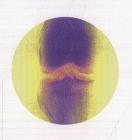
A 4-VOLUME SET



BI MECHANICAL SYSTEMS TECHNOLOGY

MUSCULAR SKELETAL SYSTEMS







CORNELIUS T LEONDES

EDITOR



CONTENTS

Preface	v
Chapter 1 Articular Cartilage Biomechanics, Mechanobiology, and Tissue Engineering Eugene Koay and Kyriacos Athanasiou	1
Chapter 2 Techniques in Modern Gait Analysis and Their Application to the Study of Knee Osteoarthritis J. L. Astephen and K. J. Deluzio	39
Chapter 3 Finite Element Modeling of the Microarchitecture of Cancellous Bone: Techniques and Applications Amit Gefen	73
Chapter 4 Effect of Stress Ratio and Stress Frequency on Fatigue Behavior of Compact Bone S. Ishihara, M. Ota, B. L. Ding, C. Fleck, T. Goshima and D. Eifler	113
Chapter 5 Kinematic Analysis Techniques and Their Application in Biomechanics Rita Stagni, Silvia Fantozzi, Andrea G. Cutti and Angelo Cappello	135
Chapter 6 Structural Analysis of Skeletal Body Elements: Numerical and Experimental Methods Elisabetta M. Zanetti and Cristina Bignardi	185

Chapter 7	
Indentation Technique for Simultaneous Estimation of	
Young's Modulus and Poisson's Ratio of Soft Tissues	227
Pong-Chi Choi, Hang-Yin Ling and Yong-Ping Zheng	
Chapter 8	
Wear Phenomena in Knee Prostheses and Their Finite	
Element Analyses	245
Changhee Cho, Teruo Murakami, Yoshinori Sawae, Nobuo Sakai,	
Hiromasa Miura and Yukihide Iwamoto	
Chapter 9	
Tribology of Metal-on-Metal Artificial Hip Joints	279

Zhong Min Jin, Sophie Williams, Joanne Tipper,

Eileen Ingham and John Fisher