Self-coupling effect type fiber optic acoustic sensing

In this review, FOASs have been divided into acoustic-structure-optic coupling (ASOC) type and acoustic-optic coupling (AOC) type according to the activation of the acoustic signal on the ...

Fiber-optic distributed acoustic sensing (DAS) has proven to be a revolutionary technology for the detection of seismic and acoustic waves with ultralarge scale and ultrahigh ...

In this study, we investigate quantitatively the effect of surrounding coupling media on the response of a downhole FO-DAS system through a series of laboratory simulation tests.

In this work, we propose a beamforming-based acoustic imaging method that can reconstruct the acoustic energy around optical fibers using distributed acoustic sensing ...

Rayleigh backscattering in optical fibers is employed in fiber-optic DAS, where acoustic disturbances induce fluctuations in light dispersion that are monitored throughout the entire fiber ...

In DAS, the optical fiber cable becomes the sensing element and measurements are made, and in part processed, using an attached optoelectronic device. Such a system allows acoustic frequency strain ...

Fiber-optic distributed acoustic sensing (DAS) has proven to be a revolutionary technology for the detection of seismic and acoustic waves with ...

Here, the authors demonstrate a blind and sparse near-field array signal processing approach to enhance the measurement quality of fibre-optic distributed acoustic sensors.

Motivated by existing cabled seismic land-streamer designs, we develop a distributed acoustic sensing (DAS) land-streamer system for high-resolution near-surface seismic data acquisition.

In this study, we conducted a comprehensive benchmarking of various machine learning models for distributed acoustic sensing classification, assessing their performance across mul-tiple datasets and ...

In this paper, an adaptive suppression method of optical fiber coupling noise based on local sparse optimization is proposed.

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