

# **Abstract**

**Moustafa Hussein Aly**

## **Outdoor Wireless Optical Communication System Attenuation at Different Weather Conditions**

The effect of visibility range on the atmospheric attenuation of the outdoor wireless optical communication system is studied. The atmospheric attenuation of laser beam in very clear weather, clear weather, light haze, haze, thin fog, light fog, thick fog and dense fog are tested to find their effects on the system availability. The wavelength effect on the atmospheric attenuation is also investigated. The study is focused on the 0.78, 1.3 and 1.55  $\mu\text{m}$  operating wavelengths.