

In this paper, we propose and experimentally demonstrate a high-resolution sensing demodulation technique using optical vector analysis based on microwave photonics (MWP).

A fast real-time demodulation method based on the coarsely sampled spectrum is proposed for transient signals of fiber optic extrinsic Fabry-Perot interferometers (EFPI) sensors.

In order to address the issue of low demodulation accuracy caused by large positioning errors when performing multi-peak demodulation of the fiber-optic MEMS Fabry-Perot sensor, a method is ...

In this article, we proposed an approach of strain demodulation using a fiber-optic Fabry-Perot (FP) sensor based on Gramian angle field (GAF) algorithm and deep learning with sparse sampling points.

This paper presents a method that integrates neural networks with arrayed waveguide gratings (AWGs) for the demodulation of fiber-optic sensors based on the Vernier effect and a novel, to our ...

To address the contradiction between speed and accuracy in the demodulation algorithms of fiber optic Fabry-Perot temperature sensors, as well as the problem of the low accuracy of existing neural ...

This paper presents a novel hybrid demodulation scheme for quasi-distributed fiber-optic acoustic sensor utilizing ultra-weak fiber Bragg grating (UWFBG) arrays as the discrete reflectors.

A high-speed spectrum demodulation method with a large dynamic range for fiber-optic Fabry-Perot sensor is presented. The demodulation system only consists of a near-infrared ...

We propose a phase demodulation algorithm in interferometric fiber-optic sensing systems based on 3 &#215; 3 coupler demodulation with high robustness and strong disturbance resistance, which...

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