



G. Yan, S.J. Dyke

Structural Damage Localization for Truss Structures Robust Against Time Synchronization Errors in a Wireless Sensor Network

Издательство DEStech Publications, Lancaster, 2010 год

6 стр; формат: 23,5 x 16 см; библиографический список: 7 единиц
ISBN: 978-1-60595-024-2

Strict time synchronization between sensors has been viewed as crucial for a structural health monitoring (SHM) system based on wireless sensor networks (WSNs). A novel approach which has the capability of being tolerant of time synchronization errors (TSEs) has been proposed to alleviate the problem of TSEs in a WSN [1]. This approach has been applied to detect damage occurring in beam-like structures. This study is to extend this approach to truss structures. By using this approach, time ^synchronization period can be prolonged significantly, and the requirement of frequent sensor synchronization in WSNs can be relaxed. The proposed approach has been successfully demonstrated by numerical simulations of truss structures.

Ключевые слова:

Содержание.

Structural Damage Localization for Truss Structures Robust Against Time Synchronization Errors in a Wireless Sensor Network