Fiber Optic Communication Security Experiment

In the context of free-space optical (FSO) communication, we propose and experimentally demonstrate a novel physical layer security transmission scheme based on phase encryption controlled by chaotic ...

Against this backdrop, our research introduces an IEAC paradigm to achieve robust security of optical fiber communications while simultaneously maintaining its high communication ...

Fundamental improvements can be achieved for the entire network by increasing the optical network"s performance in terms of chan-nel capacity, data rate, and processing speed. Furthermore, the ...

As we enter the big data and artificial intelligence (AI) era, integrating security and communication over optical fiber has become a critical challenge. This urgency is driven by the need to protect vast ...

This is the first time that physical layer security has been investigated in a fiber optical network based on measured transmission matrices.

A secure fiber-optic communication system based on Internet-accessible multipath transmission of ciphertext fragment (MTCF) technology is proposed and demonstrated in this paper.

Fiber optic tapping poses a significant threat to data security, requiring a proactive approach to protect sensitive information from unauthorized access. As technology evolves, so do ...

Optical fiber communications are essential for all types of long- and short-distance transmissions. The aim of this paper is to analyze the previously presented security risks and, based on measurements, ...

In this work, a secure fiber optic communication system utilizing Hill cipher algorithm is demonstrated and investigated via integrated the MATLAB with OptiSystem software.

Researchers propose an integrated encryption and communication framework via end-to-end deep learning. They demonstrate a 1 Tb/s secure optical transmission ...

In this chapter, we discuss using fiber-optic-based techniques to defend against threats in the network, including optical encryption, optical code-division multiple access (CDMA), optical key distribution, ...

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