

Sathisha R N

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Education

Sl. No.	Degree	Year	Institute	Specialization
1	PhD	2024	IISc, Bangalore	Optical Wireless Communication
2	MTech	2011	BMSCE, Bangalore	Digital Communication
3	BE	2006	KIT, Tiptur	Telecommunication

Professional Experience

Sl. No.	Date (from-to)	Designation	Organization
1	Feb 2007- July 2007	Lecturer	KIT Tiptur
2	Aug 2007- till date	Assistant Professor	SIT Tumkur

Positions held

- Assistant Professor

Affiliations of Professional organizations

- IEEE

Awards and Honors

- Best Paper Award 2024 @ SPIE, California

Courses Taught

Undergraduate Courses:

- ElectroMagnetic Field Theory
- Digital Electronic Circuits
- Analog Communication
- Microwave Engineering
- Digital Communication
- Digital Design using VHDL
- Analog Electronic Circuits
- Machine Learning
- Advanced Digital Communication
- Advance Wireless Communication
- Error Control coding

Research Areas

- Optical Wireless Communication

Publications

Journals

1. Ramachandrapura S, Ahmad F, Prosad A, Raghunathan V. Dual-Carrier Multiplexed Laser-based Hybrid Transmitter for High Data-rate Indoor Optical Wireless Communication. *Optik*. 2023 Jan 7:170522.
2. Ahmad F, Ramachandrapura S, Manattayil J, Raghunathan V. Path-loss optimized indoor laser-based visible light communication system for variable link length gigabit-class communication. *IEEE Photonics Journal*. 2020 Aug 4;12(4):1-2.
3. HS Shwetha, RN Sathisha, "Performance Enhancement of MIMO OFDM", *International Journal of Computer Applications*, Volume 975, Year 2015, Pages 8887

Conference Proceedings

1. R.N. Sathisha, F. Ahmed, and V. Raghunathan, "Two-user NOMA based Indoor Optical Wireless Communication with Variable Cell Coverage using Beam Divergence Control", *NCC* Feb,2024
2. R.N. Sathisha, F. Ahmed, and V. Raghunathan, "Demonstration of gigabitspersecond two-user NOMA in laser-based indoor optical wireless communication," in *Next-Generation Optical Communication: Components, Sub-Systems, and Systems XIII*, SPIE Photonics West, San Francisco, California, United States: SPIE, Jan. 2024
3. R. N. Sathisha, Faheem Ahmad, Varun Raghunathan, "Demonstration of RFVLC Hand-over using Receiver side Channel Selection", in *2023 15th International Conference on COMMunication Systems NETWORKS (COMSNETS)*, Publisher: IEEE, pp. 382-386, 2023.

4. Faheem Ahmad, R. N. Sathisha, Konkada Manattayil Jyothisna, Varun Raghunathan, “Lighting fixture compatible NIR laser-based 16QAM-OFDM modulated visible light communication”, in SPIE: Metro and Data Center Optical Networks and Short-Reach Links V vol. 12027, pp. 171-177, 2022.
5. Faheem Ahmad, R. N. Sathisha, Konkada Manattayil Jyothisna, Varun Raghunathan,” Design of variable link length indoor visible light communication system using focus tunable liquid lens”, in SPIE: Broadband Access Communication Technologies XV vol. 11711, pp. 96-102, 2021.
6. R. N. Sathisha, Faheem Ahmad, Konkada Manattayil Jyothisna, Varun Raghunathan,” Demonstration of high data-rate multimedia streaming in a laserbased indoor visible light communication system”, in 2020 International Conference on COMmunication Systems NETworkS (COMSNETS), Publisher: IEEE, pp. 614-617, 2020.
7. Faheem Ahmad, R. N. Sathisha, Konkada Manattayil Jyothisna, Rabindra Biswas, Varun Raghunathan,” Lens design-based optimization of path loss in a high data rate indoor visible light communication link”, in SPIE: Free-Space Laser Communications XXXII vol.11272, pp. 288-295, 2020.
8. Shalini, T. S., Sathisha, R. N., “Design and simulation of hybrid circuits for RF power amplifiers used in LTE base stations” in RTEICT 2017 - 2nd IEEE International Conference on Recent Trends in Electronics, Information and Communication Technology, Proceedings, Volume 2018-January, Year 2017, Pages 760-763.
9. RN Sathisha, Sreenidhi T, and Shambhu Shastry K, “Selection of Impedance Matching Technique and Networks for X Band MMIC Design “, International Conference on Nanotechnology (ICNANO-2016) April 21- 23, 2016.

Reviewer of Journal

- Journal of Lightwave Technology

Invited Lectures, talks and workshops

1. 5G TESTBED @ IISC: Laser Based Visible Light Communication: System-level implementation VLC/RF hand-off, July 30th, 2021.
2. VLC talk at IEEE Chapter, CMR Institute of Technology, Bangalore: Beam Steering in Laser Based Visible White Light Communication, 9th October 2021
3. LiFi talk at Creactive : “Why LiFi when there is WiFi?”, 16 Mar 2024
4. LiFi talk at IEEE SIT : “The Multifold Evolution of Wireless Technology in a Decade”, 25 March, 2024