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PROFESSIONAL EXPERIENCE

05/2019 –	Assistant Professor (C/G)	Jamia Millia Islamia University
01/2013 – 06/2014	Engineer Trainee	Tata Tele Service Pvt. Ltd.

RESEARCH INTERESTS

- Optoelectronics
- Fiber Optic Sensors
- Optical Communication
- Under water Communication
- Microwave Photonics

EDUCATION

PH.D. Electronics and Communication Engineering, Jamia Millia Islamia, Central University, Delhi, India (2019 – 2024)

***PhD Topic*:** Design and Performance Analysis of Optical Sensors
M.Tech., Communication System, National Institute of Technology, Patna, India (2015 – 2017)
B.Tech., Electronics & Communication Engineering, Jamia Millia Islamia, Central University, New Delhi, India (2009 – 2013)

TECHNICAL PUBLICATIONS AND MANUSCRIPTS

0.1 Journal Publications

1. Ashraf, M., Mainuddin, M., Beg, M.T. et al. **U-shaped plastic optical fiber sensor for phosphate detection in water**. Opt Quant Electron 55, 1192 (2023). https://doi.org/10.1007/s11082-023-05466-5

2. Ashraf, M., et al. (2023), "**Differential absorption LIDAR signal denoising using empirical mode decomposition technique"**, Optical and Quantum Electronics, 55(11), 964. https://doi.org/10.1007/s11082-023-05237-2

3. M Ashraf, M Mainuddin, Mirza Tariq Beg, Fiza Moin, Ananta Saikia, Sanjai K Dwivedi, Gagan Kumar," **Comparison of U and Coil-shaped Fiber Sensors for Fluoride Detection in Water**" Optical and Quantum Electronics,2023 https://doi.org/10.1007/s11082-023-05966-4

4. M. Ashraf, Mainuddin, M. T. Beg, F. Moin, R. Rajesh and G. Singhal, "**Sensitivity Enhancement in U-Shaped Evanescent Wave Fiber Sensor**," *in IEEE Sensors Journal*, vol. 23, no. 10, pp. 10444-10451, 15 May15, 2023, doi: 10.1109/JSEN.2023.3262864.

5. M. Ashraf, Mainuddin, M. T. Beg, F. Moin, R. Rajesh and G. Singhal, "**U-Bent Plastic Optical Fiber Sensor for Iron in Iron Supplements,**" in *IEEE Sensors Journal*, vol. 22, no. 15, pp. 14921-14928, 1 Aug.1, 2022, doi: 10.1109/JSEN.2022.3187829.

6. Mohd Ashraf, Gaurav Baranwal, Dinesh Prasad, Saima Idris, Mirza Tariq Beg, "**Performance Analysis of ASK and PSK Modulation Based FSO System Using Coupler-Based Delay Line Filter under Various Weather Conditions**" Optics and Photonics Journal, Vol.8 No.8, 2018

7. M. Ashraf, Mainuddin, M. T. Beg, "**Tapered Coil-Shaped Optical Fiber Sensor for Fluoride Detection in Water**", under review in Journal "Measurement"
8. M. Ashraf, Mainuddin, "**Quantum Computing and Communication: A Decade of Bibliometric Review**" under review in "Journal Transactions on Knowledge and Data Engineering"

0.2 Conference Publications

1. M. Ashraf, Nusrat Jahan, "**Performance Analysis of Raman LIDAR for detecting explosive by residues on surfaces of distant objects**", 13th International Conference on Interdisciplinary Research for Sustainable Development 2024 (IRSD 2024), 30th May 2024, New Delhi, India

2. Ashraf, M., Mainuddin, Beg, M. T., Sekia, A., & Dwivedi, S. K. (2023, September**). Effects of Material Deformation on U-shaped Optical Fiber Sensor**. In International Conference on Micro-Electronics and Telecommunication Engineering (pp. 75-85). Singapore: Springer Nature Singapore.

3. M. Ashraf, Mainuddin, M.T.Beg, Fiza Moin, R Rajesh, **"Detection of Phosphate using Different Geometries of Optical Fiber Sensor**", XLVI OSI Symposium ,International Conference on Optics, Photonics & Quantum Information OPTIQ2023, CUSAT, Cochin, Kerala, India, FIB113, 1315-1319, 13(4), December 11- 13, 2023

4. Ashraf, M., Mainuddin (2023). **Simulation of Optical FBG Based Sensor for Measurement of Temperature, Strain and Salinity**. In: Tiwari, M., Ismail, Y., Verma, K., Garg, A.K. (eds) Optical and Wireless Technologies. OWT 2021. Lecture Notes in Electrical Engineering, vol 892. Springer, Singapore. https://doi.org/10.1007/978-981-19-1645-8_3

5. M. Ashraf and R. Ranjan, "**Tunable single passband microwave photonic filter based on direct generation technique**," 2018 3rd International Conference on Microwave and Photonics (ICMAP), Dhanbad, India, 2018, pp. 1-2, doi: 10.1109/ICMAP.2018.8354521.

6. M. Ashraf, Mainuddin, Fiza Moin, "**Novel Millimeter Wave Signal Generation and Linearization for High-Frequency 5G/6G Applications**", 6th International Conference on Emerging Technologies: Micro to Nano (ETMN-2024), 22-23 November 2024, India

0.3 Workshops

1. ATAL sponsored FDP on "**Recent Advances in Photonic Materials and its Applications**" organised by the Department of Physics of C.V. Raman Global University, 28th Sep – 2nd Oct, 2020.
2. Attended **"5G Workshop - India Perspective"** September 21, 2018, organized by IIT Delhi
3. International Workshop on "**5G Secured Smart City**", 20th – 21th March, 2017. NIT Patna
4. Faculty Development Program on "**Towards 5G: The Key Enabling Technologies**", 5th -14th December, 2016. NIT Patna.
5. **IEEE International Symposium on 5G**, 26th -29th March,2016, IIT Patna.

0.4 Book Chapter

1. Ashraf, M., Mainuddin (2023). **Simulation of Optical FBG Based Sensor for Measurement of Temperature, Strain and Salinity**. In: Tiwari, M., Ismail, Y., Verma, K., Garg, A.K. (eds) Optical and Wireless Technologies. OWT 2021. Lecture Notes in Electrical Engineering, vol 892. Springer, Singapore. https://doi.org/10.1007/978-981-19-1645-8_3
2. ***Book:*** *Basic of Analog Electronics; (ISBN No. 9789385983610) SCITECH PUBLICATIONS (INDIA) PVT. LTD.*

To keep yourself updated with my research publications, please follow my profile on ***Google Scholar***. (https://scholar.google.com/citations?user=zvLe7kkAAAAJ&hl=en)

INVITED TALKS DELIVERED

1. Delivered an invited talk on **'Impacts of Climate Change on Ground Water Quality**' at the AICTE -VANNI sponsored 3-Day Workshop on 'Energy, Sustainability, & Climate Change,' organized by Manav Rachna University, Faridabad, India, in July 2024.

2. Invited talk on **Fiber Optics in Avionics – Trends and Challenges** organized by Aerospace Resources Panel, ARDB, DRDO, New Delhi at SVNIT, Surat, India, in February, 2019)

SKILLS

- Basics of PSPICE, MATLAB, Opti-System, Opti-grating, VPI Photonics and COMSOL Multiphysics

PATENT

- OPTICAL FIBER- BASED IRON DETECTION AND QUANTIFICATION SENSOR (granted Patent No. 444002)
- OPTICAL FIBER-BASED FLUORIDE DETECTION AND QUANTIFICATION SENSOR AND A METHOD THEREOF (Published, Application No: 202311052376)

TEACHING

Course Name	**Level**	**University**
Basic Electronics	U	JMI
Antenna and Wave Propagation	U	JMI
Circuit Analysis and Synthesis	U	JMI
3G/4G Networks and Convergence	G	JMI
Optical fiber communication (Lab)	G	JMI

ACHIVEMENTS & RECOGNITIONS

- Qualified Graduate Aptitude Test in Engineering (GATE) 2013 (AIR 5237), 2014 (AIR 2739), 2015 (AIR 1723), 2016 (AIR 1103) and 2017 (AIR 2318).
- Qualified UGC-NET; July 2018 for Assistant Professor in Electronic Science
- Qualified UGC-NET& JRF; December 2018 for JRF & Assistant Professor in Electronic Science with 99.8351 percentile.
- Sessional Test Co-Coordinator (B. Tech./B.E./M. Tech.) for 2019-20 session
- Editor of Departmental "NEWS LETTER" (Issue: Jan-May, 2019)
- Member Editorial Board in SPECTRONICS, Departmental Magazine, 2017-2018
- Prepared the final draft of NBA Pre-qualifier for the Dept. of Electronics and Communication, JMI (2018)

DECLARATION

I hereby declare that all the information given here is true.

Date: 23 March, 2025
Place: New Delhi, India