

Emerging Technologies in Electronics and Communication Engineering

R.Lavanya

AP/Chemistry

Sri Sairam Engineering College

lavanya.ch@sairam.edu.in

Mr. Rageeth Krishnakumar

First Year Student/ECE

Sri Sairam Engineering College

rageethkumar@gmail.com

ABSTRACT

This paper explores cutting-edge advancements in electronics and communication engineering, focusing on quantum communication, 6G networks, neuromorphic computing, and other emerging technologies such as e-textiles and terahertz communications. It highlights significant progress in quantum-encrypted networks, energy-efficient neuromorphic chips, integrated photonics, and novel paradigms such as analog machine learning and memristors. Additionally, lesser-known but impactful technologies like Orbital Angular Momentum multiplexing and molecular communication are reviewed for their transformative potential in the coming decade.

Keyword: Quantum Communication, 6G Networks, Neuromorphic Computing, E-Textiles, Terahertz Communication, Quantum-Encrypted Networks