SMART'13: Smart Materials and Structures

Table of Contents

Preface and Committees	
Three-Dimensional Exact Analysis of Laminated Piezoelectric Plates and Shells G.M. Kulikov and S.V. Plotnikova	1
Recent Advances in Computational Methods for Microsystems A. Corigliano, M. Dossi and S. Mariani	13
Smart Flow Control with Riblets K.S. Choi	27
Optimisation of a Hybrid Energy Scavenger with Piezoelectric/Magnetic Coupling for Sensor-Bearing Units	41
E. Brusa	41
Mechatronic System Integration Potential for Different Applications S. Rinderknecht and B. Strah	57
Design of Piezoelectric Sensors for Structural and Health Monitoring Based on the Principle	
of Virtual Work M. Krommer and H. Irschik	73
Continuous Dynamic Monitoring of Bridges: Different Perspectives of Application A. Cunha, E. Caetano, C. Moutinho and F. Magalhães	89
Analysis of Three-Dimensional Piezo-Electric Beams via a Unified Formulation G. Giunta, Y. Koutsawa and S. Belouettar	101
Giant Displacements in IPMC-Based Structures: A Preliminary Study Y.S. Cha, P. Nardinocchi, M. Pezzulla and M. Porfiri	119
Active Moving Polymers and Multifunctional Composites: Shape the Future Structures J.S. Leng	129
Control of Wall Turbulence by Spinning Discs P. Ricco and S. Hahn	135
On Gradient Elasticity and Discrete Peridynamics with Applications to Beams and Plates J.N. Reddy, A. Srinivasa, A. Arbind and P. Khodabakhshi	145
Wireless Structural Sensing P. Gaudenzi and G. Facchini	155
Smart Nano-Systems and Inflammatory Reactions N. Tirelli	167