GDR Telecom Site Energy Systems

Chaos in Fiber Optic Communication Projects

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	To break the limit, we propose and experimentally demonstrate a pilot-based digital signal processing scheme for coherent chaotic optical communication combined with deep-learning ...
	Abstract: As a physical layer secure transmission scheme, optical chaotic communication has garnered significant attention for its notable advantages in transmission rate and transmission distance.
	Then, 86-Gb/s secure communication over 100-km fiber transmission is demonstrated experimentally by chaos masking of 16-ary quadrature amplitude modulation (QAM) signal.
	Design a chaotic waveform and use a chaos masking scheme to embed an information signal inside it to secure an optical fiber system. Study and comparison were conducted on three diferent DCF ...
	Here, we propose and experimentally demonstrate high-speed and long-distance chaos-based secure optical communications using mutual injection of semiconductor lasers and space ...

	To break the limit, we propose and experimentally demonstrate a pilot-based digital signal processing scheme for coherent chaotic optical ...
	Here we demonstrate high-speed long-distance communication based on chaos synchronization over a commercial fibre-optic channel.
	In this work, for the first time in our knowledge, a secure optical communication based on optical chaos with pre-, post-, and symmetric dispersion compression fiber (DCF) configurations was ...
	In order to solve the problem of key exposure in the laser chaotic system, an electro-optic coupled mutual injection chaotic system based on classical electro-optic intensity chaotic model is ...
	We propose a novel chaotic communication and sensing detection scheme based on random envelope linear frequency modulation (RE-LFM) signals. Integrating sensing.
	The proposed scheme is suitable for various chaotic optical communication scenarios and is a possible way to promote practical applications of chaotic optical communication systems and...

	In the present communication we report the achievement of chaotic. transmission rates (higher than 1 Gb/s) and low bit error rates (lower than 10-7).
	Here we demonstrate high-speed long-distance communication based on chaos synchronization over a commercial fibre-optic channel.
	In this paper, we propose a novel and simple multi-channel broadband optical chaos generation scheme based on phase modulation and chirped fiber Bragg grating (CFBG).

Contact Us

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