

DEBLINA SABUI



Contact

Address:

Centre of Sensors instrumentation and cyber-physical systems engineering (SeNSE)

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Languages

English , Hindi , Bengali

E-Courses

- Scored **Elite** in NPTEL Online Examination across India (Sep-Oct 2020)
Course: Python for Data Science
- Scored **Silver Badge** in NPTEL Online Examination across India (July-Oct 2019)
Course: Digital Image Processing

Work experience

- ❖ **2023-Principal Project Associate**
Creation of Centre of Excellence (CoE) in Advanced Ultra-Precision Optics Manufacturing Technologies
- ❖ **2018- Junior Research Fellow:** IIT Delhi, New Delhi/India
- ❖ **2020- Senior Research Fellow:** IIT Delhi, New Delhi/India
- ❖ **2015-Lighting Design Engineer :** Reiz Electrocontrols Pvt Ltd ,Gurgaon
- ❖ **2011-Lecturer :**
Hooghly Engineering and Technology College, Hooghly, West Bengal

Summary

Experienced with optical design, constructing and implementing optical experiments. Worked with photometric calculations, lighting design tools and lighting energy analysis for both indoor and outdoor projects. Well versed with numerous tools Matlab, Zemax, Rsoft, Dialux, MS-office. Possess analytical skills, problem solving ability, and desire to succeed

Area of research work

Visible light communication, Photometry, Freeform optics, Micro nano structures, Diffractive optics, High power grating, Error- estimation

Ph.D. Thesis: Development of optical-front end for visible light communication receiver systems

ME Thesis: Urbanscape lighting: Modern practises

Education

Doctorate (Pursuing): 2017- (present), SeNSE, Indian Institute of Technology, India

Master: ME in Illumination, Dept of Electrical Engineering, Jadavpur University, 2011, West Bengal, India

Bachelor: B. Tech in Electrical Engineering, West Bengal University of Technology, 2009, India

Selected publications

- **D. Sabui**, S Chatterjee, V Mishra, B Roy, and G S. Khan. "Compact Monolithic Freeform Fresnel Receiver Front-end for Li-Fi Application: A Step Forward" IODC 2023, vol.1279809, SPIE, 2023
- **D. Sabui**, V Mishra, S Chatterjee, B Roy, and G S. Khan. "Freeform based compact receiver front-end for indoor multi-cell VLC system:Fabrication, optical characterization and associated challenges." Optik (2023): 170539
- **D. Sabui**, S Chatterjee, A Prakash, B Roy, and G S. Khan. "Design of an off-axis freeform diversity receiver to improve SINR performance of a multi-cell VLC system." Optics Communications 510 (2022): 127937
- **D. Sabui**, S Chatterjee, A Prakash, B Roy, and G S. Khan. "An improved angular diversity receiver structure for indoor VLC system using off-axis freeform optics." vol. 12216, pp. 164-168. SPIE, 2022.
- S Chatterjee, **D. Sabui**, G S. Khan, and B Roy. "Signal to interference plus noise ratio improvement of a multi-cell indoor visible light communication system through optimal parameter selection complying lighting constraints." Transactions on Emerging Telecommunications Technologies 32, no. 10 (2021)
- **D Sabui**, A Gupta, and G S. Khan. "Error estimation of high-power multilayer dielectric grating." Optical Design and Fabrication Congress, 2021.
- A Gupta, **D Sabui**, G S. Khan and J.Joseph " Effects of variations in refractive index and film thickness on multilayer dielectric mirror performance" . Optical Design and Fabrication Congress, 2021.
- S Chatterjee, and **D Sabui**. "Daylight integrated indoor VLC architecture: an energy-efficient solution." Transactions on Emerging Telecommunications Technologies 31, no. 9 (2020): e3800.
- V. Mishra, **D Sabui**, D R Burada, V Karar, S Jha, and G S. Khan. "Experimental investigations on slow tool servo process parameters for freeform optics machining." Materials and Manufacturing Processes 35, no. 7 (2020): 797-810