

## **FACULTY PROFILE**



### **Dr. K. Sunilkumar, M.E, Ph.D**

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### **Education**

**(Ph.D.)** :Indian Institute of Science (IISc), Bengaluru

**ME** :Anna University, Chennai

**AMIE** :The Institution of Engineers (I), Kolkata

### **Experience: 11 years**

**Research area:** Optical communication through the atmosphere, atmospheric aerosols, wave propagation through random media

### **Recent Publications:**

1. **Sunilkumar, K.**, Anand, N., Satheesh, S. K., Moorthy, K. K., and Ilavazhagan, G., Enhanced optical pulse broadening in free-space optical links due to the radiative effects of atmospheric aerosols, (accepted in *Optics Express*, Nov. 2020)
2. **Sunilkumar, K.**, Anand, N., Satheesh, S. K., Moorthy, K. K., and Ilavazhagan, G. (2019), Performance of free-space optical communication systems: effect of aerosol-induced lower atmospheric warming, *Optics Express*, 27, 11303-11311.
3. **Sunilkumar, K.**, Anand N., Satheesh S. K., Moorthy, K. K., and Ilavazhagan, G. (2019), Radiative effects of atmospheric aerosols on optical pulse propagation: implications to high data rate Free Space Optical (FSO) communication systems, *Proc. SPIE*, 11133.
4. Anand, N., **Sunilkumar, K.**, Satheesh, S. K., and Moorthy, K. K. (2018), Distinctive roles of elevated absorbing aerosol layers on free-space optical communication systems, *Applied Optics*, 57 (25), 7152–7158.
5. Anand, N., **Sunilkumar, K.**, Satheesh S. K., and Moorthy, K. K. (2019), Dual role of absorbing aerosols in atmospheric refractive index fluctuations: a closure study from balloon-based and multi-satellite observations, *Proc. SPIE*, 11133.

6. Anand, N., **Sunilkumar, K.**, Satheesh, S. K., and Moorthy, K. K. (2020), Entanglement of near-surface optical turbulence to atmospheric boundary layer dynamics and particulate concentration: implications for optical wireless communication systems, *Applied Optics*, 59 (5),1471-1483.
7. **Sunilkumar, K.**, Satheesh, S. K., Moorthy, K. K., and Ilavazhagan, G. (2018), Free Space Optical Communication System through Turbid Media with Pointing Errors, *Proc. Applications of Lasers for Sensing and Free Space Communications*, Optical Society of America.