Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603110.

(An Autonomous Institution Affiliated to Anna University, Chennai)

Department of Electronics and Communication Engineering

International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2025)

<u>Program Schedule</u>

<u>Day 1 (20 March 2025)</u>

Time	Event	Venue
8:30 AM – 9:00 AM	Inauguration	Central Seminar Hall
9:00 AM – 10:30 AM	Keynote 1 **Dr. Arokiaswami Alphones** Professor, School of EEE Nanyang Technological University, Singapore, Chair, IEEE, Singapore section. **Title:** THz Band Transceivers for 6G Systems Session Coordinator: **Dr. K. T. Selvan**, Professor, Department of ECE, SSNCE	Central Seminar Hall
11:00 AM – 12:30 PM	Keynote 2 **Dr. Santhakumar Mohan** Professor, Mechanical Engineering, Indian Institute of Technology, Palakkad. **Title:** Challenges in Industry 4.0 and 5.0 Session Coordinator: **Dr. A. Jawahar,** Professor, Department of ECE, SSNCE	Central Seminar Hall
12:30 NOON – 1:30 PM	Lunch	Canteen First Floor
1:30 PM – 3:30 PM	Paper presentation I	Central Seminar Hall ECE Seminar Hall Microwave Lab VLSI Lab-Hall I

Day 1 - Paper presentation I - Session 1
Detailed Schedule

Track 1: Wireless Communications and Networking

Session Chair: **Dr. C. Annadurai**, Associate Professor, ECE, SSNCE

Dr. B. Ramani, Associate Professor, ECE, SSNCE

Venue: Central Seminar Hall

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	57	Design and Implementation of a Resilient Communication Network for Disaster Recovery Using Satellite Links	Rushank Tripathi
1:45 pm – 2:00 pm	239	PancreasNet: A Transformer-Based Progressive Residual Network for Comprehensive Pancreatic Cancer Detection using CT Images	Aniruddhan P
2:00 pm – 2:15 pm	246	Real Time Implementation of Chaotic Adaptive Rate Frequency Hopping in WBAN Using SDR	Saranmurthy B
2:15 pm – 2:30 pm	278	Energy-Efficient Communication with Data Integrity in Wireless Sensor Networks	Gowtham E
2:30 pm – 2:45 pm	300	Depth and Dimension Estimation Using Computer Vision	Ravindran S
2:45 pm – 3:00 pm	305	BER Analysis of Forum-Standards in Near-field Communication	A. Kasi Vishwanathan
3:00 pm – 3:15 pm	307	PAPR and BER analysis of Chrip Transform based OTFS	K Satyanarayana

Day 1 - Paper presentation I-Session 2

Detailed Schedule

Track 2: Signal and Image Processing, Computer Vision

Session Chair: **Dr. R. Amutha**, Professor, ECE, SSNCE

                 Dr. Satyakam Baraha, Assistant Professor, ECE, SSNCE

Venue: ECE Seminar Hall

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	5	Hate Speech Detection and Marker Identification Approach	Bhavayukta S
1:45 pm – 2:00 pm	6	Comprehensive Stride Analysis Through Plantar Pressure	V Harsha Vardhan
2:00 pm – 2:15 pm	37	Real-Time Wild Animal Detection using YOLOv10 Algorithm	Nishanth I
2:15 pm – 2:30 pm	293	YOLO-ASCA: A Rule-Based Framework for Identifying Safety Risks in Construction Management	Mohamed Aslam K
2:30 pm – 2:45 pm	422	Secure Audio Embedding in Images with Image Transforms and Decompositions	Shyam Tripathi
2:45 pm – 3:00 pm	518	Performance Analysis of Triple Hop RF-RIS Convergent with FSO and UWOC System	Sheeba A
3:00 pm – 3:15 pm	541	Energy Harvesting Optimization in FSO Communication with SLIPT Using Advanced Splitting Methods	Dharshini V M

Day 1 - Paper presentation I-Session 3

Detailed Schedule

Track 3: VLSI Design and Nanotechnology

Session Chair: **Dr. V. Vaithianathan**, Associate Professor, ECE, SSNCE

Venue: Microwave Laboratory

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	99	Temperature-Dependent Bandgap Modeling of Alx Ga1-x N using Varshni Equation and Bowing Parameter Analysis for High-Electron-Mobility Transistors	T Suresh Babu
1:45 pm – 2:00 pm	379	Low Noise and High Linear Multi Band LNA for IEEE 802.11be 5G Wireless Application	Sakthiya J
2:00 pm – 2:15 pm	567	Performance analysis of LeadFree Perovskite Absorber Materials for High-Performance Solar Cells Using SCAPS1D	Jerlin Trickcy J
2:15 pm – 2:30 pm	580	Evaluating ETL/HTL Materials for Optimized Performance in Perovskite Solar Cells	Varsaa Shrri Nagendran
2:30 pm – 2:45 pm	1222	Performance Optimization of FIR Filters Using Approximate Multipliers	Aluvoju Vivek
2:45 pm – 3:00 pm	1226	Design and Analysis of Compressor Using Approximate Full Adders for Future Low power Electronics	Aluvoju Vivek
3:00 pm – 3:15 pm	1251	Design and UVM-Based Verification of Unified AXI4 and AXI4-Stream Protocols	Mohanakrishnan K R
3:15 pm – 3:30 pm	1332	Selective Dual Word Line and Single Bitline 8T SRAM Cell Design for Low Power Applications	J.S. Ashwin
3:30 pm – 3:45 pm	263	Pentacene-based Organic Tunnel Field Effect Transistor for Hybrid Working Environment	Nivedha E

Day 1 - Paper presentation I - Session 4
Detailed Schedule

Track 4: Antenna, Microwave & RF

Session Chair: **Dr. B. Sakthi Abirami**, Assistant Professor, ECE, SSNCE

Venue: VLSI Laboratory – Hall I

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	178	Design and Investigation of Flexible Flower Shaped UWB Antenna for Body Area Networks	Sreedevi B
1:45 pm – 2:00 pm	258	A Multi-Resonator based Conformal Band-Stop Frequency Selective Surface For X-Band Electromagnetic Shielding	Amul H
2:00 pm – 2:15 pm	486	Design of A High Gain and Isolated Orthogonal Polarized Dual-Port Slotted MIMO Antenna for ISM Band Application	M. Uma
2:15 pm – 2:30 pm	520	Design and Implementation of an IEEE-Compliant Receiver for 2.45 GHz QAM Signals	Thivya Selvi A R
2:30 pm – 2:45 pm	528	Design and Simulation of an FMCW/CW X Band Radar for Detection/Classification of LSS Targets	SPK Babu, Amalorpava Selvi
2:45 pm – 3:00 pm	537	Compact and Low-Profile MIMO Antenna for 5G Wireless Performance	Arasa Chandra Krithik M G
3:00 pm – 3:15 pm	712	Design of V-Slot and Arc Shape Patch Antenna for Brain Tumor Detection	S. Kalaivani
3:15 pm – 3:30 pm	1396	A Compact Multiband Antenna for ICP Monitoring	Vishnu U

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603110.

(An Autonomous Institution Affiliated to Anna University, Chennai)

Department of Electronics and Communication Engineering

International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2025)

<u>Program Schedule</u>

<u>Day 2 (21 March 2025)</u>

Time	Event	Venue
09:00 AM – 10:30 AM	Keynote 3 **Dr. Radhakrishna Ganti**, Professor, Electrical Engineering, IIT Madras. **Title:** AI/ML for 6G Networks Session Coordinator: **Dr. N. Venkateswaran,** Professor, Department of ECE, SSNCE.	ECE Seminar Hall
11:00 AM – 12:30 PM	Keynote 4 **Dr. V. Natarajan** Scientist, Society for Electronic Transactions and Security, Taramani, Chennai. **Title:** Cybersecurity in the Era of Quantum Computing and AI Session Coordinator: **Dr. R. Kishore,** Associate Professor, Department of ECE, SSNCE	ECE Seminar Hall
12:30 NOON – 1:30 PM	Lunch	Canteen First Floor
1:30 PM – 3:30 PM	Paper presentation Session II	ECE Seminar Hall Microwave Lab VLSI Lab-Hall-I VLSI Lab-Hall-II Research Lab Communication Lab

Day 2 - Paper presentation II - Session 1
Detailed Schedule

Track 1: Wireless Communications and Networking &

Track 5: Web of Things, IoT and Industry 5.0

Session Chair: **Dr. M. Anbuselvi**, Associate Professor, ECE, SSNCE

Venue: ECE Seminar Hall

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	346	Performance analysis of the reliability based direct decoding algorithm for Turbo codes with QPSK modulation and different interleavers	Salija P
1:45 pm – 2:00 pm	584	Performance Analysis of Normalized Min-Sum Decoder for LDPC using Non-Uniform Quantization	Pargunarajan K
2:00 pm – 2:15 pm	809	Beam Steering MIMO Antenna Design for Sub-6 THz Wireless Communication Systems	Sanjai B
2:15 pm – 2:30 pm	952	Traffic Sign and Obstacle Detection for Autonomous Vehicle Navigation using Edge Computing	Bharathwaj M
2:30 pm – 2:45 pm	1143	Stochastic Analysis of Underwater Acoustic Networks with Dynamic Command Center and AUVs for IoUT Applications	Mohamed Dharik H
2:45 pm – 3:00 pm	1472	IMHPS: IoT-Enabled Mobile Hotspot Positioning System for Smart Home Applications	Bavishya Sankaranarayanan
3:00 pm – 3:15 pm	296	Empowering Dysarthric Individuals through Speech Recognition: A Transformer-Based Approach	Tejashvini A

Day 2 - Paper presentation II - Session 2

Detailed Schedule

Track 2: Signal and Image Processing, Computer Vision

Session Chair: **Dr. K. Muthumeenakshi**, Associate Professor, ECE, SSNCE

Dr. M. P. Actlin Jeeva, Assistant Professor, ECE, SSNCE

Venue: Microwave Lab

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	316	AudioCensorNet: A multilingual audio censoring model based on whisper for generating censored video	Vedansh Kumar
1:45 pm – 2:00 pm	336	A Comparative Analysis of Deep Neural Network Models for the Detection of Hyperfunctional Dysphonia from Speech Signals	Anitha S
2:00 pm – 2:15 pm	345	Enhanced Polyp Segmentation in Colonoscopy Videos using Deep RGB and Depth Fusion Strategies	Dr. Sushma B
2:15 pm – 2:30 pm	529	Anomaly Segmentation of Leather Defects Using Modified U-Net Architectures	Suriya Prakash J
2:30 pm – 2:45 pm	540	Language Detection in Overlapping Multilingual Speech: A Focus on Indian Languages	Anupama Anil Kolsur, K prajwal
2:45 pm – 3:00 pm	546	Integrating Inception v3 and Retinex Enhancement for Accurate Diagnosis of Age-Related Macular Degeneration	R vijaya lakshmi
3:00 pm – 3:15 pm	552	Transfer Learning Based Gastrointestinal Disease Classification Using WCE Images	Subashree T U
3:15 pm – 3:30 pm	690	Spectrogram Analysis for ECG Heartbeat Anomaly Detection Using a Novel Framework Incorporating Explainable AI with LIME and SHAP Techniques	R Srivats

Day 2 - Paper presentation II - Session 3

Detailed Schedule

Track 3: VLSI Design and Nanotechnology &

Track 4: Antenna, Microwave & RF

Session Chair: **Dr. S. Karthie**, Associate Professor, ECE, SSNCE

Venue: VLSI Laboratory – Hall I

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	515	Optimizing FIR Filters for High-Speed Signal Processing	Nitesh R
1:45 pm – 2:00 pm	579	A Low Power 7.05-10.10 GHz 90-nm CMOS LNA Radio Astronomy Receivers	Sivayogarajan L
2:00 pm – 2:15 pm	1405	FPGA based Hardware Accelerator for Ocular Biometrics Recognition using YOLOv8	Pujiita Srieya Bolisetty
2:15 pm – 2:30 pm	798	A Self-Adhesive Serpentine based Passive UWB tag for Wireless Medical Data Monitoring	Dr. Samuelraj Chrysolite
2:30 pm – 2:45 pm	1013	5G Sub-6 GHz Dual Port Wideband MIMO Antenna with Improved Gain and Isolation	Sibiya Trini Lydia K
2:45 pm – 3:00 pm	1087	Design and Analysis of 2x2 Circularly Polarized Microstrip Patch Antenna Array for Ultra-Wideband Applications	B R Sanjeevadharsh
3:00 pm – 3:15 pm	1152	Metasurface based Hybrid Plasmonic Waveguide fed THz Antenna for On-Chip Wireless Communication	Kirtana Narayanan
3:15 pm – 3:30 pm	1157	Performance of Range Doppler Algorithm in Synthetic Aperture Radar Image Formation for Semi-urban Terrain	Mallireddy Venkateswara Reddy
3:30 pm – 3:45 pm	50	Antenna Design for Dual Band Filtering With H- Shaped Slot and Symmetric OSCF	Tharani R

Day 2 - Paper presentation II - Session 4
Detailed Schedule

Track 5: Web of Things, IoT and Industry 5.0

Session Chair: **Dr. R. Rajavel**, Associate Professor, ECE, SSNCE

Venue: VLSI Laboratory – Hall II

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	223	Piezoelectric-based Footstep Power Generation for Sustainability	Lingeshwaramoorthy E
1:45 pm – 2:00 pm	226	Smart Lab Management: Real-Time Occupancy Monitoring and Analysis Using Edge-Computing and Deep Learning	Mukesh Balaji K
2:00 pm – 2:15 pm	295	H-PCFed: Hierarchical Privacy-Enhanced and Communication-Efficient using Federated Learning with Lightweight Deep Learning Model for Industrial IoTs	Ashwanthram A C
2:15 pm – 2:30 pm	517	A Novel Task Offloading and Scheduling Framework for Fog Computing	Meghana M, Kushala R
2:30 pm – 2:45 pm	591	ROS2-Based Autonomous System for Precision Monitoring in Unstructured Crop Arrangement	Srinidhi Arunkumar
2:45 pm – 3:00 pm	728	Destination Oriented Directed Acyclic Graph (DODAG) Formation and Healing in Wi-SUN Networks	Aditya Gupta

Day 2 - Paper presentation II - Session 5A

Detailed Schedule

Track 5: Web of Things, IoT and Industry 5.0

Session Chair: **Dr. S. Aasha Nandhini,** Assistant Professor, ECE, SSNCE

Venue: Research Lab

Time (IST)	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	204	Benchmarking Fault Tolerance in Hadoop MapReduce with Enhanced Data Replication	Rakesh Recharla Chenchu
1:45 pm – 2:00 pm	207	Building a Scalable Decentralized File Exchange Hub Using Google Cloud Platform and MongoDB Atlas	Rakesh Recharla Chenchu
2:00 pm – 2:15 pm	209	FlexAlloc: Dynamic Memory Partitioning for SeKVM	Rakesh Recharla Chenchu
2:15 pm – 2:30 pm	212	Parallel Sparse Matrix Algorithms in OCaml v5: Implementation, Performance, and Case Studies	Rakesh Recharla Chenchu
2:30 pm – 2:45 pm	389	Secure and Scalable Anomaly Detection in Cloud Environments Using Hidden Markov Models, SMPC, and Decentralized Federated Learning	Swapna Narla

Day 2 - Paper presentation II - Session 5B

Detailed Schedule

Track 6: Network Security & Artificial Intelligence

Session Chair: **Dr. R. Kishore**, Associate Professor, ECE, SSNCE

Venue: Communication Lab

Time (IST)	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	1134	Low Power Hybrid Full Adder Design using MGDI Based XNOR Gate with Swing Restored Technique	Ujala
1:45 pm – 2:00 pm	1233	SpoofGuard Framework: A novel GPS Spoofing Detection and Mitigation Approach for autonomous vehicles using Interval kalman filtering and Hybrid signal modelling	D. Kiruthika
2:00 pm – 2:15 pm	1346	Federated Learning for Anomaly Detection in Smart Cities	Protik Mukherjee
2:15 pm – 2:30 pm	624	VisiBot Automated Detection and Visualization of IoT Botnets	Dimplesri Addagiri
2:30 pm – 2:45 pm	358	AI-Powered Warehouse Management: Autonomous Mobile Robots and Advanced Optimization with NFC, MILP, and Swarm Algorithms	Jyothi Bobba

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603110.

(An Autonomous Institution Affiliated to Anna University, Chennai)

Department of Electronics and Communication Engineering

International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2025)

Program Schedule

Day 3 (22 March 2025)

Time	Event	Venue
9:00 AM – 10:30 AM	Keynote 5 **Mr. Vishnu Ram OV** ITU-T focus group on autonomous networks. Bengaluru. **Title:** A fresher's guide to AI, 6G and Code Session Coordinator: **Dr. P. Kaythry**, Associate Professor, Department of ECE, SSNCE	Central Seminar Hall
11:00 AM – 12:30 PM	Keynote 6 **Dr. Dejan Vukobratovic** Professor. Department of Power, Electronic and Communication Engineering. University of Novi Sad, Serbia. **Title:** Recent Advances in AI/ML Integration in 5G and Beyond Session Coordinator: **Dr. N. Prabagarane**, Associate Professor, Department of ECE, SSNCE	Central Seminar Hall
12:30 NOON – 1:30 PM	Lunch	Canteen First Floor
1:30 PM – 3:30 PM	Paper presentation III	Central Seminar Hall ECE Seminar Hall Microwave Lab VLSI Lab-Hall-I VLSI Lab Hall-II

Day 3 - Paper presentation III - Session 1
Detailed Schedule

Track 1: Wireless Communications and Networking

Session Chair: **Dr. W. Jino Hans**, Associate Professor, ECE, SSNCE

Venue: Central Seminar Hall

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	810	Optimizing Wireless EV Charging Efficiency with Metamaterial-Driven Coil Alignment	Venkat Raman P
1:45 pm – 2:00 pm	1659	Power-Aware Optimization in RSMA-OFDM Systems with AF Relay Integration	Dr. Samikkannu Rajkumar
2:00 pm – 2:15 pm	509	A secure design of PUF based Mutual Authentication Protocol for Mobile IoT Network	Dr. V.C.Diniesh
2:15 pm – 2:30 pm	1684	Deep Space Communication Utilizing IP Stack and Reinforcement Learning Algorithm	Sivakrishna Manoj
2:30 pm – 2:45 pm	1685	Non-Invasive Frequent Hemoglobin monitoring system	Neelambari R A
2:45 pm – 3:00 pm	1686	Photonic Integrated Continuously Tunable Beamformer for Millimeter Wave Communication	Dr. Shayna kumari
3:00 pm – 3:15 pm	1141	Improving e-Health Security with Lightweight Cryptography for Enhanced Protection	Dr. K. J. Jegadish Kumar, Bhuvaneshwari. A. J

Day 3 - Paper presentation III - Session 2
Detailed Schedule

Track 2: Signal and Image Processing, Computer Vision

Session Chair: **Dr. C. Vinothkumar**, Associate Professor, ECE, SSNCE

   Dr. I. Nelson, Associate Professor, ECE, SSNCE

Venue: ECE Seminar Hall

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	752	Advanced KOA Detection Using Multi-Architecture Ensemble Models with Attention Mechanisms	Mr. Bharanidivya Madhavan
1:45 pm – 2:00 pm	828	Low-cost design and modelling of mobile manipulator with RRT based path planning	Mr. Selva Kathiresan S
2:00 pm – 2:15 pm	874	A Vision-based Gait Analysis and Fall Detection Using YOLOv11 Model	Mr. V S Rishith Reddy
2:15 pm – 2:30 pm	1048	Implementation of Sidelobe Canceller using MVDR Beamforming Technique	Ramboraj Basumatary, Dr. Govind Murmu
2:30 pm – 2:45 pm	1188	Accent Based Transformer Ensemble for Air Traffic Control Speech Recognition	Mr.Sumukh Shadakshari, Srinivasa Puranika Bhatta
2:45 pm – 3:00 pm	1193	A New Color Manipulation Method and Dehazing for Enhancement of Underwater Images	Kanagavel M
3:00 pm – 3:15 pm	1658	Image Captioning Using Scene Graph Generation	Mr. Abisheak A

Day 3 - Paper presentation III - Session 3

Detailed Schedule

Track 6: Network Security & Artificial Intelligence

Session Chair: **Dr. K. J. Jegadish Kumar**, Associate Professor, ECE, SSNCE

Venue: Microwave Laboratory

Time	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	23	Comparative Analysis of Air Quality Prediction Using Diverse Learning Models: Insights from The Indian Scenario	K. Naveen Kumar
1:45 pm – 2:00 pm	120	Quantum Phase True Random Number Generation for Secure Sustainable 6G Communication	T.S. Gururaja
2:00 pm – 2:15 pm	320	Privacy-Preserving Skellam Mixture Model Fusion for Robust Statistical Learning	Tvisha Prasad, Anshuman B Suresh
2:15 pm – 2:30 pm	593	Side-Channel and Fault Attacks on ML-KEM: A Survey of Vulnerabilities and Countermeasures	Renita J
2:30 pm – 2:45 pm	594	Artificial Intelligence Assisted Side-Channel Analysis: Security Assessment Challenges	Suganya
2:45 pm – 3:00 pm	1101	Multimodal Sentiment Analysis Using TriFusion Attention Network	Dinesh Kumar S
3:00 pm – 3:15 pm	1706	Comparative Study: Deepfake Detection in Tamil Speech using Hybrid Convolutional Networks	Mohamed Faheem M

Day 3 - Paper presentation III - Session 4

Detailed Schedule

Track 1: Wireless Communications and Networking

Session Chair: **Dr. G. Durga**, Associate Professor, ECE, SSNCE

Dr. B. Partibane, Associate Professor, ECE, SSNCE

Venue: VLSI Laboratory – Hall I

Time (IST)	Paper ID	Title of the Paper	Presenting Author
1:30 pm – 1:45 pm	269	Revolutionizing 6G Networks: Implementing Cell-Free Architecture with Advanced Clustering Through Deep Machine Learning	Dr. Iacovos Ioannou
1:45 pm – 2:00 pm	311	An Accurate Intelligent Plan Library for Belief-Based Desire Prioritization to Intentions in BDIx Agents	Dr. Iacovos Ioannou
2:00 pm – 2:15 pm	375	A Review of Ensemble Learning Techniques and Public Dataset for Intrusion Detection Systems	Mr. Fifto Nugroho
2:15 pm – 2:30 pm	536	Towards an Improvement of the ADR Mechanism Based on New Parameters for Possible Optimization of LoRaWAN Transmission	Mr. Ousmane Diallo
2:30 pm – 2:45 pm	598	Optimal ARIS Deployment for Network Throughput Maximization in Multi ARIS-assisted Networks	Bhagawat Adhikari
2:45 pm – 3:00 pm	612	Fuzzy Logic Based Non-coherent FSK for Ambient Backscatter across OFDM Signals	Mr. Satyam Pandey
3:15 pm – 3:30 pm	1664	Design of Reflective Index Modulated Non-orthogonal Multiple Access (RI-NOMA) System for 6G Networks	J. Arun kumar
3:30 pm – 3:45 pm	56	Neural Network approach for Resource Allocation and Traffic Management in 6G Networks	Priyanka H B