

Contents

Overview	vii
Review of Multiaxis Fatigue Testing for Fatigue/Durability of Cardiovascular Medical Devices	
S. Anderson	1
In-Vitro Modeling of the Dynamic Forces in the Femoropopliteal Artery	
A. Nikanorov, A. J. Mach, L. Lenaway, H. Zhao, and L. B. Schwartz	13
A Methodology for Quantifying Deformations in Stented Coronary Arteries Based on Three-Dimensional Angiography	
S. J. Chen, J. C. Messenger, and J. D. Carroll	23
A Review of Peripheral Vascular Deformations due to Respiration and Musculoskeletal Influences	
C. P. Cheng	46
Feasibility of a Method to Quantify Movement-Induced Conformational Changes in the Superficial Femoral and Popliteal (Femoropopliteal) Arterial Tree Using 3-D Angiography	
A. J. P. Klein, J. C. Messenger, I. P. Casserly, A. R. Hansgen, J. D. Carroll, and S. J. Chen	58
Crystallographic Study of Superelastic Deformation of Nitinol	
M. H. Wu, X. Y. Gong, S. Mao, and X. Han	78
Full-Field Measurements of Fracture Initiation and Crack Growth in Superelastic Nitinol	
K. E. Perry and P. E. Labossiere	92
An Investigation of Factors Impacting Nitinol Wire Fatigue Life	
S. Wong, Z. C. Lin, A. Tahran, J. Boylan, K. Pike, and P. Kramer-Brown	99
Fatigue to Fracture: An Informative, Fast, and Reliable Approach for Assessing Medical Implant Durability	
X. Y. Gong, D. J. Chwirut, M. R. Mitchell, and B. D. Choules	108
Active Surveillance Systems for Early Detection and Improved Recall Decision Making	
D. Tolomeo	122
Hydrogen-Related Degradation of Mechanical Properties of Titanium and Titanium Alloys	
K. Asaoka and K. Maejima	132