عنوان مقاله:

Defining A Conceptual Framework for Vibration-Based Damage Detection Platforms Using Blockchain

محل انتشار:

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خلاصه مقاله:

Current vibration-based damage detection consists of two main components, including modal parameter estimation methods and detection techniques. The second component employs the first part to detect and locate damage. Therefore, both are influenced by each other. They are typically predicted upon centralized data collection techniques, which significantly affect the ability to extract information on the structural health condition. Besides, the modal domain methods play an important role in structural damage identification and their popularity is much more than time domain or frequency domain approach. In the same line, an advanced decentralized database technology is required for the aforesaid techniques to overcome high maintenance cost of centralized approaches. Therefore, this study aims to improve the reliability and efficiency of current damage detection platforms through the integration of vibration-based methods and blockchain. To this end, a conceptual framework is proposed to make a connection between hardware and software components of structural damage detection.

کلمات کلیدی:

structural health monitoring, Vibration-based damage detection, Blockchain, Big Data