

Dr. S. Kranthi – Ph.D. Achievement:

The Department of Artificial Intelligence, Siddhartha Academy of Higher Education, proudly congratulates Dr. S. Kranthi, Assistant Professor, on the successful completion of her Ph.D. from SRM University, Chennai. Her research focused on “A Collaborative and Intelligent Intrusion Detection and Prediction Framework for Secure and Energy Efficient Software Defined Networks.” We wish her continued success and excellence in her academic and research journey.



Dr. S. Kranthi
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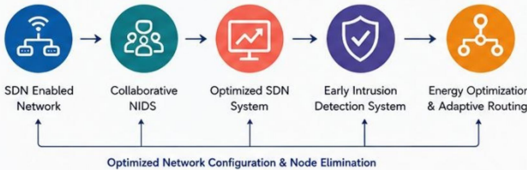
★ *Congratulations!* ★
ON THE SUCCESSFUL COMPLETION OF
Ph.D.
RESEARCH TITLE
**A Collaborative and Intelligent Intrusion
Detection and Prediction Framework for
Secure and Energy Efficient Software
Defined Networks**

A novel modular framework that integrates intrusion detection, traffic management, energy optimization, and adaptive routing in Software Defined Networks (SDN) to enhance security, performance, and energy efficiency.

GUIDE
Dr. M. Kanchana
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PROPOSED FRAMEWORK OVERVIEW



SDN Enabled Network → Collaborative NIDS → Optimized SDN System → Early Intrusion Detection System → Energy Optimization & Adaptive Routing

Optimized Network Configuration & Node Elimination

KEY CONTRIBUTIONS

- INTRUSION DETECTION (CbAN Model)**
Detects malicious traffic using deep learning and optimization for higher accuracy and low false positives.
- TRAFFIC MANAGEMENT (BRBN Model)**
Dynamically classifies traffic and optimizes load balancing for better QoS and reduced delays.
- ENERGY OPTIMIZATION & ROUTING (Hyena-based Model)**
Monitors node energy, trust, and traffic to enable energy-efficient routing and sustainable operation.
- IMPACT**
Significant improvement in security, throughput, latency, packet delivery, and energy efficiency compared to existing methods.

★ *Wishing Dr. S. Kranthi continued success and many more achievements in her research journey!* ★