

# **Abstract**

**Moustafa Hussein Aly**

## **Suppression of Four Wave Mixing Crosstalk in Four 10 Gbps Channels Over a 50 km Dispersion Shifted Fiber Using Unequal Channel Spacing**

Four wave mixing (FWM) is a nonlinear effect in optical fibers employing high bit rate channels over long distance dispersion shifted fibers (DSFs) in wavelength division multiplexing (WDM) systems. This paper presents a study of the effectiveness of using unequal channel spacing to suppress fourwave mixing crosstalk in four channels 10 Gbps per channel WDM system. The study is conducted using VPI Transmission Maker simulator.