

Dr. Yogendra Kumar Prajapati

Professor

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Areas of Interest: Photonic sensors, Fiber optics, Plasmonics in thin films and nanostructures, Optical Communication

Academic, Research and Industrial Experiences

- ❖ Professor at MNNIT Allahabad, Prayagraj, India (August 2023- Continue)
- ❖ Associate Professor at MNNIT Allahabad, Prayagraj, India (March 2018– August 2023)
- ❖ Assistant Professor at MNNIT Allahabad, Prayagraj, India (Oct. 2012 - March 2018)
- ❖ Visiting Scientist at Multimedia University, Malaysia (May 2016 - June 2016)
- ❖ Assistant professor at BIET, Jhansi, (U.P. Govt. Institute), India (Dec. 2007 – Oct. 2012)
- ❖ Lecturer at BIET, Jhansi, (U.P. Govt. Institute), India (July 2007 – July 2007)
- ❖ Lecturer at VCE, Bijnor, (U.P), India (Sept. 2003 - June. 2007)

Summary of Publications

- ✚ Research papers Published in SCI International journals: 182
- ✚ Book chapters: 12

Research Guidance

- ✚ Ph.D.: 14 (Completed) M. Tech.: 32 (Completed)

Research/ Editorial Activities

- ✚ Associate Editor of IEEE Sensors Journal
- ✚ Associate Editor of IEEE Access
- ✚ Editorial Board Member: Quantum Materials and Applied Physics (Japan), IETE Journal of Education
- ✚ Associate Editor in Frontiers in Physics – Optics and Photonics from February 2019 to January 2024.

✚ Text Book:

1. Yogendra Kumar Prajapati, Alka Verma, Rupam Srivastava, "Photonic Spin Hall Effect: Fundamentals, Applications, and MATLAB Simulations," Springer Publication (In press, 2026)

✚ Book as an Editor:

2. R.K. Nagaria, V.S.Tripathi, C.R. Zamarreno, and Y.K. Prajapati, eds., "VLSI, Communication and Signal Processing: Select Proceedings of the 5th International Conference," VCAS 2022 (Vol. 1024), 2023. Springer Nature.
3. Yogendra Kumar Prajapati, Santosh Kumar, "Materials and Devices with Magneto-Optical Properties for Communication and Sensing," Magnetochemistry 2023, MDPI Publication, [As a Guest Editor], (Impact Factor: 2.5)

✚ Reviewers of more than 40 SCI/SCI-E journals

Listed among the Top 2% Scientists Worldwide each year since 2021, as recognized by Stanford University, USA.

- ✚ Citations: **5626** (**h-index: 40** as per Google Scholar on June 17, 2026)

Detail of Patents

Indian Patent (Granted)

1. Method to determine beam width of a dip in surface plasmon resonance sensor and its application, (Patent No.: 407708, Application No.: 201611005417, Date of Grant: 29.09.2022)
2. Low Power, Uniform Frequency Resolution and High Sampling Speed Arbitrary Waveform Generator, (Patent No.: 461154, Application No.: 201811032831, Date of Grant: 20.10.2023)
3. Integrated health-monitoring device and a method of real time transfer of health condition data collected, (Patent No.: 469442, Application No: 201611025089, Date of Grant: 16.11.2023)

International Patent (Granted)

4. A system for an improved long-range surface plasmon resonance (LR-SPR) sensor with extremely high imaging sensitivity,” (App. No.: DE 202022100430U12022.03.17) Published on March, 2022.

Indian Patent (Published)

5. A device for detection of an analyte (Application No: 202511101484, Date of Publication: 02.01.2026)
6. Integrated Opto-Mechanical Monitoring System for Non-Invasive Evaluation of Healing Progression in Limb Reconstruction System Stabilized Bone Fractures,” (Application No: 202611002322, Date of filing: 08.01.2026)

Awards and Honors

- ❖ Received Certificate of Honour from Council of Science and Technology, Department of Science and Technology, Govt. of U.P. under Engineering Students Project Grant Scheme (2018-19).
- ❖ Young Faculty Research Fellowship (YFRF, MEITY-PHD-2057) of Sir Visvesvaraya Ph.D. Programme, Ministry of Electronics and Information Technology (Meity), Govt. of India
- ❖ Young Scientist Research Grant, Sept. 2014, DST, SERB, New Delhi
- ❖ Travel Grant June 2010, DST, SERB, New Delhi
- ❖ Teacher fellowship received from U.P. Technical University, Lucknow, India, during 07 July 2007 to 16 December 2007.

On-going Projects

1. “High Data Rate Channel Codec Architecture for Free Space Classical RF and Optical Communication,” **Funding Agency: ISRO**, Duration: 3 Years (2026-29) (**Status: Ongoing**) (Co-PI), Collaborating institute: IIIT Pune
2. “Design and development of a non-invasive, smart, and portable device for real-time assessment of bone fracture healing progression,” **Funding Agency: Core Research Grant, SERB**, Rs. 49 Lakhs, Duration: 3 Years (2023-26) (**Status: Ongoing**) (Co-PI), Collaborating institute/Department-KGMC, Lucknow & AMD, MNNIT Allahabad
3. “A Simulation and Experimental Study on Screening the Best Materials Combination for Specific Target Detection in Plasmonic Sensors Using Machine Learning Techniques,” **Funding Agency: Council of Science & Technology U.P.**, Rs. 15 Lakhs, Duration: 3 Years (2024-27) (**Status: Ongoing**) (PI),

Projects Completed:

4. “Prototype development of a photovoltaic solar cell with a high conversion efficiency: An application of two-dimensional materials,” **Funding Agency: Council of Scientific & Industrial Research (CSIR), India**, Rs. 25 Lakhs, Duration: 3 Years (2023-26) (**Status: Completed**) (PI), Collaborating institute/Department-NIT Delhi
5. “Investigations on surface plasmon resonance (SPR) based optical sensing with an emphasis on the role of spin waves and magnonics in related materials,” **Funding Agency: Core Research Grant, SERB**, Rs. 20.44 Lakhs,

- Duration: 3 Years (2019-22) (**Status: Completed**) (Co-PI), Collaborating institute-NIT Delhi.
6. "Role of graphene and MoS₂ on performance of surface plasmon resonance-based sensors: An application to biosensing," **Funding Agency: Research Grant, DAE-BRNS**, Rs. 24.00 Lakhs, Duration: 3 Years (2017-21) (**Status: Completed**) (PI)
 7. "Phosphorene based fiber optic plasmonic sensor for biomedical application," **Funding Agency: Collaborative Research Scheme Under NPIU** Rs. 15.00 Lakhs, Duration: 3 Years (2019-22) (**Status: Completed**) (Co-PI)
 8. "Design and Analysis of Optical Waveguide for Biosensing Application," **Funding Agency: Collaborative Research Scheme Under NPIU**, Rs. 13.00 Lakhs, Duration: 3 Years (2019-22) (**Status: Completed**) (Co-PI)
 9. "Design and Study of Sensitivity of optical biosensors having Metamaterials", **Funding Agency: ECR, SERB**, Rs. 23.39 Lakhs, Duration: 3 Year (2014-17), (**Status: Completed**) (PI)
 10. "Design of biosensors using metal clad for sensing application," Ref.No.146/R&C/13-14 dated on 02/09/2013, **Funding Agency: Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India** under TEQIP-II, Duration (2013-14) (**Status: Completed**) (PI)
 11. "Simulation and numerical analysis of optical microstructure fibers: Dispersion characteristic," Ref.No.134/R&C/13-14 dated on 23/08/2013&Ref. No. 360/R & C/13-14, dated 07/03/2014, **Funding Agency: Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India** under seed grant, Duration (2013-14) (**Status: Completed**) (PI)

Lab facility creation:

12. "To strengthen the post-graduate Teaching and Research in the Department," **Funding Agency: DST-FIST**, Rs. 1.06 Crores, (**Status: Completed**), (**Convener & PI**)

Administrative Experiences

- Faculty In charge: • FI Purchase: From October 18, 2023 to September 13, 2025
- Faculty In charge: • FI [Electrical (Residential & Academic campus)]: From October 12, 2020 to October 23, 2023
 • FI (Examination): From September 20, 2018 to October 12, 2020
 • FI (EMSW): From September 12, 2013 to December 26, 2015.
- Hostel Warden: • Warden (Tilak): From March 23, 2022 to September 1, 2023
 • Warden (SVBH): From March 21, 2021 to March 04, 2022
 • Warden (PG): From February 19, 2019 to March 08, 2021
 • Warden (Raman): From February 10, 2017 to February 23, 2019
 •
- Deputy Dean R & C • From May 19, 2017 to May 20, 2018
- Department Activities: • Officer In charge (Microwave and Project Lab): From October 15, 2015 to continue
 • DPC Convener: From September 16, 2019 to continue
 • NBA Committee Convener: From September 06, 2019 to September 15, 2021
 • Members of different departmental committees

Publications (List of papers published in IEEE Journals, in year wise descending order)

1. J. Rana, R. Srivastava, V. Kumar, S. Pal and **Yogendra Kumar Prajapati***, "Ultralow Prediction Error in SPR-Based PCF Sensor Using Kolmogorov–Arnold and Artificial Neural Networks," **IEEE Journal of Selected Topics in Quantum Electronics**, doi: 10.1109/JSTQE.2026.3669493, 2026, (**Impact factor 5.1, Quartile Score:Q1**)
2. Saumya Pandey, Harshit Shukla, Vimal Mishra, Sarika Pal, Alka Verma, **Yogendra Kumar Parajapati**, Alka Verma, "Highly Sensitive Magneto-Optical SPR Sensor Based on the Photonic Spin Hall Effect with CeYIG and Graphene," **IEEE Transactions on Magnetics**, DOI: 10.1109/TMAG.2025.3650609 (**Impact factor 2.1, Quartile Score:Q1**)
3. Nitesh Kumar, Rakesh Kumar, Narendra Pal, Sarika Pal, Alka Verma, **Yogendra Kumar Parajapati**, "Advances and

- Strategies in the Development of High-Performance Cortisol Sensors: A Comprehensive Review," *IEEE Sensors Reviews*, DOI: 10.1109/SR.2025.3638316, 2025
4. Kumar, Rakesh, Sarika Pal, Narendra Pal, Alka Verma, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "High-Performance SPR-PCF Sensor Using GZO/TiO₂ for Broad-Range Detection." *IEEE Sensors Journal*, vol. 25, no. 22, pp. 41494-41501, 15 November 2025, DOI: [10.1109/JSEN.2025.3618924](https://doi.org/10.1109/JSEN.2025.3618924), (Impact factor 4.5, Quartile Score:Q1)
 5. Kumar, Vinit, Ajit Kumar, Rupam Srivastava, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "High Magnitude Spin-Dependent Shift and Field Enhancement in BaTiO₃-based Plasmonics for Quantum Photonic Applications." *IEEE Journal of Quantum Electronics*, vol no. 61, no. 5, 24 July 2025, (Impact factor 2.1, Quartile Score:Q1)
 6. Kumar, Virendra, Nitesh Kumar, Sarika Pal, Bela Goyal, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "Highly sensitive and accurate cortisol sensor based on long-range surface plasmon resonance." *IEEE Sensors Journal*, vol no. 25, no. 10, pp. 17324-17331, 03 April 2025, DOI: <https://doi.org/10.1109/JSEN.2025.3555704>, (Impact factor 4.5, Quartile Score:Q1)
 7. Kumar, Vinit, Jitendra Bahadur Maurya, and **Yogendra Kumar Prajapati***, "Piezoplasmonic System for Enhanced Photonic Spin Hall Effect for Applications in Optical Refractive Index Sensing." *IEEE Journal of Selected Topics in Quantum Electronics*, vol no. 31, no. 5, 1 April 2025, DOI: <https://doi.org/10.1109/JSTQE.2025.3556890>, (Impact factor 5.1, Quartile Score:Q1)
 8. Shukla, Harshit, Alka Verma, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "Thin Film Magneto-Optic Plasmonic Sensor with the Photonic Spin Hall Effect." *IEEE Sensors Letters*, vol no. 9, no. 4, 4 April 2025, DOI: <https://doi.org/10.1109/LSSENS.2025.3547745>, (Impact factor 2.2, Quartile Score:Q1)
 9. Kumar, Rajeev, Sarika Pal, Narendra Pal, Alka Verma, J. P. Saini, and **Yogendra Kumar Prajapati***, "MXene-Enhanced Plasmonic Sensor Utilizing Planar Waveguide Modes and Long-Range Surface Plasmon Polaritons for Ultra-Sensitive Detection." *IEEE Sensors Journal*, 3 January 2025, DOI: [10.1109/JSEN.2024.3523178](https://doi.org/10.1109/JSEN.2024.3523178), (Impact factor:4.3, Quartile Score:Q1)
 10. Kumar, Virendra, Sarika Pal, Vivek Singh, Bela Goyal, Lalit Kumar Awasthi, and **Yogendra Kumar Prajapati***, "On the Feasibility of Thallium Bromide in Long-Range Plasmonic Sensing for Enhancement of Performance." *IEEE Transactions on Plasma Science*, 8 October 2024, DOI: [10.1109/TPS.2024.3468954](https://doi.org/10.1109/TPS.2024.3468954), (Impact Factor : 1.3, Quartile Score:Q2)
 11. Rana, Jatin, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "Intervention of machine learning and explainable artificial intelligence in fiber optic sensor device data for systematic and comprehensive performance-optimization." *IEEE Sensors Letters*, vol. 8, no. 10, 21 August 2024, DOI: [10.1109/LSSENS.2024.3445324](https://doi.org/10.1109/LSSENS.2024.3445324), (Impact factor 2.2, Quartile Score:Q2)
 12. Yesudasu, Vasimalla, Rupam Srivastava, Sarika Pal, MS Mani Rajan, and **Yogendra Kumar Prajapati***, "Surface-Plasmon and Titanate Material-Assisted Sensor Structure for Pseudomonas Bacteria Detection With Increased Sensitivity." *IEEE Transactions on AgriFood Electronics*, 8 April 2024, DOI: [10.1109/TAFE.2024.3379378](https://doi.org/10.1109/TAFE.2024.3379378).
 13. S. Agarwal, R. Srivastava, S. Kumar and **Yogendra Kumar Prajapati***, "COVID-19 Detection Using Contemporary Biosensors and Machine Learning Approach: A Review," *IEEE Transactions on NanoBioscience*, vol. 23, no. 2, pp. 291-299, April 2024, doi: [10.1109/TNB.2023.3342126](https://doi.org/10.1109/TNB.2023.3342126) (Impact factor: 3.9, Quartile Score: Q1)
 14. Srivastava, Rupam, Vinit Kumar, Shrayansh Tyagi, Sarika Pal, Anuj K. Sharma, and **Yogendra Kumar Prajapati***, "On the Feasibility of Particle Swarm Optimization Method for Inverse Design of High-Performance SPR Biosensor." *IEEE Sensors Journal*, 2 April 2024, DOI: [10.1109/JSEN.2024.3381250](https://doi.org/10.1109/JSEN.2024.3381250), (Impact factor:4.3, Quartile Score:Q1)
 15. Harshit Tiwari; Yogendra S. Dwivedi; Rishav Singh; **Yogendra Kumar Prajapati**; Richa Krishna; Nitin Singh Singha, Anuj K Sharma, "Exploring deep learning models aimed at favorable optimization and enhancement of fiber optic sensor's performance," *IEEE Sensors Journal*, August 2023, DOI [10.1109/JSEN.2023.3296199](https://doi.org/10.1109/JSEN.2023.3296199), (Impact factor: 4.3, Quartile Score: Q1)
 16. Vinit Kumar, Rupam Srivastava, **Yogendra Kumar Prajapati***, "Improved photonic spin Hall effect by an induced polarization gradient in anisotropy- black phosphorous and its application to NO₂ gas detection," *IEEE Sensors Journal*, August 2023, DOI :[10.1109/JSEN.2023.3301965](https://doi.org/10.1109/JSEN.2023.3301965) (Impact factor: 4.3, Quartile Score: Q1)
 17. Rajeev Kumar, Alka Verma, Sarika Pal, **Yogendra Kumar Prajapati***, "Enhancing the Gas detection sensitivity of Surface Plasmon Resonance Sensor based on MXene and Black phosphorus," *IEEE Transction on Plasma Science*, Vol. 51 (6), pp. 1427-1433, June 2023, [10.1109/TPS.2023.3276371](https://doi.org/10.1109/TPS.2023.3276371). (Impact factor: 1.368, Quartile Score: Q3)
 18. Shivam Singh, **Yogendra Kumar Prajapati***, "Novel Bottom-Side Polished PCF-Based Plasmonic Biosensor for

- Early Detection of Hazardous Cancerous Cells," *IEEE Transactions on Nanoscience*, vol. 22 (1), pp. 647- 654, July 2023, <https://doi:10.1109/TNB.2023.3233990> (Impact factor: 2.967, Quartile Score: Q1)
19. Maneesh Kumar Singh, Sarika Pal, and **Yogendra Kumar Prajapati***, "Design and Analysis of an SPR Sensor based on Antimonene and Platinum for the Detection of Formalin," *IEEE Transactions on NanoBioscience*, vol. 22, no. 1, pp. 106-112, Jan. 2023, <https://doi:10.1109/TNB.2022.3159532> (Impact factor: 3.9, Quartile Score: Q1)
 20. Rupam Srivastava, **Yogendra Kumar Prajapati***, Sarika Pal, Santosh Kumar, "Micro-channel Plasmon Sensor Based on a D-Shaped Photonic Crystal Fiber for Malaria Diagnosis with Improved Performance," *IEEE Sensors Journal*, <https://DOI:10.1109/JSEN.2022.3181198> June 2022, (Impact factor: 4.3, Quartile Score: Q1)
 21. Rajeev Kumar, Sarika Pal, **Yogendra Kumar Prajapati***, Santosh Kumar, "Sensitivity Improvement of a MXene-immobilized SPR Sensor with Ga-doped-ZnO for Biomolecules Detection," *IEEE Sensors Journal*, vol. 22, no. 7, pp. 6536-6543, April 2022. (Impact factor: 4.3, Quartile Score: Q1)
 22. V.A. Popescu, **Yogendra Kumar Prajapati**, Anuj K. Sharma, "Highly Sensitive Magnetic Field Detection in Infrared Region with Photonic Spin Hall Effect in Silicon Waveguide Plasmonic Sensor," *IEEE Transactions on Magnetics*, Vol. 57, no. 10, pp. 4002210, August 2021. <https://doi:10.1109/TMAG.2021.3103651> (Impact factor: 2.1, Quartile Score: Q2)
 23. [14]. Maneesh Kumar Singh, Sarika Pal, **Yogendra Kumar Prajapati**, J.P. Saini, "Sensitivity Improvement of Surface Plasmon Resonance Sensor on using BlueP/MoS2 Heterostructure and Antimonene," *IEEE Sensors Letters*, vol.4, no. 7, pp. 1-4, July 2020, <https://DOI:10.1109/LSSENS.2020.3005942> (Impact factor: 2.8, Quartile Score: Q2)
 24. J. B. Maurya, **Yogendra Kumar Prajapati***, "Experimental Demonstration of DNA Hybridization Using Graphene-Based Plasmonic Sensor Chip," *IEEE Journal of Lightwave Technology*, Vol. 38, issue 18, pp. 5191-5198, DOI: 10.1109/JLT.2020.2998138, September 15, 2020. (Impact factor: 4.439, Quartile Score: Q1)
 25. J.B.Maurya, **Yogendra Kumar Prajapati***, "A Novel Method to Calculate Beam Width of SPR Reflectance Curve: A Comparative Analysis," *IEEE Sensor Letters*, Vol. 1, issue 4, pp. 1-4, <https://doi.org/10.1109/LSSENS.2017.2709549>, August 2017. (Impact factor: 2.8, Quartile Score: Q1)
 26. Sajal Agarwal, Pushpa Giri, **Yogendra Kumar Prajapati***, P. Chakrabarti "Effect of Surface Roughness on the Performance of Optical SPR Sensor for Sucrose detection: Fabrication, Characterization and Simulation Study," *IEEE Sensors Journals*, Vol. 16, No. 24, pp. 8865 – 8873, December 2016, (Impact factor: 4.3, Quartile Score:Q1).
 27. Sajal Agarwal, **Yogendra Kumar Prajapati***, J.B.Maurya: "Effect of Metallic Adhesion Layer Thickness on the Sensor Performance," *IEEE Photonics Technology Letters*, 28(21), pp. 2415-2418, Nov. 2016. <https://doi.org/10.1109/LPT.2016.2597856> (Impact factor: 2.414, Quartile Score: Q2)

Publications (List of papers published in Other SCI/ESCI Journals, in year wise descending order)

28. Verma A, Katiyar D, Mishra V, Gupta R, **Prajapati YK**. Enhancement of the Shift in the Photonic Spin Hall Effect and Its Application for Cancer Cell Detection. *Quantum Reports*. 2026; 8(1):17. <https://doi.org/10.3390/quantum8010017> (Impact factor 1.2, Quartile Score:Q2)
29. Varunika Dixit, Kamal Agarwal, **Yogendra Kumar Prajapati***, "On the modeling and performance enhancement of underwater wireless optical communication: impairments, throughput, and ergodic capacity," *Optical and Quantum Electronics*, DOI: 10.1007/s11082-025-08643-w, 2026 (Impact factor 4.0, Quartile Score: Q2)
30. Kumar, Rakesh, Sarika Pal, **Yogendra Kumar Prajapati**, and J. P. Saini. "Rhenium disulfide (ReS₂) and halide perovskite mediated plasmonic sensor for biosensing." *Physica Scripta*, vol. 100, no. 11, pp.115608, 13 November 2025, DOI: 10.1088/1402-4896/ae1b46, (Impact factor 2.6, Quartile Score:Q2)
31. Chauhan, Sweety, Anuj K. Sharma, Nitin Singh Singha, and **Yogendra Kumar Prajapati**, "Sb₂S₃ as Hole Transport Layer Material Massively Enhances the Performance and Stability of Tin-Based Perovskite Solar Cell." *Journal of Electronic Materials* (2025): pp.1-14, 4 November 2025, (Impact factor 2.5, Quartile Score: Q2)
32. Kumar, Vikas, Rupam Srivastava, Anuj K. Sharma, and **Yogendra Kumar Prajapati***. "Enhanced photovoltaic performance of lead-free Cs₂SnI₆ double perovskite solar cells: SCAPS-1D simulation and optimization." *Physica Scripta*, vol. 100, no. 10, pp. 105017, 16 October 2025, DOI 10.1088/1402-4896/ae0fc8 (Impact factor 2.6, Quartile Score: Q2)
33. Veluchamy, Devika, Murugan Senthil Mani Rajan, and **Yogendra Kumar Prajapati**. "Sensitive Detection of Formalin Adulteration in Fish Using a Square-Core Photonic Crystal Fiber Sensor." *Sensing and Imaging*, vol. 26, no. 1, pp. 128, 08 October 2025, (Impact factor 2, Quartile Score:Q3)
34. Popescu, Vasile A., Priyanshu Singh, **Yogendra Kumar Prajapati**, and Anuj K. Sharma. "High-Performance Plasmonic Sensor with Photonic Spin Hall Effect for NaCl Detection: Role of an Active Voltage Biasing of Graphene

- Monolayer in Near Infrared." *Sensing and Imaging*, vol no. 26, no. 1, pp. 67, 20 May 2025, (Impact factor 2, Quartile Score:Q3)
35. Kumar, Nitesh, Sarika Pal, and **Yogendra Kumar Prajapati**. "Dual Polished-Based Dual Core LRSPR Sensor for Stress Monitoring Using Cortisol Biomarker in Human Saliva." *Sensing and Imaging*, vol no. 26, no. 1, pp. 57, 14 May 2025, (Impact factor 2, Quartile Score:Q3)
 36. Daher, Malek G., Sofyan A. Taya, Osama S. Faragallah, Shobhit K. Patel, **Yogendra Kumar Prajapati**, and Ammar Armghan. "Detection of protozoa in drinking water using SPR biosensor employing titanium dioxide and MXene nanomaterial." *Journal of Computational Electronics*, vol no. 24, no. 2, pp. 45, 24 April 2025, (Impact factor 2.5, Quartile Score:Q3)
 37. Alhawari, Adam RH, Abdulkarem HM Almawgani, Malek G. Daher, Sofyan A. Taya, **Yogendra Kumar Prajapati**, and Samer H. Zyoud. "Design of a novel plasmonic sensor for the determination of uric acid concentration with ultra-high figure of merit." *Plasmonics*, pp. 1-10, 17 February 2025, (Impact Factor 4.3, Quartile Score:Q3)
 38. Gumaih, Hussein S., Abdulkarem HM Almawgani, Malek G. Daher, Yousif S. Adam, Sofyan A. Taya, and **Yogendra Kumar Prajapati**. "Theoretical Optimization of Silver-Based Surface Plasmon Resonance Sensor with Perovskite and Graphene Composite Structure for the Rapid Detection of Breast Cancer Cells." *Plasmonics*, vol no. 20, pp. 1-9, 06 February 2025, DOI: <https://doi.org/10.1007/s11468-024-02753-z>, (Impact Factor 4.3, Quartile Score:Q3)
 39. Chauhan, Sweetly, Anuj K. Sharma, Nitin Singh Singha, Alok Kumar Patel, and **Yogendra Kumar Prajapati**. "Simulation of ZnO (window layer)-ZnS (buffer)-SDL-CIGS (absorber)-Sb2S3 (back surface field layer) solar cell design achieving 35.82% power conversion efficiency with low thermal effect." *Journal of Optics*, pp. 1-9, 03 February 2025, DOI: <https://doi.org/10.1007/s12596-025-02514-z>, (Impact Factor 2.5, Quartile Score:Q3)
 40. Abohassan, Khedr M., Malek G. Daher, Sofyan A. Taya, Abinash Panda, and **Yogendra Kumar Prajapati**. "Narrow bandpass filter using octonacci photonic quasicrystal." *Journal of Optical Communications*, vol no.; 45, no. s1, pp. s1683-s1691, 27 January 2025, (Quartile Score:Q3)
 41. Alhawari, Adam RH, Abdulkarem HM Almawgani, Malek G. Daher, Sofyan A. Taya, and **Yogendra Kumar Prajapati**. "A Novel Surface Plasmon Resonance (SPR) Sensor Based on Beryllium Oxide and Graphene Layers for Fuel Adulteration Discovery." *Plasmonics*, pp. 1-10, 6 January 2025, DOI: <https://doi.org/10.1007/s11468-024-02657-y> (Impact Factor 3.3, Quartile Score:Q3)
 42. Alhawari, Adam RH, Abdulkarem HM Almawgani, Sofyan A. Taya, Malek G. Daher, **Yogendra Kumar Prajapati**, and Hussein S. Gumaih. "Highly sensitive protein sensor based on surface plasmon resonance nanostructure employing titanium dioxide and graphene layers." *Diamond and Related Materials* Vol 151, pp. 111867, 1 January 2025, DOI: <https://doi.org/10.1016/j.diamond.2024.111867> (Impact Factor 4.3, Quartile Score:Q2)
 43. Kumar, Rajeev, Sajal Agarwal, Narendra Pal, Sarika Pal, and **Yogendra Kumar Prajapati**. "Platinum diselenide (PtSe₂) mediated heterostructure based SPR sensor for the detection of formalin: a theoretical analysis." *Physica Scripta*, Vol 100, no. 1, pp. 015546, 30 December 2024, DOI: [10.1088/1402-4896/ad9e46](https://doi.org/10.1088/1402-4896/ad9e46)(Impact Factor 2.6, Quartile Score: Q2)
 44. Daher, Malek G., Sofyan A. Taya, Osama S. Faragallah, Mohammed A. AlZain, Abdulkarem HM Almawgani, Ahmad Alzahrani, **Yogendra Kumar Prajapati**, Ammar Armghan, and Samer H. Zyoud. "Supersensitive Novel Detector using Surface Plasmon Resonance Nanostructure Based on Black Phosphorus/Graphene for the Discovery of Various Pathogens in Drinking Water." *Plasmonics*, pp:1-9, 27 December 2024, DOI: <https://doi.org/10.1007/s11468-024-02678-7> (Impact Factor 3.3, Quartile Score:Q3)
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 - 21 Sarika Pal, Narendra Pal, Y.K. Prajapati, J.P. Saini, "Sensitivity analysis of surface Plasmon resonance biosensor based on Heterostructure of 2D BlueP/MoS₂ and MXene", *Layered 2D advanced materials and their allied applications*, pp. 103-29, 18 May 2020, Wiley-Scrivener. DOI: <https://doi.org/10.1002/9781119655190.ch5>
 - 22 Agarwal, Sajal, and Y. K. Prajapati. "Chip-Level Optical Interconnect in Electro-optics Platform." *Nanoscale VLSI: Devices, Circuits and Applications*, pp. 203-223, Springer Singapore, 2020. DOI: https://doi.org/10.1007/978-981-15-7937-0_11
 - 23 Sarika Pal, Y. K. Prajapati and J.P. Saini "Analyzing the Sensitivity of Heterostructure of BP Graphene/TMDC Layer Coated SPR Biosensor." In *Advances in VLSI, Communication, and Signal Processing: Select Proceedings of VCAS 2018*, pp. 663-671, 04 December 2019, Springer Singapore, 2020. DOI: https://doi.org/10.1007/978-981-32-9775-3_61
 - 24 Maurya, J. B., Alka Verma, and Y. K. Prajapati. "Phosphorene: A Worthy Alternative of Graphene and MoS₂ in Surface Plasmon Resonance Sensor", In *Advances in VLSI, Communication, and Signal Processing: Select Proceedings of VCAS 2018*, pp. 569-578, December 2019, Springer Singapore, 2020. DOI: https://doi.org/10.1007/978-981-32-9775-3_51
 - 25 Maurya, Jitendra Bahadur, Alka Verma, and Y. K. Prajapati. "Plasmonic Sensor Based on Graphene, Black and Blue Phosphorous in the Visible Spectrum", In *Modelling, Simulation and Intelligent Computing: Proceedings of MoSiCom 2020*, pp. 48-55, 29 July 2020, Springer Singapore, DOI: https://doi.org/10.1007/978-981-15-4775-1_6

H. Publications (List of papers published in Conferences)

1. Kumar, Rakesh, Sarika Pal, and Y. K. Prajapati. "MPS Modified CeO₂ Oxide (Ceria) Mediated Surface Plasmon Resonance Sensor for Biomedical Application." *International Conference on Signal Processing and Integrated Networks*, Singapore: Springer Nature Singapore, vol no. 1453, pp. 145-154, 16 October 2025
2. Verma, Alka, Aditya Kumar Maurya, Vimal Mishra, and Yogendra Kumar Prajapati. "Plasmonic effect-based dual-core PCF sensor for refractive index sensing." *2024 International Conference on Photonics Solutions (ICPS2024)*, vol. 13518, pp. 5-12. SPIE, 19 February 2025, DOI: <https://doi.org/10.1117/12.3058047>.
3. Kumar, Ajit, Sanjay Kumar, Vikram Pratap Singh, Vinit Kumar, Amritanshu Pandey, and Yogendra Kumar Prajapati. "Highly Sensitive Black Phosphorous and Si-Based SPR Sensor for Formalin Detection Applications." *2025 Third International Conference on Microwave, Antenna and Communication (MAC)*, pp. 1-6. IEEE, 27 June 2025, DOI: [10.1109/MAC64480.2025.11139880](https://doi.org/10.1109/MAC64480.2025.11139880),
4. Gaur, Samta, Rupam Srivastava, Vinit Kumar, Sarika Pal, and Yogendra Kumar Prajapati. "Magnetite-Based Surface Plasmon Resonance Sensor for Pseudomonas Bacteria Detection." *2025 Third International Conference on Microwave, Antenna and Communication (MAC)*, pp. 1-5. IEEE, 27 June 2025, DOI: [10.1109/MAC64480.2025.11140387](https://doi.org/10.1109/MAC64480.2025.11140387)
5. Dixit, Varunika, and Yogendra Kumar Prajapati. "Scintillation Effects on Plane and Spherical Waves in Oceanic Turbulence from Weak to Strong Regimes." *2025 Third International Conference on Microwave, Antenna and Communication (MAC)*, pp. 1-6. IEEE, 27 June 2025, DOI: [10.1109/MAC64480.2025.11140459](https://doi.org/10.1109/MAC64480.2025.11140459)
6. Agarwal, Sajal, Rahul Raparia, and Yogendra Kumar Prajapati "Graphene-Based Surface Plasmon Resonance Sensor for Milk Adulteration Sensing", *2024 IEEE Applied Sensing Conference (APSCON)*, pp. 1-4, IEEE, 2024, DOI: [10.1109/APSCON60364.2024.10466161](https://doi.org/10.1109/APSCON60364.2024.10466161)
7. Vinit Kumar, Rupam Srivastava, Anuj K Sharma, Yogendra Kumar Prajapati "Tunable plasmonic refractive index sensor based on enhanced photonic spin Hall effect", In *2024 IEEE Applied Sensing Conference (APSCON)*, pp. 1-4, IEEE, 2024, DOI: [10.1109/APSCON60364.2024.10465867](https://doi.org/10.1109/APSCON60364.2024.10465867)
8. Srivastava, Rupam, Vinit Kumar, and Yogendra Kumar Prajapati. "Highly sensitive dual-side polished SPR based PCF sensor for blood compositions detection." In *2023 IEEE Workshop on Recent Advances in Photonics (WRAP)*, pp. 1-3. IEEE, 2023. DOI: [10.1109/WRAP59682.2023.10712897](https://doi.org/10.1109/WRAP59682.2023.10712897)

9. Kumar, Virendra, Rajeev Kumar, Sarika Pal, and Yogendra Kumar Prajapati. "Early Detection of Dengue Virus Using GaSe and WS₂ Mediated Surface Plasmon Resonance Sensor With Ultrahigh Sensitivity." In *2023 IEEE Workshop on Recent Advances in Photonics (WRAP)*, pp. 1-4. IEEE, 2023, DOI: [10.1109/WRAP59682.2023.10713006](https://doi.org/10.1109/WRAP59682.2023.10713006)
10. Kumar, Rajeev, Sarika Pal, Narendra Pal, J. P. Saini, and Y. K. Prajapati. "Performance Evaluation of Bimetallic Surface Plasmon Resonance Sensor Based on Ti₃C₂T_x (MXene)", In *Recent Trends in Electronics and Communication: Select Proceedings of VCAS 2020*, pp. 13-25, Springer Singapore, 2022, DOI: https://doi.org/10.1007/978-981-16-2761-3_2
11. Pal, Narendra, Jitendra Bahadur Maurya, and Yogendra Kumar Prajapati. "Figure of Merit Analysis of LRSPR Sensor using Graphene in NIR Regime." In *2021 8th International Conference on Signal Processing and Integrated Networks (SPIN)*, pp. 434-439. IEEE, 2021. DOI: [10.1109/SPIN52536.2021.9566024](https://doi.org/10.1109/SPIN52536.2021.9566024)
12. Devi, Shikha, Divya Sharma, and Y. K. Prajapati. "5× 222 Gb/s PM-16QAM Nyquist-WDM Superchannel." In *Proceedings of International Conference on Sustainable Computing in Science, Technology and Management (SUSCOM)*, Amity University Rajasthan, Jaipur-India. 2019. DOI: <http://dx.doi.org/10.2139/ssrn.3351800>
13. Sharma, Divya, Vinit Jaiswal, Y. K. Prajapati, and Rajeev Tripathi. "Performance Optimization of Carving Signal RZ-DQPSK Modulation Scheme." In *Recent Trends in Communication, Computing, and Electronics: Select Proceedings of IC3E 2018*, pp. 27-33. Springer Singapore, 2019. DOI: https://doi.org/10.1007/978-981-13-2685-1_3
14. Sharma, Divya, Y. K. Prajapati, and A. Upadhyay. "16× 40 Gb/s, 32× 40 Gb/s And 64× 40 Gb/s DWDM network." In *2018 international conference on computational and characterization techniques in engineering & sciences (CCTES)*, pp. 173-176. IEEE, 2018. DOI: [10.1109/CCTES.2018.8674065](https://doi.org/10.1109/CCTES.2018.8674065)
15. Kumar, Rahul, and Yogendra Kumar Prajapati. "Comparative Study of Photonic Crystal Fiber Using Different Structures." In *2018 3rd IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT)*, pp. 2589-2593. IEEE, 2018. DOI: [10.1109/RTEICT42901.2018.9012299](https://doi.org/10.1109/RTEICT42901.2018.9012299)
16. Pal, Sarika, Narendra Pal, Y. K. Prajapati, and J. P. Saini. "Performance evaluation of SPR biosensor using metamaterial over conventional SPR and graphene based SPR biosensor." In *2018 5th International Conference on Signal Processing and Integrated Networks (SPIN)*, pp. 696-701. IEEE, 2018. DOI: [10.1109/SPIN.2018.8474060](https://doi.org/10.1109/SPIN.2018.8474060)
17. Sharma, Divya, and Y. K. Prajapati. "Terabit Nyquist superchannel transmission using PM-QPSK subchannels." In *2018 3rd International Conference on Microwave and Photonics (ICMAP)*, pp. 1-2. IEEE, 2018. DOI: [10.1109/ICMAP.2018.8354503](https://doi.org/10.1109/ICMAP.2018.8354503)
18. Agarwal, Sajal, and Y. K. Prajapati. "Effect of substrate on the performance of metamaterial based absorber." In *2018 3rd International Conference on Microwave and Photonics (ICMAP)*, pp. 1-2. IEEE, 2018. DOI: [10.1109/ICMAP.2018.8354500](https://doi.org/10.1109/ICMAP.2018.8354500)
19. Sharma, Divya, Shrish Bajpai, and Y. K. Prajapati. "Next generation PON using PM-BPSK and PM-QPSK modulation." In *2017 International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT)*, pp. 10-12. IEEE, 2017. DOI: [10.1109/MSPCT.2017.8363963](https://doi.org/10.1109/MSPCT.2017.8363963)
20. Singh, Anand, Divya Sharma, and Y. K. Prajapati. "Comparison of DPSK and QAM modulation schemes in Passive optical network." In *International Conference on Fibre Optics and Photonics*, pp. Tu4A-56. Optica Publishing Group, 2016, DOI: <https://doi.org/10.1364/PHOTONICS.2016.Tu4A.56>
21. Maurya, J. B., and Y. K. Prajapati. "Sensitivity Improvement of Graphene-Silicon Based One-Dimensional Photonic Crystal Biosensor." In *International Conference on Fibre Optics and Photonics*, pp. W3A-22. Optica Publishing Group, 2016. DOI: <https://doi.org/10.1364/PHOTONICS.2016.W3A.22>
22. Sharma, Divya, Jitendra Bahadur Maurya, and Yogendra Kumar Prajapati. "Effect of noise on constellation diagram of 100 Gbps DP-QPSK systems under influence of different digital filters." In *2015 International Conference on Microwave and Photonics (ICMAP)*, pp. 1-2. IEEE, 2015. DOI: [10.1109/ICMAP.2015.7408787](https://doi.org/10.1109/ICMAP.2015.7408787)
23. Maurya, J. B., Y. K. Prajapati, Vivek Singh, and J. P. Saini. "Field Confinement of Stacked Multilayer Slab Waveguide Using Graphene", In *International Conference on Fibre Optics and Photonics*, pp. M4A-25. Optica Publishing Group, 2014. DOI: <https://doi.org/10.1364/PHOTONICS.2014.M4A.25>

I. Conferences & Workshop Organized

- i. As a Coordinator organized "Workshop on High-End Optoelectronics Devices: Fabrication, Characterization, and Functionalization" January 1-8, 2024, under Karyashala, Science and Engineering Research Board (SERB), NewDelhi
- ii. As a Coordinator organized Two-days' Workshop (Online) On Advances in Photonic Devices, Sensors, and Systems

- (APDSS), June 2-3, 2022, Under Scientific Social Responsibility (SSR) Scheme – SERB (India)
- iii. As a Coordinator DST Sponsored National Level Training Programme on Hands on Training on Microwave & Photonics Related Sophisticated Equipment and Components (HTMPRSEC22), under DST STUTI Programme-2022, June 06 -12, 2022, at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Uttar Pradesh, India
 - iv. As an Organizing Secretary organized “Fourth International Conference on VLSI, Communication and Signal Processing (VCAS 2021),” during 24-26 September 2021, at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Uttar Pradesh, India
 - v. As a Coordinator organized “2nd National workshop on Advances in Wireless and Optical Networks (AWON 2019)” during May 27, 2019 to June 01, 2019 at Motilal Nehru National Institute of Technology (MNNIT), Allahabad, Uttar Pradesh, India.
 - vi. As a Co-coordinator organized “National workshop on Advances in Wireless and Optical Networks (AWON 2014)” during 2nd to 7th June-2014 at Motilal Nehru National Institute of Technology (MNNIT), Allahabad, Uttar Pradesh, India.
 - vii. As an organizing secretary organized Students Conference on Engineering and Systems (SCES2014), from May, 28- 30, 2014, at Motilal Nehru National Institute of Technology (MNNIT), Allahabad, Uttar Pradesh, India.
 - viii. As a Co-coordinator organized “Mobile, Ad hoc and Vehicular Communication MAVECOM-2013” at MNNIT, Allahabad, during July 22-27, 2013.
 - ix. As a Coordinator organized “3G Wireless Networks, MIMO Systems and Antenna Design” at MNNIT, Allahabad, during July 08-13, 2013.
 - x. As a convener organized “Techzion-12” at B.I.E.T., Jhansi, during 6-7, April 2012.

J. Outreach Activities

1. Delivered an invited expert talk on “Fundamentals of Opto-Spintronics & its applications,” five-day workshop on “Emerging Trends on Optoelectronics Materials and Photonics Technologies (ETOMPT-2026),” from 20th to 24th April 2026 at Galgotias University, Greater Noida, Uttar Pradesh.
2. Delivered an invited expert talk on “ Photonic spin Hall effect and its application,” ANRF-sponsored Five-Day Faculty Development Program on Emerging Trends in Photonics and Fiber Optic Technologies at Thiagarajar College of Engineering, Madurai, Tamil Nadu.
3. Delivered an invited expert talk on “Photonic Spin Hall Effect for Advancing Sensing Applications,” Symposium on Advanced Photonics (SAP 2025), IIT Indore, November 17, 2025.
4. Delivered an expert talk on “Manipulating Light with Spin-Orbit Interaction for Sensing Applications,” ECED, NIT Patna, October 08, 2025.
5. Delivered an expert talk on “Spin-Driven Light: Advancing Sensing Technologies through the Photonic Spin Hall Effect,” FDP on VLSI Devices, Circuit Design & Semiconductor Materials, MNNIT Allahabad, Prayagraj, July 20, 2025.
6. Delivered an expert talk on “Strong Spin-Orbit Interaction of Light in Plasmonic Nanostructures for Advanced Optical Sensing,” One-week Online STTP on Recent Trends in Sensors and Internet of Things, NIT Surat, May 28, 2025.
7. Delivered an expert talk on “Prospects for Forthcoming Technologies in Optical Communication,” International Conference on VLSI and Microwave and Wireless Technologies (ICVMWT 2024), Madan Mohan Malaviya University of Technology, Gorakhpur (U.P.) India, May 18, 2024.
8. Delivered an expert talk on “Role of the Engineers for Digital Innovation in Advancing Sustainable Development for Society,” The Institution of Engineers (India), Local Chapter Prayagraj, May 17, 2024.
9. Delivered an expert talk on “Photonic Spin Hall Effect and its Applications in Piezoelectric & Plexcitonic System,” Powering Progress: The International Conference on Energy, Functional Materials and Photonics (PPICEFP-2024), MMMUT Gorakhpur, U.P., March 02, 2024.
10. Delivered an expert talk on “Let's Commence the Research with Mindfulness,” Shri Rama Krishna Group of Institution, Satna, M.P., March 09, 2024.
11. Delivered an expert talk on “Strong Spin-Orbit Interaction of Light in Plasmonic Nanostructures,” Kalinga Institute of Industrial Technology (KIIT), Deemed to be University, Bhubaneswar, Odisha, February 09, 2024.

12. Delivered an expert talk on “Piezoelectric Assisted High Photonic Spin Hall Effect,” Workshop on High-End Optoelectronics Devices: Fabrication, Characterization, and Functionalization, ECED, MNNIT Allahabad, Prayagraj, January 04, 2024.
13. Delivered an expert talk on “Photonic Spin Hall Effect and its Applications on Sensing,” 4th International Electronic Conference on Applied Sciences, Italy, October 23, 2023.
14. Delivered an expert talk on “Spin–Orbit Interactions (SOI) Light and its Applications,” 6th IEEE International Workshop on Recent Advances in Photonics, IIT-Allahabad, Prayagraj, December 07–09, 2023.
15. Delivered an expert talk on “Free Space Optics: Emerging beyond Conventional RF Communication,” ATAL Workshop on Photonics and its Application, Department of Electronics Engineering, SVNIT Surat, February 17, 2022.
16. Delivered an expert talk on “Nanotechnology and Nanomaterials for Circuits and Devices,” GIAN Course on Advances in Nanotechnology & its Application in Future Electronics, Department of Electronics and Communication Engineering, MNNIT Allahabad, Prayagraj, March 09, 2022.
17. Delivered an expert talk on “Wireless Optical Communication and its Applications,” Department of Electronics Engineering, MITS Gwalior, M.P., May 21, 2021.
18. Delivered an expert talk on “Free Space Optical Communication,” Online Short-Term Course on Recent Trends in Wireless Communication, Department of Electronics Engineering, NIT Uttarakhand, July 21, 2020.
19. Delivered an expert talk on “Role of Photonic Spin Hall Effect in the Photonic Devices: A Sensing Application,” Recent Trends in Optical Engineering (RTOE-2020), SVNIT Surat, September 23, 2020.
20. Delivered an expert talk on “Advanced Modulation Techniques for Lower and Higher Optical Transmission Rates,” Workshop on Optical Fiber Communication and its Applications, Department of Electronics, MITS Gwalior, M.P., September 07, 2019.
21. Delivered an expert talk on “Materials and Structures for Sensing Applications,” STC on Smart Materials, Devices and Sustainable Technologies (SMDST-19), Department of Applied Science (Physics), MMMUT Gorakhpur (U.P.), March 15–16, 2019.
22. Delivered an expert talk on “Advances in Optical Wireless Communication,” 2nd National Workshop on Advances in Wireless and Optical Networks (AWON-2019), MNNIT Allahabad, Prayagraj, May 28, 2019.
23. Delivered an expert talk on “Advances in Free Space Optical Communication,” STC on Recent Advances in Communication Engineering, Bundelkhand Institute of Engineering and Technology, Jhansi (U.P.), December 26–30, 2018.
24. Delivered an expert talk on “Advances on Optical Communication and Devices,” STC on Advanced Modelling of Microwave and Photonics Devices (AMMPD-2018), MMMUT Gorakhpur (U.P.), March 06, 2018.
25. Delivered an expert talk on “Advances in Surface Plasmon Resonance Sensing,” Workshop on Recent Trends in Photonics Technology (RTPT-2017), IIT (ISM) Dhanbad, October 07–11, 2017.
26. Delivered an expert talk on “Laser for Optical Communication and Sensors,” STC on Laser and its Applications (LAP-2017), MNNIT Allahabad, March 27–31, 2017.
27. Delivered an expert talk on “Role of Materials in SPR Sensing,” STC on Emerging Trends in Materials Science (STCETMS-2017), MMMUT Gorakhpur (U.P.), March 23–29, 2017.
28. Delivered an expert talk on “Innovative Photonics for Communication and Sensing Application,” 6th International Conference on Technology Innovation & Management for Sustainable Development (TiMS-16), ITM University, Gwalior (M.P.), February 11–13, 2016.
29. Delivered an expert talk on “Metamaterials and its Application in Optical Devices,” National Workshop on Recent Trends in Optical and Wireless Networks, Sam Higginbottom Institute of Agriculture, Technology & Sciences, Naini, Allahabad, November 03–07, 2014.
30. Delivered an expert talk on “Metamaterials and its Application in Optical Networks & Sensors,” National Workshop on Advances in Wireless and Optical Networks (AWON-2014), MNNIT Allahabad, June 02–07, 2014.
31. Delivered an expert talk on “Introduction to Bragg Waveguide,” Faculty Development Program on Advanced Microwave Communication, B.I.E.T. Jhansi, December 07–08, 2007.

K. Details of Ph.D. Thesis Supervised

1. Ms. Rupam Srivastava (Reg. No.2020REL11): Simulation and Experimental Investigation of Optical Sensors for Different Applications, Awarded Year: 2024.

2. Mr. Surjeet Raikwar (Reg. No. PhD/17/ECE/2215): Nanomaterials based design of SPR sensor: an application toward biosensing, Awarded Year: 2023.
3. Mr. Shivam (Reg. No.:2018REL13): Investigations Towards the Development of Plasmonic Sensors based on Photonic Crystal Fiber for Refractometric Sensing, Awarded Year: 2022.
4. Mr. Akash Srivastava (2018REL08): Sensing Performance Enhancement in SPR Based Sensor Using Two Dimensional and Related Nanomaterials, Awarded Year: 2022.
5. Mr. Dheeraj Dubey (2018REL04): Performance Analysis of Hybrid FSO/RF for Satellite and Terrestrial Communication, Awarded Year: 2021.
6. Mr. Vivek Kumar Srivastava (Enrolment No.:Ph.D/11/ECE/1078): Propagation of Electromagnetic waves in a Bragg wave guide having unconventional materials, Awarded Year: 2020.
7. Mr. Ajay Kumar Yadav (Reg. No.: 2016REL10): A Study on Some Hybrid Techniques for PAPR Reduction in OFDM System, Awarded Year: 2020.
8. Mr. Pritam Keshari Sahoo (2016REL16): Hybrid Modulation Techniques under Diverse Turbulence Conditions of Outdoor and Indoor FSO Channel, Awarded Year: 2020.
9. Ms. Sajal Agarwal (2014REL52): Design, Fabrication, and Characterization of Optical Devices: Absorber and Sensor, Awarded Year: 2019
10. Ms. Divya Sharma (2018REL53): Performance Evaluation of Advanced Modulation Techniques for Lower and Higher Optical Transmission Rates, Awarded Year: 2018.
11. Mr. Jitendra Bahadur Maurya (2018REL05): Design and Fabrication of Plasmonic Sensor Based on Graphene and MoS₂ for Biosensing, Awarded Year: 2017.
12. Ms. Sarika Pal (Enrolment No.: Ph.D/11/ECE/1075): To Study the Sensitivity of Optical Sensor in Layered Media Using Unconventional Material, Awarded Year: 2017.
13. Ms. Pooja Lohia (Enrolment No.: Ph.D/13/ECE/1136): Single Mode Optical Fiber Design for High-Speed Optical Communication Using Transfer Matrix Technique, Awarded Year: 2016.
14. Mr. Anurag Upadhyay (2013REL01): Analysis of Optical Waveguide Sensors having Metamaterial for Refractometry and Immunosensing Application, Awarded Year: 2016.

L. Details of Consultancy Work

- i. A third-party audit of Electrical work related to electrification at Devipattan, Project Manager, Office of Project Manager Unit-34, Uttar Pradesh Jal Nigam (Urban) Basti-272002, Rs. 1.50 Lakh, February 2025-March 2025 **(As a PI)**
- ii. A third-party audit of Electrical work related to electrification at Balrampur, Uttar Pradesh under Uttar Pradesh Rukiya Nirman Nigam, Rs. 1.35 Lakh, December 2022-January 2023 **(As a PI)**
- iii. Third party audit of Electrical work related to the quality at Siddharthnagar, Uttar Pradesh under Uttar Pradesh Rajkiya Nirman Nigam, Rs. 2.89 Lakh, December 2022-January 2023 **(As a PI)**
- iv. Third party evaluation of CCTV, Wi-Fi, and Solar Light work in District- Kushinagar, Uttar Pradesh, under Uttar Pradesh Rajkiya Nirman Nigam, Rs. 1.50 Lakh, October 2021-November 2021 **(As a PI)**
- v. Veekay Connectors(P) Ltd., Naini, Allahabad for Confirmatory tests of fiber optical splitter with microlens chip, Rs. 50,000/- (As a member)