ABHISHEK TRIPATHI

PhD, Electronics Engineering,
S V National Institute of Technology (NIT), Surat, Gujarat, 395007, India
Date of Birth: January 1, 1986
Mobile: +91-7987563542, 9770825430
Email: tripathi.abhishek.5@gmail.com
ORCID- https://orcid.org/0000-0002-7569-185X
Google Scholar: https://scholar.google.com/citations?hl=en&user=sbSCyisAAAAJ
LinkedIn Profile: https://www.linkedin.com/in/abhishek-tripathi-05826291/

OBJECTIVE

Seeking a responsible position in an esteemed institution where my research and teaching experience shall make a significant contribution to the organization via consistent efforts.

EDUCATION

Qualification	College/ University	Major Subjects	Year
PhD Thesis Submitted	S V National Institute of Technology **(NIT),** Surat, Gujarat	Optical communication, Wireless Communication	2022
MTech (Optical Communication)	S G S Institute of Technology and Science, Indore (**State Govt.**)/ Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal, MP	Fiber optic network, Digital communication, Quantum Information theory, Photonic integrated circuit	2011
MSc (Electronics)	Bundelkhand University, Jhansi, UP	Digital electronics, Microwave/Antenna, Electronic devices and circuits	2008
BSc (Science)	Rajkiya Mahavidhyalaya/Bundelkhand University, Jhansi, UP	Mathematics, Physics, Chemistry	2006

TOTAL EXPERIENCE- 10 YEARS

RESEARCH – 5.5 YEARS

1) **1 year** experience as 'Senior Project Fellow' on "**Fabrication of GaN-based integrated AC operated LED"** in the optoelectronics devices group (under program of PSC0102) at **CSIR-CEERI,** Pilani, India**.**

2) **4.5 years** of research work at NIT Surat in 'Free Space Optics' under atmospheric conditions. **PhD title:** 'Performance Analysis of Hybrid Free Space Optical Communication System under Atmospheric Conditions.

- Established a laboratory for the setup of free-space optical communication link and investigated the system performance under wind, rain, and temperature by replicating the turbulent atmosphere inside a controlled experimental chamber.

- Simulated an architecture for generation of optically assisted mm-wave, and investigated a DWDM-polarization based hybrid optical wireless system in converged baseband as well as 60-GHz RF signals under different climate conditions using OptiSystem/MTALAB tool.

TEACHING – 5 YEARS

In a state government engineering college of Indore (MP), India (Shri GS Institute of Technology and Science, affiliated to RGPV, Bhopal). · ·

- Engaged theory/practical classes for the subjects of BTech, MTech & MSc courses. ·
- Appointed as a paper setter and examiner for UG & PG engineering subjects.
- Attended as an external examiner to conduct practical/viva examinations of RGPV's colleges.
- Experience in working towards NAAC and NBA documentation.

ACHIEVEMENTS

1) Awarded MHRD fellowship during full-time PhD program at NIT, Surat, India.
2) 1-year diploma in 'Computer in Office Management' from UP Rajarshi Tandon University, Allahabad in 2007.
3) N.S.S. certificate by the ministry of youth affairs and sports.

SOFTWARES KNOWN

OptiSystem 17 (Optiwave), RSOFT, MATLAB, NI Multisim, ORIGIN, COMSOL, C Programming, LaTeX, Mathcad, Inkscape, Microsoft Visio.

SUBJECTS OF INTEREST:

Fiber optic communication, Digital/Mobile communication, Digital Logic Circuits, Semiconductor devices, Basic electronic circuits, Microprocessor, Microwave engineering, Sensors and transducers, VLSI design, Laser/Engineering physics.

PG PROJECT GUIDED/CO-GUIDED

➢ **MTech:**

1) Wavelength-reuse bidirectional gigabit transmission in DWDM passive optical network (2017).
2) Optical fiber based real-time thickness monitoring of aerosol assisted CVD grown thin films (2017).
3) Growth and effect of dopants on the physical properties of Strontium Barium Niobate by optical floating zone method (2016).
4) Peak power reduction by selective mapping and BER improvement using tone suppression in OFDM. (2016)

5) Experimental study of optical wireless system performance under atmospheric turbulence (2013).

- **MSc:**

1) Development of low cost analog/digital IC trainer kit (2016).

2) Realization of 10 Gb/s optical half adder using high speed logic gates based on SOA-MZI (2015).

3) Constant current driver circuitry for 1310 and 1550 nm pigtailed laser diode with a temperature control mechanism (2015).

PUBLICATIONS:

JOURNALS (SCI & SCOPUS)

1) **Abhishek Tripathi**, S Gupta, A Mandloi and G G Soni, "Optically assisted mm-wave based multi-Gbps RoFSO transmission link under channel fading models" *Journal of Modern Optics* 69, no. 8 (2022): 419-426. (2022) [**SCI**, Taylor & Francis, IF-1.46]. DOI-10.1080/09500340.2022.2041754.

2) **Abhishek Tripathi**, S Gupta and A Mandloi, "Investigation of weather effects toward convergence of wired and wireless gigabit services over hybrid free-space optical link." *Optical Engineering* 60, no. 2, 026102, (2021). **[SCI,** SPIE, IF-1.08**]** DOI-10.1117/1.OE.60.2.026102.

3) **Abhishek Tripathi,** S Gupta and A Mandloi, "Orthogonally polarized and 60 GHz dual-channel based 18×2.5Gb/s DWDM-interleaved hybrid FSO system under atmospheric turbulence." *Optical and Quantum Electronics* 52, no. 4 (2020): 1-12. [**SCI,** SPRINGER, IF- 2.08] DOI-10.1007/s11082-020-02324-6.

4) **Abhishek Tripathi,** G G Soni, S Gupta and A Mandloi, "An optical architecture of 12×2.5Gbps wavelength-interleaving free space hybrid distribution system under turbulent atmosphere." *Wireless Personal Communications* 115, no. 3 (2020): 2615-2626. **[SCI,** SPRINGER, IF-1.67**]** DOI-10.1007/s11277-020-07699-z.

5) **Abhishek Tripathi,** G G Soni, S Gupta, and A S Mandloi, "Experimental investigation of wind and temperature induced scintillation effect on optical wireless communication link." *Optik* 178 (2019): 1248-1254. [**SCI,** ELSEVIER, IF-2.44**]** DOI-10.1016/j.ijleo.2018.10.102.

6) G G Soni, **Abhishek Tripathi**, A Mandloi, and S Gupta, "Effect of wind pressure and modulation schemes on rain interrupted optical wireless links under tropical climates." *Optical and Quantum Electronics* 51, no. 6, 1-10 (2019). [**SCI,** SPRINGER, IF- 2.08] DOI-10.1007/s11082-019-1893-x.

7) G G Soni, **Abhishek Tripathi**, A Mandloi, and S Gupta, "Compensating rain induced impairments in terrestrial FSO links using aperture averaging and receiver diversity". *Optical and Quantum Electronics*, *51* no. 7, 1-11 (2019). [**SCI,** SPRINGER, IF- 2.08] DOI-10.1007/s11082-019-1962-1.

8) **Abhishek Tripathi**, S Gupta, and A Mandloi. "Performance of orthogonal frequency division multiplexing based 60-GHz transmission over turbulent free-space optical link." *Journal of Optical Communications* (2021). [**SCOPUS,** De Gruyter, Cite Score-1.7] DOI- 10.1515/joc-2020-0242.

9) **Abhishek Tripathi**, S Gupta, A Mandloi, and G G Soni, "An investigation of 16-QAM signal transmission over turbulent RoFSO link modeled by Gamma–Gamma Distribution." *Journal of Optical Communications* (2020). [**SCOPUS,** De Gruyter, Cite Score-1.7] DOI-10.1515/joc-2020-0126.

10) **Abhishek Tripathi,** K Singh, A Chauhan, M Mathew, "Design and fabrication of InGaN/GaN MQWs blue LED on substrate for high voltage operation", *International Journal of Engineering Science and Technology*, 299-301, 4, 2015, ISSN: 2250-3498.
11) G G Soni, **Abhishek Tripathi**, S Kumbhaj, V Singh, "Experimental analysis of rain effect on 1550 nm FSO link to investigate regression parameters for tropical Indian monsoon", *Microwave and Optical Technology Letters,* 2022 [**SCI,** Wiley, IF-1.39] Submitted.
12) H Khan, K K Kushwah, J S Thakur, S Singh, **Abhishek Tripathi** and G G Soni, "Performance analysis of DSR, AODV and MP-OLSR routing protocols in mobile ad-hoc network", *International Journal of Autonomous and Adaptive Communications Systems,* 2022 [**SCOPUS,** Inderscience, Cite Score-0.9] Submitted.

PROCEEDINGS/CONFERENCES

1) **Abhishek Tripathi,** "Experimental investigation of optical wireless system under controlled meteorological turbulence", Proceedings of M. P. Young Scientist Congress, 10-11 March, 2017, MPCST, Bhopal, India.
2) V Tiwari, **Abhishek Tripathi**, G G Soni "Analysis of 6×10 Gbps spectrally efficient optical AP-DCDM based communication system", proceedings of international conference on computer communication and informatics (ICCCI), 3-5 Jan 2014, Shri Shakthi Engineering College, Coimbatore, India. **DOI:** 10.1109/ICCCI.2014.6921817.
3) **Abhishek Tripathi**, A Singh, G G Soni "DWDM-interleaved photonic architecture for wired and wireless services" proceedings of international conference on optical engineering, July 26-28, 2012, Visvesvaraya Technological University, Belgaum, India. **DOI:** 10.1109/ICOE.2012.6409581.
4) A Singh, **Abhishek Tripathi**, G G Soni "Design of 3×60 Gbps DCDM based WDM system" proceedings of international conference on optical engineering, July 26-28, 2012, Visvesvaraya Technological University, Belgaum, India. **DOI:** 10.1109/ICOE.2012.6409582.

BOOK CHAPTER

A Medpalliwar, **Abhishek Tripathi** and S Gupta, "Performance analysis of OFDM based optical wireless communication system." *In International Conference on Emerging Technology Trends in Electronics Communication and Networking*, Springer, 2022; [Accepted].

PATENTS

1) **Indian Design Patent Filed-** "Laser Diode Mount" 2022. Application No: 357679-001.
2) **Indian Design Patent Filed-** "Atmospheric Turbulence Chamber" 2022. Application No: 360949-001
3) **Australian Innovation Patent Granted-** "Methodology to detect crime using computer vision and deep learning for safer nation" 2021. Patent No: 2021102450.

REVIEWERS ROLE

- Optik: International Journal of Light & Electron Optics, Elsevier

- IEEE Sensors
- Optical & Quantum Electronics, Springer
- Journal of Optoelectronics & Advanced Materials

WORKSHOPS ATTENDED

1) ISTE-'**CMOS, mixed signal and radio frequency VLSI design**' under national mission through ICT-MHRD held at SGSITS conducted by IIT Kharagpur, Dec 26, 2016 - Feb 04, 2017.
2) ISTE-'**Engineering physics**' under national mission through ICT-MHRD held at SGSITS conducted by IIT Bombay, Dec 08-18, 2015.
3) ISTE-'**Aakash for education**' under national mission through ICT-MHRD held at SGSITS Indore conducted by IIT Bombay, Nov 10-11, 2012.
4) ISTE-'**Solar photovoltaic-fundamentals, technologies and applications**' under national mission through ICT-MHRD held at SGSITS, Indore conducted by IIT Bombay, 12-22 Dec 2011.

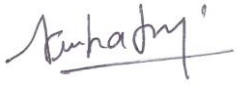
REFERENCES

(1). Dr. Shilpi Gupta
Associate Professor
Dept. of Electronics Engg.
SVNIT, Surat (Gujarat)
Email: shilpig1980@gmail.com
Phone: +91 2612201739

(2). Dr. Gireesh G. Soni
Asst. Professor
Dept. Appl. Phys. & Optoelx.
SGSITS, Indore (MP)
Email: gireeshsoni@gmail.com
Phone: +91 9827299866

(3). Dr. Kuldip Singh
Principal Scientist,
Semicond. Device Fabrication Group
CSIR-CEERI, Pilani (Rajasthan)
Email: kuldip@ceeri.ernet.in
Phone: +91 9649532237

Declaration: I hereby declare that all information stated above is true, authentic and complete to the best of my knowledge.



Place: Surat, Gujarat **Abhishek Tripathi**