Demodulation of Fiber Optic Sensor Array

The proposed method offers the potential to enhance the capacity of FBG sensors within a network, paving the way for notable advancements in signal demodulation within intricate sensor ...

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.

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 ...

Accurate demodulation is essential for a deeper understanding of the physical processes in fiber optic sensing systems, enhancing measurement accuracy, and optimizing system ...

Abstract: 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 ...

We propose an ultra-high-speed demodulation system of the weak fiber Bragg grating (wFBG) sensor utilizing an 8-channel multi-wavelength reconstruction-equivalent-chirp distributed feedback (REC ...

An eight-sensor S-FOH array featuring an alternative quadrature phase bias scheme is demonstrated, and experimental verification of the response equalization demodulation algorithm is ...

This paper proposes a low harmonic distortion signal demodulation scheme for PMDI-TDM structure fiber-optic sensor arrays based on multi-channel parameter fitting and tracking.

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.

An improved demodulation scheme is proposed for PMDI-TDM based fiber-optic sensor array, which tracks the parameters of the interference fringes using the multichannel parallel EKF, can effectively ...

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