



# 3<sup>rd</sup> IEEE International Conference on Range Technology

## Program Schedule

Day 1

23<sup>th</sup> February, 2023 (Thursday)

09:00-10:10	<i>Registration</i>	
10:00-10:45	<b>Inauguration</b>	
10:45-11:45	<i>Keynote Address by Dr. V. K. Saraswat, Former DG, DRDO, member Niti Aayog</i>	
11:45-12:15	<b>HIGH TEA</b>	
12:15-13:15	Inauguration of Exhibition	
13:15-14:30	<b>LUNCH BREAK</b>	
14:30-16:30	<i>Tutorial 1</i> <b>Prof. Debasish Dutta</b> KIIT University, Bhubaneswar 'Passive Optical Networks: An Overview' <b>Venue 3</b>	<i>Tutorial 2</i> <b>Dr. Saumik Bhattacharya</b> IIT, Kharagpur 'Machine Learning for Object Detection and Tracking' <b>Venue 2</b>

Day 2

24<sup>th</sup> February, 2023 (Friday)

09:00-10:00	<i>Invited Speech 1</i> <b>Prof. Jayanta Mukhopadhyay,</b> IIT Kharagpur 'Unsupervised Learning: Challenges on Handling Large Data' Venue 2		<i>Invited Speech 2</i> <b>Dr. Avik Santra,</b> Infineon Technologies, Munich 'AI for Radar Signal Processing' Venue 1		<i>Invited Speech 3</i> <b>Prof. Smita Sadhu</b> Jadavpur University 'A Recently Proposed Adaptive Filter for Tracking Applications' Venue 3	
10:00-10:30	<b>TEA BREAK</b>					
10:30-12:30	<b>Parallel Session 1A</b> Track: Antennas, RF & Microwave & Radar <b>Session: Antenna Design I</b> <b>Chair: Dr. Satyajit Chakravarthi ,</b> SAMEER, Kolkata Venue 1 08 Papers	<b>Parallel Session 2A</b> Track: IR Tracking and Image Processing <b>Session: Pattern Recognition &amp; Deep Learning</b> <b>Chair: Prof. J. Mukhopadhyay,</b> IIT, KGP Venue 2 08 Papers	<b>Parallel Session 3A</b> Track: Telemetry, Communication & Flight Termination System <b>Session: Communication</b> <b>Chair: Prof. H. Sahoo,</b> VSSUT, Burla Venue 3 08 Papers	<b>Parallel Session 4A</b> Track: Data Analytics, Decision Theory <b>Session: Machine Learning and Decision Theory</b> <b>Chair: Air Cmde (Retd) P. Banerjee,</b> Venue 4 08 Papers	<b>Parallel Session 1B</b> Track: Antennas, RF & Microwave & Radar <b>Session: RF Systems</b> <b>Chair: Dr. S.N.Mishra</b> VSSUT, Burla Venue 5 08 Papers	
12:30-13:00	<b>Sponsors Session</b>					
13:00-14:00	<b>LUNCH BREAK</b>					
14:00-15:00	<i>Invited Speech 4</i> <b>Prof. Ganapati Panda,</b> CV Raman Global University 'Recent Trends in Machine Learning ,Deep Learning and Adaptive Signal Processing' Venue 2			<i>Invited Speech 5</i> Prof. Subal Kar, University of Calcutta 'Metamaterial for Microwave through THz to Optical Frequencies' Venue 3		
15:00-15:30	<b>TEA BREAK</b>					
15:30-17:30	<b>Parallel Session 1C</b> Track: Antennas, RF & Microwave & Radar <b>Session: Radar Systems</b> <b>Chair: Dr. A Bose,</b> Burdwan University Venue 1 08 Papers	<b>Parallel Session 2B</b> Track: IR Tracking and Image Processing <b>Session: EO &amp; IR Systems</b> <b>Chair: Prof. G Panda, CV Raman University</b> Venue 2 08 Papers	<b>Parallel Session 3B</b> Track: Telemetry, Communication & Flight Termination System <b>Session: Antenna Design II</b> <b>Chair: Dr. S K Mondal,</b> NIT, Durgapur Venue 3 08 Papers	<b>Parallel Session 4B</b> Track: Data Analytics, Decision Theory <b>Session: Sensors and Control systems</b> <b>Chair: Prof. S Sadhu,</b> Jadavpur University Venue 4 08 Papers	<b>Parallel Session 5A</b> Track: Range Systems and Mission Management <b>Session: Synchronization, Navigation Quality</b> <b>Chair: Dr. P Bannerjee</b> NPL, CSIR Venue 5 10 Papers	

Day 3

25<sup>th</sup> February, 2023 (Saturday)

09:00-10:00	<p><i>Invited Speech 6</i>  <i>Dr. Viswam Gampala,</i>  <i>Centre Head, MTRDC</i>  <i>'Range requirements.... Considerations for Radar Architectures and Design '</i>  <i>Venue 1</i></p>		<p><i>Invited Speech 7</i>  <b>Dr. S K Ghosh</b>  <i>IIT Kharagpur</i>  <i>'Geospatial Data Infrastructure'</i>  <i>Venue 2</i></p>		<p><i>Invited Speech 8</i>  <i>Shri K S Varaprasad,</i>  <i>DG (HR), DRDO</i>  <i>'</i>  <i>Venue 3</i></p>			
10:00-10:30	<b>TEA BREAK</b>							
10:30-12:30	<p><b>Parallel Session 1D</b>  <i>Track: Antennas, RF &amp; Microwave &amp; Radar</i>  <b>Session: Microwave Devices, Material and Circuits</b>  <b>Chair: Prof. B Gupta,</b> Jadavpur University            Venue 1            08 Papers</p>		<p><b>Parallel Session 2C</b>  <i>Track: IR Tracking and Image Processing</i>  <b>Session: Image Processing</b>  <b>Chair: Dr. D Chaudhury,</b> Techno India University            Venue 2            08 Papers</p>		<p><b>Parallel Session 3C</b>  <i>Track: Telemetry, Communication &amp; Flight Termination System</i>  <b>Session: Telemetry and Telecommand</b>  <b>Chair: Shri K S Varaprasad</b> DG (HR)            Venue 3            08 Papers</p>		<p><b>Parallel Session 5B</b>  <i>Track: Range Systems and Mission Management</i>  <b>Session: Target Systems and UAV</b>  <b>Chair: Prof. M Sinha,</b> IIT, Kharagpur            Venue 4            07 Papers</p>	
12:45-13:45	<p><i>Invited Speech 9</i>  <i>Prof. Bhaskar Gupta,</i>  <i>Jadavpur University</i>  <i>'Electromagnetic radiation absorption in Indian flora and related consequences: a critical issue for sustainable growth ''</i>  <i>Venue 2</i></p>			<p><i>Invited Speech 10</i>  <i>Prof. M Sinha,</i>  <i>IIT, Kharagpur</i>  <i>'Unwinding-Free Fast Finite-Time Sliding Mode Satellite Attitude Tracking Control''</i>  <i>Venue 3</i></p>				
13:45-15:00	<b>LUNCH BREAK</b>							
15:00-16:00	<b>Panel Discussion : Role of Industry and Academia Towards Future Challenges in Range technology</b>							
16:00-17:30	<b>Valedictory Function</b>							

\* Detailed Technical Program is given in next pages

## Technical Program of ICORT 2023

Day 2: 24<sup>th</sup> February, 2023 Session ID: 1A

Time: 10:30-12:30 hrs.

Track: Antennas, RF & Microwave & Radar			
Session: Antenna Design 1			
Session Chair: Dr. Satyajit Chakraborty, Sameer, Kolkata			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570852747	Design and Characterization of High Gain Semicircular Slotted V-Band Printed Antenna/Array with Superstrate	Shipra Bhatia; Debasish Pal; Ayan Bandopadhaya
2.	1570862039	Four Elements Tapered Fed UWB MIMO Antenna Design Using Theory of Characteristic Modes	Prabir Ghosh; Dipanjan Dutta; Abhik Gorai; Subhrakanta Behera; Rowdra Ghatak
3.	1570864242	Analysis of Octagonal Microstrip Antenna for the Fundamental Mode	Jayanta Bhattacharya; Sudipta Maity
4.	1570866324	Wide-Scan Angle Phased Array with Cavity Backed Patch Antenna at X-Band with Enhanced Active Matching Characteristics	Dovari Nagaraju
5.	1570866376	Measurement of Geometrical Parameters of MOTR Array Antenna Using Photogrammetry Technique	Vaidhyanathan A; Sriranganath Annam; Rajkumar S; Sravan Kumar Venepally; Anbarasan S; Aditya Sarkar
6.	1570867111	Dual Circularly Polarized Horn Antenna with Bandwidth Enhancement by Truncated Horn and Linear Tapered Curve	Bharti Gajendra; Pravakar Mallick; Milan Pal
7.	1570868947	Analyzing the Effect of Substrates on a Compact Pentagonal Patch Antenna-A Short Review	Bappadittya Roy
8.	1570871360	A Paper Clip Shaped MIMO Antenna with 4-Ports for Small Satellite Applications	Praveen Naidu Vummadisetty; Kalasani Naveen; Arvind Kumar; Dudi Neelima; Goutham Kumar N; Sai Haranadh Akkapanthula
<b>TOTAL PAPER : 08</b>			

Day 2: 24<sup>th</sup> February 2023

Session ID: 2A

Time: 10:30-12:30 hrs.

Track: IR Tracking & Image Processing			
Session: Pattern Recognition and Deep Learning			
Session Chair: Prof. Jayanta Mukhopadhyay, IIT, Kharagpur			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570854942	Semantic Segmentation of Urban Area Using Pix2Pix Generative Adversarial Networks	Khyat K Patel; Pratham Hiteshkumar Shah; Ruchi Gajjar
2.	1570866284	Attention Aware U-Net Architecture for Semantic Segmentation and Detection of Ocean Eddy's	John Saida Shaik
3.	1570869282	Optimization of Multi-Class Non-Linear SVM Image Classifier Using A Sobel Operator Based Feature Map and PCA	Debasis Chaudhuri
4.	1570869619	One-Dimensional Microaneurysm Feature Sequence Segmentation in Fundus Images	Renuka Acharya; Niladri Puhan; V. Sairam Reddy
5.	1570871207	Comparative Analysis of CNN Models for Self-Driving Cars in a Simulated Environment	Henil Gajjar; Dev Diwan; Ruchi Gajjar; Manish Patel
6.	1570871312	Multi-Class Multi-Object Detection and Tracking System in 3 Dimensions Using YOLOv5	Aditi Bhateja
7.	1570871386	Discrimination of Birds from Aircraft in a Video Sequence for EO Tracking Systems Using Deep CNN	Swarnava Ray; Pradipta Roy; Ranjan Kumar Dey; Prasant Kumar Dash; Vishal Kumar Routh
8.	1600000001	AI improvements for visual tracking on multi-FOV sight systems	Mahmoud Ghoniem; Samir Bouindour; Joël Budin
<b>TOTAL PAPER : 08</b>			

Day 2: 24th February 2023

Session ID: 3A

Time: 10:30-12:30 hrs.

Track: Telemetry, Communication &amp; Flight Termination System

Session: Communication

Session Chair: Prof. Harish Kumar Sahoo, VSSUT, Burla

Sl. No.	Paper ID	Paper Title	Authors
1.	1570853857	Performance Characterization of Multipath Routing Protocol in Different Mobility Scenarios	Surabhi Patel; Khushboo Jain
2.	1570855442	Design of an Analog Wireless Communication for Radiation Monitoring System with Inherent Encryption	Shri Vidhatri M M; M Sivaramakrishna; Chitrakkumar S; R Sanga
3.	1570869601	Empirical Modeling and Comparison of VHF Path Loss in Vegetation and Building Channels	Adewumi Adebayo Segun; Oyetoro Stephen Oluwatosin; Abimbade Adedayo John; Olalere Islamiat Ayobami; Odejobi Rebecca Oluwaseyifunmi
4.	1570862158	Dual-Port MIMO Antenna with Defected Ground Structure for UWB Wireless Applications	Deven Patanvariya
5.	1570862280	A Compact Tri Band Rocket Shaped MIMO Antenna Using ACS Feeding Technique for WLAN and WiMAX Applications	Kalasani Naveen; Praveen Naidu Vummadisetty; A Rajasekar; Sanjeev Kumar; Dudi Neelima; Arvind Kumar
6.	1570869580	Design and Analysis of Substrate Reliant Slotted Microstrip Patch Antenna for Modern Communication	T. Hemalatha; Bappadittya Roy
7.	1570854604	CPW Fed Heart Shaped Antenna for Ultra-Wide Band Applications	Dheeraj Pandey; Surajit Kundu; Vipashyana Sharma
8.	1570869838	A Novel Server Health Monitoring System on a Local Area Network Using Gammu, Syslog and SNMP	Ayush Gupta
<b>TOTAL PAPER : 08</b>			

Day 2: 24th February 2023

Session ID: 4A

Time: 10:30-12:30 hrs.

Track: Data Analytics, Decision Theory & Control Systems			
Session: Machine Learning & Decision Theory			
Session Chair: Air Cmde (Retd.) P. Banerjee,			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570853232	LOCOMETER an A.I. Based System for Capturing the Location of Underground Pipeline	Mukesh Rawat; Akash Pawar; Aditi Sharma; Adarsh Choudhary
2.	1570862273	EEG Signal -Based Emotion Recognition Using Machine Learning Algorithm	Akhilesh Kumar; Awadhesh Kumar
3.	1570869841	Intelligent Phase Detection of Signals on Varying SNR Using Machine Learning Algorithms	Somnath Halder; Souvik Sonar
4.	1570866429	Real-Time Forward Moving Target Tracking in Multi-Stage Launch Vehicle	Venkataramana P
5.	1570853898	A Novel High-Resolution DOA Estimation Method for Closely Spaced Targets with Sparse Array Using Compressive Sensing in Multi-Path Environment	Nagaraju L; Kishore Kumar Puli
6.	1570866220	Probabilistic Data Association Performance During Launch Vehicle Tracking	Ravindra Challa; Vaidhyanathan A; Rajkumar S
7.	1570869759	Digitization Noise Elimination from the Guidance Signal of an AESA Missile Seeker	Ankita Muhury; Smita Sadhu; Tapan Ghoshal
8.	1570869818	Improvement of Position Measurement by TDOA Technique Using K-Means Clustering	Ajay Singh Matharia; Sourav Kaity; Lalatendu Das; Jayshankar Bharti
<b>TOTAL PAPER : 08</b>			

Day 2: 24th February 2023

Session ID: 1B

Time: 10:30-12:30 hrs.

**Track: Antennas, RF & Microwave & Radar**

**Session: RF Systems**

**Session Chair: Dr. S N Mishra, VSSUT Burla**

Sl. No.	Paper ID	Paper Title	Authors
1.	1570853892	Analysis of a Passive RF Tag Based Solution for Avalanche Victim Detection	B S Mahaboob Shareef; Agraharam Ashok Kumar; Srikanth Vadada
2.	1570861525	Triangular Trihedral Corner Reflector Simulation and Measurement for RCS Calibration	Anil Kumar Chepala; Srikanth Kota; Sumanth Polimera
3.	1570861943	Radar Cross Section Reduction Simulation of Cylindrical Object Using Cobalt Coated Multiwalled Carbon Nanotubes/Polyurethane Based Radar Absorbing Composites	Navdeep Singh; Sankarsan Padhy
4.	1570869273	Flight Aerodynamic Performance of Single and Twin Air Channel for Radar Cross Section Reduction	Manish Varun Yadav; Shivani Ranjan
5.	1570869848	Frequency Coded Orientation Insensitive Chipless RFID Tags for Vital Signs Monitoring	Sri Venkata Surya Teja Jonnalagadda; Durga Prasad Mishra; Santanu Kumar Behera
6.	1570869850	Frequency Coded High Density Complementary U - Shaped Chipless RFID Tag Design	Sri Venkata Surya Teja Jonnalagadda; Durga Prasad Mishra; Santanu Kumar Behera
7.	1570871308	Orientation Insensitive Chip-Less RFID Tag Using Modified Concentric Rings	E Sai Sudeepthi; Tksv Poorna Charan; Sri Venkata Surya Teja Jonnalagadda; Situ Rani Patre
8.	1570871398	Passive RFID Transponder Using Open-Stubs for Bit-Capacity Enhancement	Durga Prasad Mishra; Sri Venkata Surya Teja Jonnalagadda; Santanu Kumar Behera
<b>TOTAL PAPER : 08</b>			



**Track: Antennas, RF & Microwave & Radar**

**Session: Radar Systems**

**Session Chair: Dr. Anindya Bose, Burdwan University**

Sl. No.	Paper ID	Paper Title	Authors
1.	1570854456	Effect of Radome Error on Miss Distance of a Surface to Air Vehicle	R Kranthi Kumar; R Laxman; Samir B Patel
2.	1570855436	Discrete Frequency Coding Waveform Sets Based on Phase-Coded Triangular FM Waveforms for MIMO Radar	R Harishankar; Anjali Kadambi; Ravi Kadlimatti
3.	1570860742	Simulation Based Study of Aircraft Detection in Chaff Environment Using Radar Techniques	Aniruddha Mandal; Pathikrit Gupta; Swaroop Sahoo; Priyanka Dangwal; Joel Roy Palathinkal
4.	1570862266	Parametric Phase Spoiling for Large Airborne Phased Array Radars	Glorious Raj; Nanditha Unnikrishnan; Ramkumar Raghu; R Rajesh
5.	1570863470	Analysis of the Life Cycle of a BOW ECHO (BE) Using Doppler Weather Radar	Bibekananda Panda
6.	1570866154	A Novel Method for Placing the Sensors for Noncircular Sources in DOA Estimation to Reduce the Mutual Coupling	Rajen Kumar Patra
7.	1570869872	Dynamic Spectrum Allocation in Cognitive Radar: A Brief Overview	Swati Swayamsiddha; Debashree Brahma; Ganapati Panda
8.	1570871397	Case Study of Fani Cyclone and Flood Monitoring Using Spaceborne Synthetic Aperture Radar and Optical Datasets	Lopamudra Samal

**TOTAL PAPER : 08**

Track: IR Tracking & Image Processing			
Session: EO & IR Systems			
Session Chair: Prof. Ganapati Panda, CV Raman Global University, Bhubaneswar			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570853033	Performance Index of a Network of Ground-Based Optical Sensors for Space Objects Observation and Measurements	Alessandro Urru; Michele Spanu; Enrico Congiu; Alessandro Palmas; Maurizio Cao; Pietro Andronico
2.	1570855046	A Dense Network Based Framework for the Fusion of Infrared and Visible Images with Edge Extraction	Ankan Banerjee; Dipti Patra; Pradipta Roy
3.	1570862157	Point Target Detection for MAWS Application	Nikhil Kumar; Neeta Kandpal; U Gopinathan; Ajay Kumar
4.	1570869318	Artificial Neural Network Based Temperature-Robust Non-Uniformity Correction for Infrared FPAs	Hemant Kumar Verma; Kishore Bachina; Chinnappa R Patil; Ramakrishnan Lakshmanan
5.	1570871100	Laser and It's Prospective Application in Range Activities	Maheshwar Jena; Dillip Kumar Behera
6.	1570862087	Triangulation with Kalman Filter for Trajectory Generation Using Electro Optical Tracking Systems (EOTS)	Asit Kumar Biswas; Satyabrata Sahu; Sobha Chandra Barik; Ranjan Dey
7.	1570859076	Analyzing Mangrove Loss in Sundarbans Using Copernicus Sentinel-1 SAR Images	Sreelakshmi Sowjanya Lanka; Kishore Kumar Puli
8.	1570855115	Non-Contact Method of Measuring Simultaneous Initiation Delay of Explosives Using Synchronization of High Speed Imaging Cameras	Harsha Akash Tanti; Viwek Mahto; Abhishek Singh; Devyani Kishore Jadhav
<b>TOTAL PAPER : 08</b>			

**Track: Telemetry, Communication & Flight Termination System****Session: Antenna Design II****Session Chair: Dr. S K Mondal, NIT, Durgapur**

Sl. No.	Paper ID	Paper Title	Authors
1.	1570858488	Millimeter-Wave Profiled Lens Antenna for 6G Beam-Steering Applications	Satyajit Chakrabarti; Ashim Chakraborty; Amitesh Kumar; Vivek Kumar Singh; P Rao
2.	1570861557	Design Studies of 26 GHz Antenna Array for 5G Applications	Ananya Pal; Ayan Kumar Bandyopadhyay
3.	1570862284	A Half Pear Shaped ACS Fed MIMO Antenna for Triband Applications	Kalasani Naveen; Praveen Naidu Vummadisetty; Sri Hasa B; Anjani Reddy B; Samuel Raj B; Mariappan R
4.	1570866226	Broadband Branch Line Coupler Using Inverted L-Type Slot for 5G Applications	Tanmoy Sarkar; Susmita Samanta; Joydeep Chakravorty; Anindya Bose
5.	1570869284	A High Gain Sub-6-GHz Array Antenna for 5G Applications	Budhadeb Maity
6.	1570869664	A Miniaturized Wideband Fractal Antenna Combining Sierpinski and Minkowski Fractals	Khushbu Patel; Santanu Kumar Behera
7.	1570871366	ACS Fed Low Profile Goose Shaped Antenna for 5G Wireless Application	Praveen Naidu Vummadisetty; Kalasani Naveen; Arvind Kumar; Sai Haranadh Akkapanthula; Ravi V; Dudi Neelima
8.	1570871382	Complementary Koch Fractal Wideband Monopole Antenna for S-Band Applications	Gaddam Saipriya; Subhasish Pandav; Santanu Kumar Behera
<b>TOTAL PAPER : 08</b>			

Day 2: 24<sup>th</sup> February 2023

Session ID: 4B

Time: 15:30-17:30 hrs.

Track: Data Analytics, Decision Theory & Control Systems

Session: Sensors and Control Systems

Session Chair: Prof. Smita Sadhu, Jadavpur University

Sl. No.	Paper ID	Paper Title	Authors
1.	1570861785	Extracting Keywords from Distributed Acoustic Sensor Signals for Earthquake Signature	Agniv Adhikari; Nandini Basumallick; Abhik Mukherjee
2.	1570866410	Multi-Sensor Data Fusion Using Triangulation Method and K-Means Algorithm	Lalatendu Das; Sourav Kaity; Biswapati Jana; Jayshankar Bharti; Shilpa Gupta; Ajay Singh Matharia
3.	1570859077	Swarm of Quadcopters Position Control in ROS-Gazebo Simulator	Satyabrata Sahu; Alok Deb
4.	1570862412	Target Tracking Based on STM32 Micro-Controller Based 3-Axis Gimbal Controller	Ranjeet Kumar; Alok Deb
5.	1570866288	Design of Servo Controller for Antenna Pedestal of C-Band Tracking Radar for Test Range Application	Aditya Verma; Bijay Kumar Shaw
6.	1570869478	Fractional Order Based RISE Controller for Autonomous Aerial Vehicle	Abhishek Dixit; Pooja Agrawal; Ajay Misra
7.	1570869773	Trajectory Prediction Under Sensor Bias Fault in a Tactical Aerial Vehicle	Dinesh Patra; Pulak Halder; Mukesh Roy; Shrabani Ghosh; Ashish Hota; Siddhartha Mukhopadhyaya
8.	1570870328	Dynamics Study and Frequency Mode Matched Analysis of Tuning Fork MEMS Gyroscope	Sudarsana Jena; Chandan Pandey; Ankur Gupta
<b>TOTAL PAPER : 08</b>			

Track: Range Systems and Mission Management			
Session: Synchronization, Navigation & Quality Management			
Session Chair: Dr. P. Bannerjee, NPL (CSIR)			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570862187	Dynamic RTK Using Compact GNSS Modules Within an Indian Urban Environment	Somnath Mahato; Ananya Ghosh; Prity Mishra; Sukabya Dan; Anindya Bose
2.	1570863754	A GIS-GNSS Integrated Static Asset Monitoring System: A Case Study Using Trees in a Plantation	Prity Mishra; Subhadip Ghorui; Somnath Mahato; Anindya Bose
3.	1570866091	Comparison of GNSS Precise Positioning Techniques Using Compact GNSS Modules for Test Range Applications	Aiswarya S Pillai; Somnath Mahato; Mrinal Goswami; Parmeswar Banerjee; Anindya Bose
4.	1570866267	Design and Development of Universal Count down Time Management Software	Chandradeo Rajak; Soumitra Ray; Anupam Kumar Shrivastava; Abdul Mannan; Biswajit Biswas
5.	1570866271	Comparative Analysis of Time Synchronization Methodologies in Test Range Scenario	Chandradeo Rajak; Biswajit Biswas; Ankita V Jaiswal; Anupam Kumar Shrivastava
6.	1570869540	Implementation of Shamir's Secret Sharing Scheme for Defense Applications	Chandradeo Rajak; Anupam Kumar Shrivastava; Biswajit Biswas; Arun Mishra
7.	1570869598	Automated Quality Management Systems: A UserFriendly Solution	Debasish Bag; Dibyajyoti Lenka; Arundhati Senapati; Pratap Chandra Sahoo; Pravakar Mallick
8.	1570869626	Significance of Quality and Reliability Analysis in Test Range	Arundhati Senapati; Dibyajyoti Lenka; Debasish Bag; Pratap Chandra Sahoo; Pravakar Mallick
9.	1570869823	A Roadmap to ISMS ISO 27001 Implementation Process	Chandradeo Rajak; Jayshankar Bharti; Ranjit Marandi; Asfa Mateen; Nishtha Mehndiratta; Jitendra Chauhan
10.	1570871244	Implementation of FPGA-Based Portable Count down Clock (PCDC)	Soumitra Ray; Chandradeo Rajak; Biswajit Biswas; Anupam Kumar Shrivastava
<b>TOTAL PAPER : 10</b>			

Day 3: 25<sup>th</sup> February 2023

Session ID: 1D

Time: 10:30-12:30 hrs.

Track: Antennas, RF & Microwave & Radar			
Session: Microwave Devices, Materials and Circuits			
Session Chair: Prof. Bhaskar Gupta, Jadavpur University			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570854920	Optimization of Input and Output Couplers for High Power S-Band Klystron	Atmakuru Nagaraju; Deepender Kant; Debasish Pal; Ayan Kumar Bandyopadhyay
2.	1570862182	Modified Minkowski Fractal Shaped Metamaterial Absorber for THz Sensing and Detection Systems	Sayani Bindai; Sapana Ranwa; Rowdra Ghatak
3.	1570862236	Control and Calibration of RF Source for Hyperthermia Treatment	Rahul Kumar Suresh Kumar Sharma; K Aurobindo Krishnan; Sandeepak S Kakatkar
4.	1570866119	An Effective EM Simulation Model to Synthesize Remote Sensing Big Data for Urban Land Use Mapping	Minh N. T. Nguyen
5.	1570869627	Ultrathin Wideband Metamaterial Based Microwave Absorber	Bhavya EV; Balamati Choudhury; Raveendranath Nair
6.	1570869899	Analysis of Bit-Transformation of a 6- Bit Spiral Resonator	Priyabrata Sethy; Santanu Kumar Behera
7.	1570871242	Synthesis and Analysis of Para/Ferroelectric Phase Shifter	Niladri Roy; Mousumi Daspattnayak; L Biswal; Ram Choudhary
8.	1570866199	Micro Fabrication of Silicon and Silicon Carbide IMPATT Diodes by Circumventing Process Related Criticality to Create Avalanche Phenomenon with Negative Resistance for the Generation of RF Power	Arindam Dasgupta
<b>TOTAL PAPER : 08</b>			

Track: IR Tracking & Image Processing			
Session: Image Processing			
Session Chair: Dr. Debasish Choudhury, Techno India University			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570855120	Non-Contact Method of Measuring Fragment Velocities of Fragmented Warhead Using High Speed Imaging Techniques	Harsha Akash Tanti; Viwek Mahto; Shyam Kumar; Devyani Kishore Jadhav
2.	1570855802	Fast Image Denoising Using Peer Group Filtering Applied to Weather Forecasting in Radar Imagery	Srinivasa Rao Gantenapalli; Praveen Choppala; James Stephen; Paul D Teal
3.	1570863294	Digital Audio Steganography Using FLT and Low-Bit Encoding for Secure Storage and Transmission of Confidential Information	Jayanti Rout; Sangram Keshari Pati; Himadri Shekhar Das; Minati Mishra
4.	1570866253	Adversarial Defense with Local Robust Principal Component Analysis and Wavelet Denoising	Aryaman Sinha; Niladri Puhan; Soumya P. Dash; Guda Mrudhul; Ganapati Panda
5.	1570869557	Low Light Scene Enhancement for Object Detection and Tracking Using Multiscale Decomposition and Fusion	Mayukhmala Jana; Pradipta Roy
6.	1570869894	Cyber Secured Remote Sensing Image Encryption Scheme Using Blockchain and Dual Chaotic Map	Ram Chandra Barik; Ganapati Panda; Adyasha Rath; Saroj Padhan; Suvamoy Changder
7.	1570871336	Clutter and Random Noise Elimination Based on Eigen Images and Curvelet Transform	Buddepu Santhosh Kumar; Ajit Sahoo; Subrata Maiti
8.	1600000002	On the development of a 3-axes orientation device using a 3-DoF parallel mechanism	Jean-Pascal MARTINENQ
<b>TOTAL PAPER : 08</b>			

Day 3: 25th February 2023

Session ID: 3C

Time: 10:30-12:30 hrs.

Track: Telemetry, Communication & Flight Termination System			
Session: Telemetry & Telecommand			
Session Chair: Shri K S Varaprasad, DRDO			
Sl. No.	Paper ID	Paper Title	Authors
1.	1570854480	Optimization of Telemetry Format with Accurate Timing Representation for a Distributed Telemetry System	Naresh Gandham; Naresh Kumar Uriti
2.	1570854838	Survey of Electronic Assembly Techniques for Onboard Shell Telemetry	Vivek Kumar
3.	1570859082	Monitor Health of Flight Vehicle Subsystem Using Feature Based Multivariate Time Series Classification	Kalpana B; Sirisha B; Sandhya Banda; Sandipan Sarkar; Rakesh Barua; Hare Krishna Ratha
4.	1570869418	Ku-Band Planar Antenna with High Gain, Wider Bandwidth and Higher Power Handling Ability for Airborne Application	Vivek Kumar Singh; Shreyanshi Singh; Swatilekha Chowdhury; Soumya Biswas; Amitesh Kumar; Satyajit Chakrabarti
5.	1570869689	Best Source Selector Performances and Implementation in a Test Range	Philippe Klaeyle
6.	1570866320	Design of Ground Telecommand System for Flight Termination in a Software Defined Radio Platform	Mohapatra Kumar Gourab
7.	1570866322	Design of 2:1 Wilkinson Power Combiner for Flight Termination System	Mohapatra Kumar Gourab
8.	1570865403	Dual Circularly Polarized Shared Aperture Reflector Antenna for S/Ka-Band Telemetry Tracking	Gautam Sadhukhan; Swatilekha Chowdhury; Ashim Chakraborty; Satyajit Chakrabarti
<b>TOTAL PAPER : 08</b>			



Day 3: 25th February 2023

Session ID: 5B

Time: 10:30-12:30 hrs.

**Track: Range Systems and Mission Management**

**Session: Target Systems and UAV**

**Session Chair: Prof. M Sinha, IIT Kharagpur**

Sl. No.	Paper ID	Paper Title	Authors
1.	1570852606	Automated Path Planning of Aerial Target for Weapon System Test and Evaluation	Nikhil Gaur; Rajib Kumar Das; Milan Pal
2.	1570853600	Target-Interception Feasibility Assessment Methodology for Air-Launched Weapon Systems	Mahender Katukuri
3.	1570854864	Projectile Velocity Spectrum Extraction and Extrapolation for Accurate Measurement of Muzzle Velocity for Weapon Systems	Rounak Padgil; Ajay Lohia; NP Prakash Nair
4.	1570858775	A Study on Quad-Copter Attitude Controllers	Satyabrata Sahu; Alok Deb
5.	1570861745	Aircraft External Stores Ejection Acceleration Modelling from Store Pit Drop Tests	Sanketh Ailneni; Sudesh Kashyap; David Livingstone; Amitabh Saraf; Nandan Kumar Sinha
6.	1570862194	Bearing Fault Predictive Maintenance Using LSTM	Rounak Jana; Debasmit Dey
7.	1570869589	Way-Points Based Trajectory Simulation Using Web Technology for Range Environment	Lalatendu Das; Sarat Patra; Amit Sardar; Rakesh Mehto; P Santosh Kumar; Tarun Sinha

**TOTAL PAPER : 07**