

List of Publications:

Patents

1. A. Dixit, R. Raj, and K. Saxena, "System and method for identifying passive optical identifier tags," U.S. Patent No. US20200208988A1, July 2020.
2. A. Dixit, R. Raj, and K. Saxena, "System and method for identifying passive optical identifier tags," Indian Patent No. 27/2020, July 2020.

Journals

1. R. Raj and A. Dixit, "Outage Analysis and Reliability Enhancement of Hybrid VLC-RF Networks Using Cooperative Non-Orthogonal Multiple Access," in *IEEE Transactions on Network and Service Management*, vol. 18, no. 4, pp. 4685-4696, Dec. 2021.
2. A. Gupta, M. Bhutani, A. Dixit and B. Lall, "FD-OMAC: A Novel Full-Duplex Optical Media Access Control for IEEE 802.15.7," in *IEEE Access*, vol. 9, pp. 148894-148910, Nov. 2021.
3. R. Raj, K. Saxena, and A. Dixit, "Passive optical identifiers for VLC-based indoor positioning systems: Design, hardware simulation, and performance analysis," *IEEE Systems Journal*, vol. 15, no. 3, pp. 3208-3219, Sep. 2021.
4. R. Raj, S. Jaiswal, and A. Dixit, "Dimming-based modulation schemes for visible light communication: Spectral analysis and ISI mitigation," *IEEE Open Journal of the Communications Society*, vol. 2, pp. 1777-1798, Jul. 2021.
5. M. Bhutani, B. Lall, and A. Dixit, "MAC Layer Performance Modelling for IEEE 802.15.7 based on Discrete-Time Markov Chain," in *IET Communications*, vol. 15, no. 14, pp.: 1883-1896, 2021.
6. R. Raj, S. Jaiswal, and A. Dixit, "On the effect of multipath reflections in indoor visible light communication links: Channel characterization and BER analysis," *IEEE Access*, vol. 8, pp. 190620-190636, Oct. 2020.

Journals (under review)

7. R. Raj, and A. Dixit, "An energy-efficient power allocation scheme for NOMA-based IoT sensor networks in 6G," *IEEE Sensors Journal*. (under review)
8. R. Raj, K. Jindal, and A. Dixit, "Fairness enhancement of non-orthogonal multiple access in VLC-based indoor broadcasting systems for 6G-IoT," *IEEE Transactions on Broadcasting*. (under review)

Conferences

1. A. Gupta, V. Singh, M. Gautam and A. Dixit, "Design and Implementation for a Duplex Visible Light Communication Link," in *14th International Conference on Communication Systems & Networks (COMSNETS)*, Jan. 2022, pp. 190-193.
2. R. Raj, and A. Dixit, "On the spectral performance of dimming-based multilevel modulation schemes for VLC systems," in *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, Hyderabad, India, Dec. 2021.
3. S. Jaiswal, R. Raj, and A. Dixit, "Performance evaluation of multipath VLC links for different transmitter configurations," *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, New Delhi, India, Dec. 2020, pp. 1-6.

4. K. Jindal, R. Raj, and A. Dixit, "On improving the fairness of NOMA-based indoor visible light communication system," *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, New Delhi, India, Dec. 2020, pp. 1-6.
5. N. Kumari, O. R. K. Reddy, A. Gupta, A. Goel, and A. Dixit, "Study of MAC Layer of LiFi link using UART," *BTIRC Award for Research with Significant Academic Impact at IEEE ANTS, 2020*.
6. R. Raj, and A. Dixit, "Performance evaluation of power allocation schemes for non-orthogonal multiple access in MIMO visible light communication links," *International Conference on Signal Processing and Communications (SPCOM)*, Bangalore, India, Aug. 2020, pp. 1-5.
7. R. Raj, G. Pandey, and A. Dixit, "Tunable receiver design for spatially distributed wireless optical sensors in IoT networks," *IEEE International Conference on Communications (ICC)*, Dublin, Ireland, Jul. 2020, pp. 1-6.
8. R. Raj, S. Jaiswal, and A. Dixit, "Optimization of LED semi-angle in multipath indoor visible light communication links," *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, Goa, India, Dec. 2019, pp. 1-6.
9. K. Saxena, R. Raj, and A. Dixit, "A novel optimization approach for transmitter semi-angle and multiple transmitter configurations in indoor visible light communication links," *9th IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT)*, Bangalore, Oct. 2018, pp. 1-7.
10. R. Raj, K. Saxena, and A. Dixit, "Analysis of Lambertian order of LEDs for optimum power distribution in diffuse visible light communication links," *14th International Conference on Fiber Optics and Photonics*, IIT Delhi, India, Dec. 2018, pp. 1-3.