Fiber Bragg Grating Demodulation Results

Fiber Bragg gratings are reflective structures in the core of an optical fiber with a periodic or aperiodic perturbation of the effective refractive index.

Fiber Bragg grating (FBG) is a relatively novel method used for network health monitoring that has a number of advantages including high accuracy, multiplexing, electromagnetic interference ...

An optical fiber sensing scheme for decoupled strain and temperature measurement is investigated based on a cascaded microfiber interferometer-fiber Bragg grating (MFI-FBG) ...

This paper presents a new method of demodulating the spectrum of fiber Bragg grating (FBG) based sensors by employing deep convolutional neural networks (DCNN).

In this article, a tracking-based high-speed demodulation method for FBG sensing systems based on the wavelength-tunable laser is proposed. The wavelength-tunable laser only ...

Abstract: A high-performance, low-cost demodulation system is essential for fiber-optic sensor-based measurement applications. This paper presents a demodulation system for FBG sensors based on a ...

This study presents an automated paradigm for assembling high-density fiber Bragg sensor arrays on complex surfaces. The framework ensures signal fidelity and structural integrity, enabling ...

A demodulation algorithm is vital for a fiber Bragg grating (FBG) sensing system. In this paper, a novel demodulation algorithm based on the variable-step-size method and cross-correlation algorithm is ...

A three-points tracking-based high-speed fiber Bragg grating (FBG) demodulation method based on wavelength-tunable laser is proposed. The wavelength-tunable laser scans just three ...

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