

## عنوان مقاله:

Error and Channel Capacity Analysis of SIMO and MISO Free-Space Optical Communications

## محل انتشار:

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## نویسندگان:

Mehdi Mofidi - Imam Hossein University

Abolfazl Chaman-motlagh

## خلاصه مقاله:

Free-space optical (FSO) communication is a promising solution, when higher capacities of data transmission, higher security, higher flexibility and robustness to RFinterferences are required. Despite its advantages, the performance of a FSO link could be degraded due to atmospheric turbulence, which causes random fluctuations of the phase and the amplitude of the received signal. The use of multiple transmit/receive apertures have the potential to mitigate thedegradation of fading effects, on turbulent optical channels. In this paper, we investigate the symbol-error-rate (SER) and thechannel capacity (as the two principal factors in communication systems) of FSO links, using diversity and Q-Ary PPM modulation with a comparative viewpoint. It is shown that in adefined received energy per symbol, employing diversity in receiver is more efficient than the transmitter (five orders of magnitude lower SER and more efficient channel capacity

## کلمات کلیدی:

Atmospheric Turbulence; Channel Capacity; Free- Space Optics; PPM Modulation; SER

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/154674>

