



Name- Dr. Tumma Yamuna

Designation- Assistant professor

Experience (Teaching and Industry)

RNSIT (13-07-2026 - till date)
SRK Institute of Technology (January 2026 to May 2026)
VIT-AP University (September 2023 to December 2025)
PSCMR College of Engineering (April 2022 to December 2022)

Qualifications

B.Tech. from JNTU-Kakinada, Andhra Pradesh.
M. Tech. from JNTU-Kakinada, Andhra Pradesh.
PhD from VIT-AP University, Amaravathi, Andhra Pradesh

Specialization (Academics)

Digital Electronics, Python, Analog and Digital Communications, Linear Integrated Circuits.

Specialization (Research)

UAV-FSO Communication using AI & ML

Publications

Journals:

1. **Yamuna. Tumma** and V. K. Kappala, "A review on deployment of UAV-FSO system for high-speed communication," IEEE Access, vol. 12, pp. 124915–124930, 2024. (SCI)
2. **Yamuna Tumma**, and Vinod Kiran Kappala. "Performance analysis of UAV-FSO system over atmospheric conditions with pointing errors," Optical and Quantum Electronics, vol. 57, no.7, p. 396, 2025. (SCI)
3. **Yamuna Tumma**, Mahesh Miriyala, "Deep learning-based pilot-free channel estimation of UAV-FSO system using variational auto-encoder," ICT Express, 2025. (SCI)

Conferences:

1. Kappala, Vinod Kiran, Jayashree Pradhan, Natasha Pawar, **Yamuna Tumma**, and Santos Kumar Das. "Performance Analysis of FSO Communication Over Atmospheric Turbulence and Pointing Error," IEEE Region 10 Conference (TENCON), pp. 1-6. IEEE, 2023.
2. **Yamuna Tumma**, Mahesh Miriyala, Jayashree Pradhan, and Vinod Kiran Kappala. "A Joint Channel Impairments Classification in a UAV-FSO System using Machine Learning," 2025 International Conference on Robotics and Mechatronics (ICRM), KOLLAM, India, pp. 1-6, 2025.



Book Chapter

1. Yamuna Tumma, Mahesh Miriyala, Jayashree Pradhan, and Vinod Kiran Kappala. "Performance Analysis of OTFS-Modulated UAV-FSO Communication Systems for 6G Non-Terrestrial Networks," on 5G/6G Wireless Communications: Technology and Security Challenges, 2025. (Accepted)

Google scholar link: [Dr. Tumma Yamuna](#)

Awards Received

- Achieved first rank in SSC under A.P. Z.P. Govt High school category.
- Achieved Town first rank in Intermediate with 97.3%.
- Received State Merit Scholarship from GOVT. of Andhra Pradesh for 2 years of Intermediate.
- Achieved Elite+Silver in NPTEL for the course of Digital Circuits.
- Received Raman Research Award twice from VIT-AP University, Amaravathi.
- Received Research Scholar award from VIT-AP University, Amaravathi.