

# **Abstract**

**Moustafa Hussein Aly**

## **Apodized Chirped Fiber Bragg Grating for Post Dispersion Compensation in WDM Optical Networks**

In this paper, a postdispersion compensation unit is proposed leading to a better performance for the optical communication systems. This unit utilizes a chirped fiber Bragg grating (CFBG). For enhanced performance of the CFBG, a proper apodization function is chosen to improve the quality factor (Q-factor) and the bit error rate (BER) of the system. A 110-km wavelength division multiplexing (WDM) optical link is investigated. The system performance is evaluated through its Q-factor, eye diagram, and BER showing best performance when using the Hamming apodization function.