

Isha Chauhan

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Academic Qualifications:

PhD (Electrical Engineering, domain: Wireless Communication) from Indian Institute of Technology Delhi, New Delhi

M.Tech. (Digital Communication) from Maulana Azad National Institute of Technology, Bhopal, M.P.

Research Interests:

Wireless Communication,
Quantum Communication,
Free Space Optical Communication
5G-NR, 6G
Physical Layer Security
Non-Terrestrial Networks

Work Experience:

Postdoctoral Fellow, IIT Ropar, (Jan 2026 to April 2026)

Research Fellow, Politecnico di Torino, Turin, Italy (Nov 2024 to Dec 2025)

Publications:

List of journals published:

1. I. Chauhan and M. R. Bhatnagar, "Information Theoretic Study of Friendly Jammer Abating an Eavesdropper in FSO Communication," IEEE Transactions on Communications, vol. 72, no. 4, pp. 2106-2123, April 2024. DOI: 10.1109/TCOMM.2023.3341912
2. I. Chauhan and M. R. Bhatnagar, "Performance of transmit aperture selection to mitigate jamming," Appl. Sci., vol. 12, no. 4, Feb. 2022. <https://doi.org/10.3390/app12042228>
3. I. Chauhan, P. Paul, M. R. Bhatnagar, and J. Nebhen, "Performance of optical space shift keying under jamming," Appl. Opt., vol. 60, no. 7, pp. 1856–1863, Feb. 2021. <https://doi.org/10.1364/AO.414456>
4. I. Chaudhary, P.; Manoj, B.R.; Chauhan, I.; Bhatnagar, M., "Channel Estimation Using Linear Regression with Bernoulli–Gaussian Noise," Appl. Sci., vol. 15, no. 19, Sept. 2025. <https://doi.org/10.3390/app151910590>
5. Prerna Chaudhary, B. R. Manoj, Isha Chauhan, and Manav R. Bhatnagar, "Data-driven statistical channel estimation for gamma–gamma noise," Appl. Opt., vol. 65, no. 16, pp. 5341-5350, May 2026. DOI: <https://doi.org/10.1364/AO.585086>

6. D. Chauhan, I. Chauhan, P. Yadav, S. Kumari, and D. Singh, "Robust Image Watermarking Using Contourlet Transform," IJAREEE, vol. 6, no. 3, Mar. 2017. DOI: 10.15662/IJAREEIE.2017.0603054

List of conference articles published:

1. I. Chauhan and M. R. Bhatnagar, "UAV-Based FSO Communication Under Jamming," 2022 IEEE 95th Vehicular Technology Conference: (VTC2022-Spring), Helsinki, Finland, 2022, pp. 1-5, DOI: 10.1109/VTC2022-Spring54318.2022.9860894.
2. P. Chaudhary, I. Chauhan, B. R. Manoj and M. R. Bhatnagar, "Linear Regression-Based Channel Estimation for Non-Gaussian Noise," 2024 IEEE 99th Vehicular Technology Conference (VTC2024-Spring), Singapore, Singapore, 2024, pp. 1-6, DOI: 10.1109/VTC2024-Spring62846.2024.10683532.
3. I. Chauhan and O.P. Meena, "A Dual - Band Frequency and Polarization Reconfigurable Antenna Design" (June 2019). Proceedings of the International Conference on Advances in Electronics, Electrical & Computational Intelligence (ICAEEC) 2019, Available at <http://dx.doi.org/10.2139/ssrn.3576607>