

To overcome these problems, we developed a novel fast phase correlation (FPC) peak detection algorithm, which computes the wavelength shift in the reflected spectrum of a FBG sensor. ...

Fibre Bragg gratings are one of the most popular sensors with a huge number of applications. Their most important advantage is signal modulation consisting in shifting the spectrum ...

In this Letter, we propose a high speed quasi-distributed demodulation method based on the microwave photonics and the chromatic dispersion effect. The scheme uses broadband light source and ...

According to the demodulation of high frequency vibration signal in the FBG (Fiber Bragg Grating) demodulator, the sampling frequency of the demodulator is high

Simulation and experimental findings demonstrate that FMD can effectively eliminate the information of environmental noise and temperature, and greatly retain vibration information. In the ...

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 ...

We propose a two-stage methodology to discern distinct wavelengths within highly overlapped FBG sensors. The method leverages a deep learning (DL) model in the initial stage to ...

The aim of this article is to introduce an innovative algorithm for the calculation of the shift of the maximum reflectivity wavelength of a Fiber Bragg ...

Fiber Bragg gratings (FBGs) are widely used as sensors for temperature, strain, and vibration measurement. However, current FBG demodulation methods face issues with stability, size, ...

This paper provides a design idea of data acquisition and processing module, which has reference significance to the design of radar signal processing board and optical fiber sensing hardware circuit.

Aiming at the requirements of low power consumption, miniaturization, and massive data processing, a modular distributed optical fibre acoustic sensing (DAS) demodulation system based ...



# Data Acquisition from Fiber Bragg Grating Demodulator

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