

**Technical Programme for
4th International Conference on Range Technology (ICORT-2025)
06-08 March 2025**

Day-1 (06 March 2025: Thursday)				
0900-1000	Spot Registration			
1000-1045	Inauguration Chief Guest Shri U Rajababu, Distinguished Scientist, Director General (MSS), DRDO			
1045-1115	HIGH TEA			
1115-1215	Keynote Address Venue: Hall-1 (Main Auditorium)			
1215-1300	Inauguration of Industrial Exhibition			
1300-1400	LUNCH (Venue: NOCCi Dining Area)			
1400-1600	Tutorial-1 by Dr. Jagannath Nayak & Team Distinguished Scientist, CHES (DRDO) <i>Topic: Directed Energy Weapons: Advancing Technology and Optimizing Test Ranges for Future</i> Venue: Hall-1 (Main Auditorium)			
1600-1615	TEA BREAK			
1615-1815	Parallel Sessions (23 Papers)			
	Parallel Session-1 Track: Range Instrumentation <i>Session Theme: Range Telemetry Systems</i> Venue: Hall 2 (Crystal)	Parallel Session-2 Track: Data Analytics, AI & ML <i>Session Theme: Data Analytics in Meteorology</i> Venue: Hall-1 (Main Auditorium)	Parallel Session-3 Track: Antenna, RF & MW <i>Session Theme: Advances in Microwave & Radar Technologies</i> Venue: Hall 3 (Emerald)	Parallel Session-4 Track: Communication & IoT <i>Session Theme: Communication & IoT</i> Venue: Hall 4 (Sapphire)

1615-1630	Paper ID:1571103671 Primary Key Based Merging on Unsynchronized Data for Aeronautical Telemetry Systems	Paper ID:1571104539 The Investigation of Cyclone ROANU Using MWR	Paper ID: 1571100104 A Broadband Artificial Magnetic Conductor for S-Band Applications	Paper ID: 1571099692 Performance Analysis of FSO Communication Under Foggy Conditions
1630-1645	Paper ID:1571099186 Low-Cost MEMS Gyroscope-Driven Measurement System for Real-Time Aircraft Attitude Dynamics	Paper ID: 1571105366 Linking Premonsoon and Monsoon Patterns in Above-Normal and Below-Normal for Central India Monsoon Years	Paper ID: 1571103600 Beam Revisit Time Based Clustering Algorithm for Classification of Radars and Modes	Paper ID:1571105399 Design of a Multipurpose Communicable Handglove Based on Navigation Tools and Microcontroller Unit
1645-1700	Paper ID:1571103239 Application of Modelling and Simulation in the Measurement of Weapon Chamber Pressures by Copper Crusher Gauges in Test Ranges	Paper ID: 1571099562 Quality Control (QC) and Quality Assurance (QA) Procedures for Meteorological Data from Automatic Weather Stations	Paper ID: 1571096187 Development of an Integrated Real-Time SAR Simulation System for Pre-Deployment Evaluation	Paper ID:1571105400 Deep Learning-Based Model for Simultaneous Channel Estimation and Signal Decoding for Wireless Communication
1700-1715	Paper ID:1571105283 Drone Based Telemetry Transceiver for Low Altitude Target Tracking	Paper ID:1571103669 Investigation of Long-Term Rainfall Analysis: Trends, Anomalies, and Implications for Operational Mission Planning at Integrated Test Range, Chandipur	Paper ID: 1571103390 Evolutionary and Hybrid Optimization Techniques for Orthogonal Polyphase Code Design: a Comprehensive Review for ONRS and MIMO Radar	Paper ID: 1571105444 FPGA Implementation of Adaptive Modulation Scheme-Based Underwater Acoustic Modem

			Applications	
1715-1730	Paper ID:1571105336 Satellite-Based Telemetry Data Relay for Long-Range Aerial Vehicle Monitoring: Challenges, Feasibility, and Future Prospects	Paper ID:1571105094 A Comparative Study of Weather Prediction Models: GFS, ECMWF and ICON for Coastal Area	Paper ID: 1571105015 Augmentation of TRM with Upgraded High-Power Pulsed Amplifier for Active Aperture Radar	Paper ID:1571103588 FPGA-Based Acoustic Detection and Ranging System for Underwater Applications
1730-1745	Paper ID: 1571105392 Realization of s-Band Multi Beam Phased Array Telemetry	Paper ID: 1571100033 Hybrid Deep Recurrent Neural Networks for Accurate Wind Speed Prediction	<i>Feedback from Session Chair</i>	<i>Feedback from Session Chair</i>
1745-1800	<i>Feedback from Session Chair</i>	Paper ID: 1571103556 Adaptive Resilience and Self-Healing in Aerospace System-of-Systems (SoS) Using Graph Neural Networks and Adversarial Machine Learning		
1800-1815		<i>Feedback from Session Chair</i>		

Day-2 (07 March 2025: Friday)

0900-1100	Tutorial-2 by Prof. P K Biswas & Prof. Saumik Bhattacharya, IIT Kharagpur <i>Topic: Deep Learning Model and Image Generation</i> Venue: Hall-1 (Main Auditorium)			
1100-1115	TEA BREAK			
1115-1145	Session for Diamond Sponsors (M/s Anadrone Systems Pvt. Ltd., Gurugram) Venue: Hall-1 (Main Auditorium)			
1145-1245	INVITED TALKS			
	Invited Talk-1 <i>IDCCA for indigenous thermal imager</i> Speaker: Dr. Ravinder Pal SSPL(DRDO) Venue: Hall-1 (Main Auditorium)	Invited Talk-2 <i>Range of the future: how the Telemetry architecture is evolving?</i> Speaker: Pierre Bastie SEMCO, USA Venue: Hall-2 (Crystal)	Invited Talk-3 <i>Unmanned Autonomous Systems for Photogrammetric Measurement</i> Speaker: Dr. Narayan Panigrahi CAIR(DRDO) Venue: Hall-3 (Emerald)	Invited Talk-4 <i>Machine Learning in Image Analysis: Surveillance and Strategic Applications in Defence</i> Speaker: Prof. Santi Prasad Maity IEST, Shibpur Venue: Hall -4 (Sapphire)
1245-1300	Session for Platinum Sponsor-1 (M/s Safran) Venue: Hall-1 (Main Auditorium)	Session for Platinum Sponsor-2 (M/s Weibel) Venue: Hall-2 (Crystal)	Session for Platinum Sponsor-3 (M/s AMPL) Venue: Hall-3 (Emerald)	
1300-1400	LUNCH			
1400-1700	Parallel Sessions (35 papers)			
	Parallel Session-5	Parallel Session-6	Parallel Session-7	Parallel Session-8

	Track: Range Instrumentation <i>Session Theme: Optics & Image Processing</i> Venue: Hall 2 (Crystal)	Track: Data Analytics, AI & ML <i>Session Theme: Data Analytics, AI & ML</i> Venue: Hall-1 (Main Auditorium)	Track: Antenna, RF & MW <i>Session Theme: Antenna & MW</i> Venue: Hall 3 (Emerald)	Track: Communication & IoT <i>Session Theme: Data/Network security & Cryptography</i> Venue: Hall 4 (Sapphire)
1400-1415	Paper ID:1571098695 Robustness Verification of Classification Through Image Perturbations	Paper ID:1571103651 Intention Prediction Using Ground Based Sensors and Multiple Apriori Trajectory Estimation Models	Paper ID: 1571096201 UHF-Band Helical Antenna for High Power Telecommand Application	Paper ID:1571093441 Advancing Adversarial Detection of Anomalous Wi-Fi Activity Through Residual Generative Adversarial Networks: a Novel Approach for Robust Wireless Network Security
1415-1430	Paper ID: 1571100206 Real-Time Object Detection and Navigation in Harsh Environments Using YOLOv7 and IoT Sensors	Paper ID: 1571096099 Particle Filter Resampling Using Sequential Draining	Paper ID: 1571099989 Survey of Antennas for Artillery Shell Telemetry	Paper ID:1571096102 Randomised RC6 Algorithm with Python Implementation for Secure Email Communication
1430-1445	Paper ID:1571105285 Auto Object Detection and Tracking Using Trajectory Matching in Test Range Scenarios	Paper ID: 1571101059 Heterogeneous Track to Track Fusion from Radar and IRST on an Aircraft	Paper ID: 1571103645 Design and Development of Spiral Antenna for Electronic Warfare Systems	Paper ID:1571099899 An Efficient and Secure Model for WSN Using Heuristic Approach
1445-1500	Paper ID:1571105388 Parallel Data Processing Algorithm	Paper ID: 1571102945 Integrated Framework	Paper ID: 1571100139 A High Gain s-Band Circularly Polarized	Paper ID:1571103591 Comprehensive Modeling and Design

	for Processing Electro-Optical Tracking System (EOTS) Data for Range Servers	of CNNs and Machine Learning for Enhanced SAR Image Classification	Antenna Array Using SFT for Telemetry Application	of Low Cost Piezoelectric Based Ultrasound Wireless Power Transfer for Submersible Sensors
1500-1515	Paper ID:1571103079 Passive Ranging of Ballistic Missile with Infrared Sensors Using Angle-Only Tracks	Paper ID: 1571097983 Towards Explainable Image Fusion: Gradient-Based Heatmaps for Modal Contributions	Paper ID: 1571100686 Design of Rectangular MIMO Array with Self-Decoupling Wall for Hybrid Beamforming	Paper ID:1571104653 An Architecture of Low Latency Low Bandwidth Mission Critical LAN and WAN Based Multichannel Multi-Source Secure Video Streaming for Range Application
1515-1530	Paper ID:1571103443 Real-Time Implementation of Automatic Video Tracking Algorithms for Performance Evaluation of Flight Vehicles	Paper ID: 1571099739 Intelligent Fault Detection in HIL Simulations: Leveraging AI and ML for Enhanced Operational Reliability	Paper ID: 1571102428 Design and Analysis of Quad-Port MIMO Antenna for Super Wide Band Coverage	Paper ID:1571105248 ENDGAN: an End-to-End Robust Video Steganography Using Encoder-Decoder Cross Association Graph-Based Generative Adversarial Network
1530-1545	TEA BREAK			
1545-1600	Paper ID:1571103511 Detection of Field Deployed Targets in Airborne Hyperspectral Image Data (SWIR Region): a Case Study	Paper ID:1571100110 Non-Uniform Illumination Image Thresholding Using MLP	Paper ID: 1571096188 UHF-Band Quadrifilar Helix Antenna with near Hemispherical Coverage for High Power Telecommand Application	Paper ID:1571099136 An Efficient Framework for IoT Security Using Machine Learning and High-Performance Computing
1600-1615	Paper ID: 1571105288	Paper ID: 1571105286	Paper ID: 1571103154	Paper ID: 1571099875

	Image Enhancement Using Spiral Phase and Computational Imaging	Forecasting Bandwidth of Network Interfaces Using Advanced Machine Learning Techniques	Compact Spider Web Shaped Patch Antenna for Wireless Communication	Remote Sensing Image Encryption Leveraging Unimodular Transformation and Galois Field
1615-1630	<i>Feedback from Session Chair</i>	<i>Feedback from Session Chair</i>	Paper ID: 1571104996 Microstrip Antenna Array Design and Fault Diagnosis Using Deep Learning	Paper ID:1571103638 Intelligent Intrusion Detection in Military IoT Networks Using Recursive Feature Elimination with Extreme Gradient Boosting
1630-1645			Paper ID:1571105361 Design and Analysis of Tapered Slot Antennas: Geometry and Wideband Frequency Effects	<i>Feedback from Session Chair</i>
1645-1700			<i>Feedback from Session Chair</i>	
1830 onwards	Cultural Programme & Conference Dinner			

Day-3 (08 March 2025: Saturday)

0900-1000	INVITED TALKS			
	<p align="center">Invited Talk-5 <i>Range Instrumentation: Doppler Radar Technology</i> Speaker: Eduardo Elias de Molins Weibel, Denmark Venue: Hall-1 (Main Auditorium)</p>	<p align="center">Invited Talk-6 <i>RF Sensing and Applications (Unlocking the Potential of Wireless Technology for Advanced Applications)</i> Speaker: Prof. Siba K Udgata University of Hyderabad Venue: Hall 2 (Crystal)</p>	<p align="center">Invited Talk-7 <i>Impact of Machine Learning on Advanced RF Sensing Systems</i> Speaker: Dr. Avik Santra Infineon Technology Venue: Hall 3 (Emerald)</p>	<p align="center">Invited Talk-8 <i>Advances in modern radar technologies for range applications</i> Speaker: Dr. G Vishwam LRDE (DRDO) Venue: Hall 4 (Sapphire)</p>
1000-1015	TEA BREAK			
1015-1300	Parallel Sessions (33 Papers)			
	<p align="center">Parallel Session-9 Track: Range Instrumentation <i>Session Theme: Navigation, Timing, Signal Processing</i> Venue: Hall 2 (Crystal)</p>	<p align="center">Parallel Session-10 Track: Data Analytics AI & ML <i>Session Theme: Data Analytics</i> Venue: Hall-1 (Main Auditorium)</p>	<p align="center">Parallel Session-11 Track: Antenna, RF &MW <i>Session Theme: RF System Design, Analysis & Measurement</i> Venue: Hall-3 (Emerald)</p>	<p align="center">Parallel Session-12 Track: Communication & IoT <i>Session Theme: Communication & IoT</i> Venue: Hall-4 (Sapphire)</p>
1015-1030	<p>Paper ID: 1571100608</p> <p>A Scheme to Generate NavIC-Based IRIG-B Signal for Strategic</p>	<p>Paper ID: 1571096209</p> <p>Performance Assessment of OLSR Protocol in UAVNETs</p>	<p>PaperID:1571096669</p> <p>Full-Wave Coupling Impact on DoA Computation</p>	<p>Paper ID:1571095849</p> <p>Exploring Frame Synchronization Pilots Orthogonality for</p>

	Applications	for Reconnaissance Operations		Space Time Coded SOQPSK-TG
1030-1045	Paper ID: 1571103439 Design and Implementation of LabVIEW-Based Soft Program Clock with Mission Hold Interface Unit	Paper ID: 1571102840 Simulation of Bubble Pulsation and Migration Phenomena Due to Underwater Explosion	Paper ID: 1571100715 Harmonic Generation in Modified Relativistic Magnetron with Diffraction Output	Paper ID: 1571103386 90dB Dynamic Range, Multi-Channel Data Acquisition ASIC for SONAR Application
1045-1100	Paper ID: 1571099823 Low-Cost RTK Using Compact GNSS Modules for Efficient Land Surveying	Paper ID: 1571103509 Flight Path Planning for UAVs in Environment with Moving Obstacles	Paper ID: 1571103085 Design and Analysis of Electromagnetic Composite for RCS Reduction	Paper ID: 1571103406 Design Optimization of Viterbi-Decoder Based Convolutional Codes on Reconfigurable Hardware
1100-1115	Paper ID: 1571099842 GLB-UniLog: a Time-Tagged Data Recording Software for Time and Frequency Applications	Paper ID: 1571105136 Simplified anti-Disturbance Control for the Roll Channel of a Low Cost Short Range Weapon	Paper ID: 1571099566 A CSRR Loaded SIW Based Band Pass Filter with Improved Stop-Band Rejection	Paper ID: 1571103375 Concept of Data Fusion for Multi Carrier Wave with Co-Resident Low End Transmission of 1/100th Data Rate
1115-1130	Paper ID: 1571096356 Statistical Analysis of Artillery Surveying Procedure in an Artillery Test Range	Paper ID: 1571099720 Range Automation System - an Ensemble Enhanced Transfer Learning-Based Approach for Monitoring Movement(s) in Range	Paper ID: 1571102990 A 3.5GHz 70dB SNDR Direct RF Sampling Time Interleaved Pipeline SAR-ADC with Capacitor Mismatch Calibration in CMOS 28nm	Paper ID: 1571103563 Performance-Trade-Offs in ELINT Systems

1130-1145	Paper ID:1571105258 GPS, Galileo, and Combined Performance Using SwaP-C Receiver for Defence Applications	Paper ID: 1571096103 RaSim: a Radar Data Simulator Using Machine Learning	Paper ID: 1571103503 Effectiveness of VMD in Removing of in Band Interference	Paper ID:1571105333 A Novel Coprime Array Configuration for Real-Valued Sources in Moving Platform with Increased DOF
1145-1200	Paper ID:1571096101 Reducing Impulse Noise in Audio Signals Using Cascaded Vector Median Filtering	Paper ID:1571104226 Performance Analysis of Cascaded Bidirectional Converters in Electric Vehicle Applications	Paper ID:1571105384 Prediction of System Load in RF Signal Propagation Using Hyperparameter-Tuned Light Gradient Boosting Model	Paper ID:1571105355 2D Fractal Based Sparse Array with Reduced Mutual Coupling for Direction of Arrival Estimation
1200-1215	Paper ID:1571103102 A Novel Optical Technique to Study the Flow Field Around a Sub-Calibre Projectile	Paper ID:1571105242 Arc of Safety	<i>Feedback from Session Chair</i>	<i>Feedback from Session Chair</i>
1215-1230	Paper ID:1571103522 Sparse Array Configurations for DOA Estimation of Non-Circular Sources: a Review	Paper ID: 1571098347 Cramer-Rao Lower Bounds of Position Estimate Using Angle-Only Measurements		
1230-1245	<i>Feedback from Session Chair</i>	Paper ID:1571105337 Closed Loop Performance Enhancement in Real-Time Object Tracking with Multi Tracker		

		Fusion		
1245-1300		<i>Feedback from Session Chair</i>		
1300-1400	LUNCH			
1400-1500	<p style="text-align: center;">Panel Discussion Chair Dr. B K Das, Distinguished Scientist, Director General (ECS), DRDO Venue: Hall-1 (Main Auditorium)</p>			
1500-1530	HIGH TEA			
1530-1730	<p style="text-align: center;">VALEDICTORY FUNCTION Chief Guest Dr. B K Das, Distinguished Scientist, Director General (ECS), DRDO</p>			