MODELING METHODS, SIGNAL ALGORITHMS AND MACHINE LEARNING FOR EFFECTIVE NON-DESTRUCTIVE TESTING & EVALUATION AND STRUCTURAL HEALTH MONITORING

2100 (OTHERS)

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Key words: Non-destructive Testing & Evaluation, Structural Health Monitoring, Ultrasonic Transducers, Vibration and Waves, Fault diagnosis, Signal Processing, Artificial Neural Network, Machine Learning

ABSTRACT

Non-destructive testing & evaluation (NDT&E) and structural health monitoring (SHM) are very important for quality assurance of manufacturing and in-service of various structures. The aim of this mini-symposium is to report and discuss the recent progress in: i) computational modeling methods which target modal and transient wave analysis (such as guided wave); ii) new methods/approaches with advanced sensor technologies (sensors can be mechanical, acoustical, electrical, etc); iii) signal processing algorithms (high-order, time/frequency domains, adaptive etc); and iv) machine learning based methods for effective NDT&E and SHM.