Name of the Research Center:

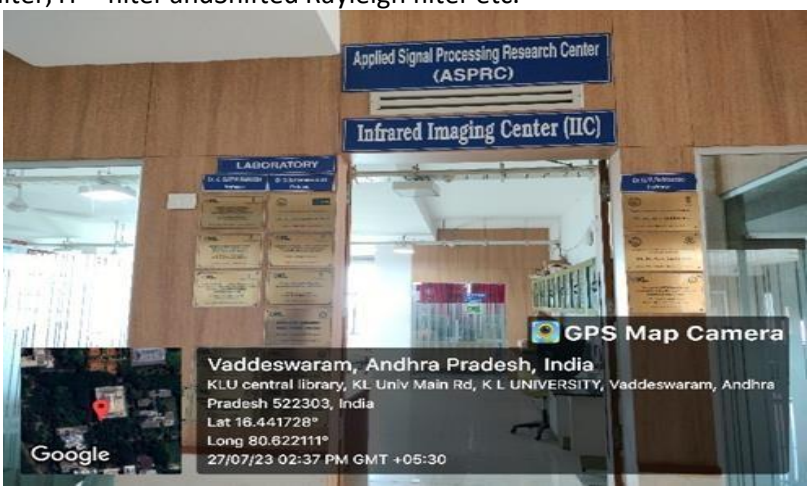
Applied signal processing research center (ASPRC) Lab (L-702)

About the research center

Salient Features:-

1. Advanced statistical signal processing algorithms are being developed for DRDO.
2. 200+ Publications
3. The software is being realized at this center and hardware and evaluation at harbor and sea trails will be carried out by DRDO, withthe help of Indian Navy.
4. This lab is also developing various algorithms like Unscented Kalman filter, Particle filter for GPS-TEC earthquake precursors and mitigation of Ionospheric scintillation mitigation.

Aim of the Projects: The specific aim of the project is to design, develop and realize state of art submarine target motion analysis (TMA). Research carried out: Mathematical modelling and realization of simulator to generate sonar measurements in Matlab PC environment, different estimation algorithms like starting with Extended Kalmanfilter, modified gain Kalman filter, Unscented Kalman filter, Particle filter, Ensemble Kaman filter, Cubature information filter, H∞ filter andShifted Rayleigh filter etc.



Consultancy (Will provide on)	1. Simulator that generates sonar measurements, observer and target paths with documentation. 2. Statistical signal processing algorithms: extended Kalman filter (EKF), modified gain extended Kalman filter (MGEKF) and unscented Kalman filter (UKF),PF combined with EKF,MGEKF &UKF, extended H-infinity filter, Cubature information filter, shifted Rayleigh filter, ensemble Kalman filter, position error ellipse and Cramer Rao Lower Bound with documentation 3. a. Simulator to train, test and validate artificial intelligence algorithms. b. Estimation of mean line of target path and mean speed of approach using artificial intelligence algorithms
Details of the Equipment **1. Name** **2. Technical details at glance** **3. Applications (Where it can be used?)** **4. HD Images**	**Equipment: Dell Workstation**
Details of the software **1. Name** **2. Version/Technical details** **3. Applications (Where it can be used?)**	Simulations Using MATLAB software environment, MATLAB version: R2023a
Completed consultancy works (If any)	Ownship tactics under torpedo attack using speed constraint contact motion analysis
Clients (If any)	NSTL, DRDO
Collaborations with Industries, Universities, etc. (If any)	Nil
Publication details (By using the mentioned equipment)	1. METHOD AND SYSTEM FOR ESTIMATING MOTION PARAMETERS (TMP) OF A TARGET USING BEARING MEASUREMENTS(Patent) 2. A METHOD AND SYSTEM FOR ESTIMATING ERRORS IN MOTION PARAMETERS (TMP) OF A TARGET USING BEARING MEASUREMENTS(Patent)
Contact details	Mobile Number:70958 02572 Extension Number:1352 Mail ID: skrao@kluniversity.in

List of Publications: -

S.No	Authors	Title	Year	Source title
1	Naga Divya G.; Koteswara Rao S.	Stochastic analysis approach of extended H-infinity filter for state estimation in uncertain sea environment	2024	International Journal of System Assurance Engineering and Management
2	Lakshmi M.K.; Rao S.K.; Subrahmanyam K.	Prediction of target state using angles-only ensemble Kalman filter	2024	International Journal of System Assurance Engineering and Management
3	Kumar S.; Rao S.K.; Singh A.R.; Naidoo R.	Switched-Resistor Passive Balancing of Li-Ion Battery Pack and Estimation of Power Limits for Battery Management System	2023	International Journal of Energy Research
4	Uppada R.; Kodati S.P.; Koteswara Rao S.	Automated Computer Aided Diagnosis Using Altered Multi-Phase Level Sets in Application to Categorize the Breast Cancer Biopsy Images	2023	IETE Journal of Research
5	Jahan K.; Koteswara Rao S.; Naga Divya G.	State Vectorâ€™s Fusion for Passive Underwater Tracking Using Two Sensor Arrays	2023	IETE Journal of Research
6	Eltayeb W.A.; Somlal J.; Kumar S.; Rao S.K.	Design and analysis of a solar-wind hybrid renewable energy tree	2023	Results in Engineering
7	Uwigize P.; Rao S.K.; Divya G.N.	Application of kalman filter for radar target tracking.	2023	Journal of Physics: Conference Series
8	Koteswara Rao S.; Kavitha Lakshmi M.; Jahan K.; Naga Divya G.; Omkar Lakshmi Jagan B.	Acceptance Criteria of Bearings-only Passive Target Tracking Solution	2023	IETE Journal of Research
9	Jagan B.O.L.; Rao S.K.	Evaluation of DB-IEKF Algorithm Using Optimization Methods for Underwater Passive Target Tracking	2022	Mobile Networks and Applications
10	Kumar S.; Koteswara Rao S.	Optimum capacity of hybrid renewable energy system suitable for fulfilling yearly load demand for a community building located at Vaddeswaram, Andhra Pradesh	2022	Energy and Buildings
11	Kiran K.U.; Rao S.K.; Ramesh K.S.	An Advanced Unscented Kalman Filter and Fuzzy-Based Approach for GPS Position estimation Real-Time Applications	2022	International Journal of Fuzzy System Applications
12	Rao S.K.; Omkar Lakshmi Jagan B.	Passive Target Tracking in Underwater Environment using Bearing and Frequency Measurements	2022	Oceans Conference Record (IEEE)
13	Omkar Lakshmi Jagan B.; Koteswara Rao S.; Kavitha Lakshmi M.	Underwater target tracking in three-dimensional environment using intelligent sensor technique	2022	International Journal of Pervasive Computing and Communications
14	Kiran K.U.; Rao S.K.; Ramesh K.S.	Adaptive and Reliable GPS Uncertain Position Estimation an Insightful Oceanography and Geography Applications	2022	International Journal of Communication Networks and Information Security
15	Rao S.K.; Kavitha Lakshmi M.; Ghosh A.	Neural Extended/Unscented Kalman Filter for Submarine Passive Target Tracking	2022	Oceans Conference Record (IEEE)
16	Omkar Lakshmi Jagan B.; Koteswara Rao S.	Measure of nonlinearity for underwater target tracking using hull-mounted sensor	2022	International Journal of Intelligent Computing and Cybernetics
17	Lakshmi K.; Rao S.K.; Subrahmanyam K.	Uncertainty zone estimation of angles only tracking in undersea environment	2022	Optik

18	Koteswara Rao S.	Bearings-only Passive Target Tracking: Range Uncertainty Ellipse Zone	2022	IETE Journal of Research
19	Naga Divya G.; Koteswara Rao S.	Prevalence of shifted Rayleigh filter for passive surveillance in underwater	2022	International Journal of Intelligent Computing and Cybernetics
20	Kavitha Lakshmi M.; Koteswara Rao S.; Subrahmanyam K.	Shifted Rayleigh filter: a novel estimation filtering algorithm for pervasive underwater passive target tracking for computation in 3D by bearing and elevation measurements	2022	International Journal of Pervasive Computing and Communications
21	Kumari T.S.; Koteswararao S.; Prabha I.S.	A Compendious Analysis of Feature-Extraction Algorithms to Frame Fusion Rules	2022	International Journal of Computing and Digital Systems
22	Divya G.N.; Koteswara Rao S.	Implementation of ensemble Kalman filter algorithm for underwater target tracking	2022	Journal of Control and Decision
23	Rao S.K.; Lakshmi M.K.; Bhanu Prakash B.; Sai Ananth T.; Kumar R.Y.	Neural Unscented Kalman Filter for Submarine Active Target Tracking	2022	Oceans Conference Record (IEEE)
24	Divya G.N.; Rao S.K.	Application of cubature information filter for underwater target path estimation	2021	Pertanika Journal of Science and Technology
25	Naga Divya G.; Koteswara Rao S.	Application of sigma point particle filter method for passive state estimation in underwater	2021	Defence Science Journal
26	Rao S.K.; Divya G.N.	Underwater State Estimation using Bearings only Measurements with an Emphasis on Sonar	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
27	Koteswara Rao S.	Bearings-Only Tracking: Observer Maneuver Recommendation	2021	IETE Journal of Research
28	Lakshmi K.M.; Rao K.S.; Kodukula S.	Three-Dimensional Submarine-to-Submarine Passive Target Tracking in the Presence of Non-Gaussian Noises	2021	International Journal of e-Collaboration
29	Rao S.K.; Jahan K.	Multi-Sensor Measurements Fusion for Passive Target Tracking in Underwater	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
30	Srimukhi J.; Rao S.K.; Bhagya Sri E.; Lakshmi M.K.	Performance Evaluation of Non-Linear State Estimation Filter in Presence of Non Gaussian Underwater Environment	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
31	Charitha N.; Rao S.K.; Diva G.N.	Design of U â€“ shaped microstrip patch environment safe antenna for ultra-wide band applications	2021	Journal of Green Engineering
32	Kavitha Lakshmi M.; Koteswara Rao S.; Subrahmanyam K.	Pervasive underwater passive target tracking for the computation of standard deviation solution in a 3D environment	2021	International Journal of Intelligent Computing and Cybernetics
33	Jagan B.O.L.; Rao S.K.; Jahan K.	Unscented particle filter approach for underwater target tracking	2021	International Journal of e-Collaboration
34	Rao S.K.; Jahan K.	The Fusion of Bearing and Frequency Measurements from Multi-sensor Arrays for Underwater Target Tracking	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
35	Rajyalakshmi U.; Satya Prasad K.; Koteswara Rao S.	Shape and Texture Features Extraction Using Segmented Histopathological Images	2021	Lecture Notes on Data Engineering and Communications Technologies
36	Rao S.K.; Jahan K.	Application of AUV to Track a Maneuvering	2021	Lecture Notes in Networks and Systems

		Target		
37	Jahan K.; Rao S.K.	Measure of Nonlinearity with Application to Bearings-Only Target Tracking	2021	International Journal of e-Collaboration
38	Divya K.S.; Rao S.K.; Ramesh K.S.; Divya G.N.	Application of Particle Filter for Passive Underwater Bearing only Tracking	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
39	Divya K.S.; Ramesh K.S.; Rao S.K.; Naga Divya G.	Underwater Object Tracking using Unscented Kalman Filter	2021	Proceedings - 2021 3rd International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2021
40	Sowmya K.; Gautham C.H.; Reddy K.R.; Rao S.K.; Lakshmi M.K.	3d underwater environment passive target tracking with bearing and elevation measurements	2020	Journal of Green Engineering
41	Vineesha A.; Sudha Sri V.; Parimala V.; Ramesh K.S.; Rao S.K.	Analysis of seismic signals and estimation of power spectrum using blackman turky method	2020	International Journal of Scientific and Technology Research
42	Ziddi M.G.S.M.; Nagendra K.G.; Sumanth K.; Ramesh K.S.; Rao S.K.	Improved particle filtering algorithm for underwater target tracking using bearing and frequency measurements	2020	Journal of Green Engineering
43	Teku S.K.; Sanagapallea K.R.; Inty S.P.	A two-stage processing approach for contrast intensified image fusion	2020	World Journal of Engineering
44	Jahan K.; Sanagapallea K.R.	Fusion of angle measurements from hull mounted and towed array sensors	2020	Information (Switzerland)
45	Jyosthna B.; Hemambica P.; Radhika B.N.; Rao S.K.; Lakshmi M.K.	Passive acoustic underwater environment target tracking using angles only measurements for auv	2020	Journal of Green Engineering
46	Kurada P.; Maruvada S.; Sanagapallea K.R.	Speech bandwidth extension using DWT-FFT-based data hiding	2020	Radioengineering
47	Sri Mukhi J.; Krishna E.S.S.Y.; Jayanth G.; Rao S.K.; Lakshmi M.K.	Implementation of cubature kalman filter in 3d passive underwater environment target tracking	2020	Journal of Green Engineering
48	Sai Divya K.; Ramesh K.S.; Koteswara Rao S.; Naga Divya G.	Object tracking using bearings-only measurements with observer maneuver	2020	Journal of Green Engineering
49	Koteswara R.S.; Jahan K.; Kavitha L.M.	Implementation of Unscented Kalman Filter to Autonomous Aerial Vehicle for Target Tracking	2020	Proceedings - 2020 IEEE India Council International Subsections Conference, INDISCON 2020
50	Uday Kiran K.; Koteswara Rao S.; Ramesh K.S.	Precise positioning of GPSTEC using statistical signal processing algorithms for environmental space weather monitoring	2020	Journal of Green Engineering
51	Jahan K.; Koteswara Rao S.	Implementation Of underwater target tracking techniques for Gaussian and non-Gaussian environments	2020	Computers and Electrical Engineering
52	Sandhya Kumari T.; Koteswara Rao S.; Santi Prabha I.	Adaptive window- Based fractal dimension estimation for weight maps in contrast improved multi- Sensor fusion	2020	Journal of Engineering Science and Technology
53	Omkar Lakshmi Jagan B.; Koteswara Rao S.	Underwater surveillance in non-Gaussian noisy environment	2020	Measurement and Control (United Kingdom)
54	Koteswara Rao S.; Kavitha Lakshmi M.; Jahan K.	Tracking Underwater Target Using Angles-only Measurements	2020	Proceedings - 2020 IEEE India Council International Subsections Conference, INDISCON 2020
55	Lakshman A.M.; Jayasurya M.; Reddy B.B.; Ramesh K.S.; Rao S.K.	Passive underwater target tracking using extended kalman filtering algorithm	2020	Journal of Green Engineering

56	Lakshmi M.K.; Koteswararao S.; Subramanyam K.	Passive target tracking using angle-only measurements	2019	Journal of Critical Reviews
57	Sandeep L.; Koteswara Rao S.; Jahan K.	Application of PFMGBEKF for bearings-only tracking	2019	International Journal of Innovative Technology and Exploring Engineering
58	Jahan K.; Koteswara Rao S.	Extended kalman filter for bearings-only tracking	2019	International Journal of Engineering and Advanced Technology
59	Divya G.N.; Rao S.K.	Application and Comparison of Bayesian Framework Algorithms for Underwater State Estimation	2019	International Symposium on Ocean Electronics, SYMPOL
60	Himaja K.; Ramesh K.S.; Koteswara Rao S.	Analysis of seismic signal using maximum entropy method	2019	International Journal of Innovative Technology and Exploring Engineering
61	Vaishnavi G.; Damodhar B.K.; Rao S.K.; Jahan K.	Underwater bearings-only tracking using particle filter	2019	International Journal of Innovative Technology and Exploring Engineering
62	Bindusri M.; Koteswara Rao S.	Sunspot data denoising using wavelet	2019	International Journal of Innovative Technology and Exploring Engineering
63	Bala Treeza Y.; Kesavanadh K.; Koteswara Rao S.; Jahan K.	Application of PFMGBEKF for bearings-only tracking using roughening	2019	International Journal of Innovative Technology and Exploring Engineering
64	Satya D.B.; Yasaswini E.; Ramesh K.S.; Koteswara Ra S.; Revath R.	Application of bartlett algorithm for spectral analysis of seismic data during an	2019	International Journal of Scientific and Technology Research
65	Ravi Kumar D.V.A.N.; Koteswara Rao S.; Padma Raju K.	A novel estimation algorithm for torpedo tracking in undersea environment; [æµ·åº•çŽ¯å¢ƒä¸‹ä¸€ä¸ªæ–°°çš„é±¼é›·è·Ÿè¸ªé—®é¢˜çš„ä¼°è®¡æ³•]	2019	Journal of Central South University
66	Arundhati B.; Gopitilak V.; Koteswararao S.	Real time TEC prediction during storm periods using AR based Kalman filter	2019	International Journal of Innovative Technology and Exploring Engineering
67	Jahan K.; S.Koteswara Rao S.K.R.	Comparison of MGBEKF and UKF Algorithms for Bearings-Only Tracking	2019	International Journal of Emerging Trends in Engineering Research
68	Mahesh C.; Reddy M.P.; Rao S.K.; Jahan K.	Particle filter application tobearings-only tracking	2019	International Journal of Innovative Technology and Exploring Engineering
69	Sai K.B.S.; Rao K.N.; Rao S.K.; Jahan K.	Underwater target tracking system using active sonobuoys	2019	Journal of Critical Reviews
70	Rajyalakshmi U.; Rao S.K.; Prasad K.S.	Image automatic categorisation using selected features attained from integrated non-subsampled contourlet with multiphase level sets	2019	Defence Life Science Journal
71	Kurada P.; Maruvada S.; Sanagapallea K.R.	Speech bandwidth extension using transform-domain data hiding	2019	International Journal of Speech Technology
72	Sujeeth Sai B.; Prashanth Ch.; Koteswara Rao S.; Jahan K.	Implementation of UKF for tracking an underwater target using dunking sonar	2019	Journal of Critical Reviews
73	Rajyalakshmi U.; Satya Prasad K.; Koteswara Rao S.	Breast Cancer Cell-Nuclei Extraction Using Modified Multi-Phase Level Sets	2018	Proceedings of the 2nd International Conference on Intelligent Computing and Control Systems, ICICCS 2018
74	Vemuri M.R.; Bade H.B.; Koteswara Rao S.; Gopi Tilak V.	Tracking of pendulum by particle smoother	2018	International Journal of Engineering and Technology(UAE)
75	Neelima S.; Saritha A.; Ramesh K.S.; Koteswara Rao S.	Application of klauder wavelet for generation of synthetic seismic signals	2018	International Journal of Engineering and Technology(UAE)

76	Uday Kiran K.; Koteswara Rao S.; Ramesh K.S.; Revathi R.	Identification of coseismic signatures by comparing welch and burg methods using GPS TEC	2018	Advances in Intelligent Systems and Computing
77	Namitha C.; Uma Mahesh V.; Anusha M.; Koteswara Rao S.; Vaishnavi Chandra T.	Frequency Estimation Using Minimum Norm Algorithm on Seismic Data	2018	Lecture Notes in Electrical Engineering
78	Yamini Surya Teja C.; Vijay Gopal Reddy B.; Sri Harsha S.; Uday Kiran K.; Koteswara Rao S.	Application of newton Raphson and steepest descent method for precise positioning for mobile communications	2018	International Journal of Engineering and Technology(UAE)
79	Kamal G.P.; Prakash B.L.; Koteswara Rao S.	Seismic Signal Processing by Using Root-MUSIC Algorithm	2018	Lecture Notes in Electrical Engineering
80	Revathi R.; Ramesh K.S.; Koteswara Rao S.; Uday Kiran K.	Application of parametric methods for earthquake precursors using GPS TEC	2018	Advances in Intelligent Systems and Computing
81	Naga Anusha M.; Swara Y.; Koteswara Rao S.; Gopi Tilak V.	Pendulum state estimation using nonlinear state estimators	2018	International Journal of Engineering and Technology(UAE)
82	Basha Saheb M.; Neeraj Kumar U.; Koteswara Rao S.; Lakshmi Bharathi V.	Processing of Seismic Signal Using Minimum Variance Algorithm	2018	Lecture Notes in Electrical Engineering
83	Revathi R.; Ramesh K.S.; Koteswara Rao S.; Kiran K.U.	Application of least squares algorithm for precise GPS receiver positioning	2018	Advances in Intelligent Systems and Computing
84	Kumar D.V.A.N.R.; Koteswara Rao S.; Padma Raju K.	A couple of novel stochastic estimators designed and tested to promote the usage of towed arrays on the regular basis for passive tracking	2018	Advances in Intelligent Systems and Computing
85	Ravi Kumar D.V.A.N.; Koteswara Rao S.; Padma Raju K.	Design of a Robust Estimator for Submarine Tracking in Complex Environments	2018	Lecture Notes in Electrical Engineering
86	Pradeep Kamal G.; Koteswara Rao S.	Application of total least squares version of ESPRIT algorithm for seismic signal processing	2018	Advances in Intelligent Systems and Computing
87	Hiranmayi P.; Gowtham K.S.; Koteswara Rao S.; Gopi Tilak V.	Tracking of pendulum using particle filter with residual resampling	2018	International Journal of Engineering and Technology(UAE)
88	Sampath Dakshina Murthy A.; Kumar P.V.J.R.; Das R.P.; Koteswara Rao S.	Fuzzy logic based technique for propeller noise in mechanical structures	2018	International Journal of Engineering and Technology(UAE)
89	Kavitha Lakshmi M.; Koteswara Rao S.; Subrahmanyam K.; Gopi Tilak V.	Passive object tracking using MGEKF algorithm	2018	Advances in Intelligent Systems and Computing
90	Surekha Y.; Prathyusha A.S.; Ramesh K.S.; Koteswara Rao S.	Application of minimum phase wavelet for generation of synthetic seismic signals	2018	International Journal of Engineering and Technology(UAE)
91	Sai Sumanth E.; Joseph V.; Ramesh K.S.; Koteswara Rao S.	Applicataion of ormsby wavelet for generation of synthetic seismic signals	2018	International Journal of Engineering and Technology(UAE)
92	Gundu R.P.; Pardhasaradhi P.; Koteswara Rao S.; Gopi Tilak V.	TOA-based source localization using ML estimation	2018	International Journal of Engineering and Technology(UAE)

93	Jyothula H.; Rao S.K.; Kumari V.V.	Integration of local chan vase along with optimization techniques for segmentation	2018	2017 International Conference on Energy, Communication, Data Analytics and Soft Computing, ICECDS 2017
94	Revathi R.; Ramesh K.S.; Koteswara Rao S.; Uday Kiran K.	Instantaneous time smoothing in GPS receivers using Kalman filter	2018	Advances in Intelligent Systems and Computing
95	Gopi Tilak V.; Koteswara Rao S.	Dual and joint estimation for speech enhancement	2018	International Journal of Engineering and Technology(UAE)
96	Goli S.S.; Papanaboyina S.; Kanchumarthi S.R.; Sanagapallea K.R.	Application of zero phase wavelet on synthetic seismic signals with noise	2018	International Journal of Engineering and Technology(UAE)
97	Rajyalakshmi U.; Koteswara Rao S.; Satya Prasad K.	Supervised classification of breast cancer malignancy using integrated modified marker controlled watershed approach	2017	Proceedings - 7th IEEE International Advanced Computing Conference, IACC 2017
98	Sampath Dakshina Murthy A.; Koteswara Rao S.; Das R.P.	Minimazation of degeneracy problem inverse beta coefficient by roughening particle filter	2017	Journal of Advanced Research in Dynamical and Control Systems
99	Kumar D.V.A.N.R.; Rao S.K.; Raju K.P.	Estimate-Merge-Technique-based algorithms to track an underwater moving target using towed array bearing-only measurements	2017	Sadhana - Academy Proceedings in Engineering Sciences
100	Bharath Kumar T.; Chandra Sekhar O.; Ramamoorty M.; Koteswara Rao S.; Venkata Bhaskar Rao D.	Comparitive study on wind forecasting models for day ahead power markets	2017	2017 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems, SPICES 2017
101	Kiran P.S.; Komala G.; Aneesh C.R.S.D.; Rao S.K.	Electroencephalogram signal analysis using wavelet transform and statistical signal processing	2017	Journal of Advanced Research in Dynamical and Control Systems
102	Uppada R.; Koteswara Rao S.; Satya Prasad K.	Integrated novel multi-phase level sets with modified marker controlled watershed for segmentation of breast cancer histopathological images	2017	Journal of Advanced Research in Dynamical and Control Systems
103	Sampath Dakshina Murthy A.; Rao S.K.	Application of fuzzy logic based kalman filter and vehicle rate sensor in optimizing differential global position system	2017	Journal of Advanced Research in Dynamical and Control Systems
104	Jyothula H.; Rao S.K.; Vallikumari V.	Two phase active counter mechanism embedded with particle swarm optimization technique for segmentation of bio-medical images	2017	Journal of Advanced Research in Dynamical and Control Systems
105	Sampath Dakshina Murthy A.; Syamala T.; Koteswara Rao S.; Das R.P.	Real time differential global positioning system using fuzzy logic extended kalman filter	2017	Journal of Advanced Research in Dynamical and Control Systems
106	Omkar Lakshmi Jagan B.; Koteswara Rao S.; Kavitha Lakshmi M.	Concert assessment of unscented and cubature Kalman filters for target tracking	2017	Journal of Advanced Research in Dynamical and Control Systems
107	Jyothula H.; Koteswara Rao S.; Valli Kumari V.	Applying level set and optimization technique for image segmentation to avoid noise and intensity inhomogeneity	2017	Fronteiras
108	Omkar Lakshmi Jagan B.; Koteswara Rao S.; Kavitha Lakshmi M.	Passive target tracking using ESM measurements in EW environment	2017	Journal of Advanced Research in Dynamical and Control Systems
109	Suresh V.; Rao S.K.; Thiagarajan G.; Das R.P.	Denoising and detecting discontinuities using wavelets	2016	Indian Journal of Science and Technology

110	Omkar Lakshmi Jagan B.; Koteswara Rao S.; Lakshmi Prasanna K.; Jawahar A.; Karishma S.B.	Novel estimation algorithm for bearings-only target tracking	2016	International Journal of Engineering and Technology
111	Lakshmi Prasanna K.; Koteswara Rao S.; Karishma S.K.B.; Jawahar A.	Application of cubature Kalman filter for bearingsonly target tracking	2016	Indian Journal of Science and Technology
112	Vijaya A.; Koteswara Rao S.; Jawahar A.; Karishma S.K.B.	Application of parameterized modified gain bearings-only extended Kalman Filter for undersea tracking	2016	Indian Journal of Science and Technology
113	Tirumala Rao P.; Koteswarao Rao S.; Manikanta G.; Ravi Kumar S.	Distinguishing normal and abnormal ECG signal	2016	Indian Journal of Science and Technology
114	Teku S.K.; Koteswara Rao S.; Prabha I.S.	Contrast enhanced low-light visible and infrared image fusion	2016	Defence Science Journal
115	Jagan B.O.L.; Koteswara Rao S.; Jawahar A.; Karishma S.B.	Application of Bar-Shalom and Fortmann's input estimation for underwater target tracking	2016	Indian Journal of Science and Technology
116	Revathi R.; Lakshminarayana S.; Koteswara Rao S.; Ramesh K.S.; Uday Kiran K.	Analysis of seismo-ionospheric perturbations using modified covariance algorithm	2016	Proceedings of SPIE - The International Society for Optical Engineering
117	Pavani A.V.V.; Tejasri D.; Revathi R.; Ramesh K.S.; Koteswara Rao S.; Lakshminarayana S.	Application of modified periodogram algorithm on GPS TEC for earthquakes	2016	Indian Journal of Science and Technology
118	Jagan B.O.L.; Rao S.K.; Jawahar A.; Karishma S.K.B.	Application of particle filter using TA bearing measurements	2016	Indian Journal of Science and Technology
119	Sampath Dakshina Murthy A.; Koteswara Rao S.	Undersea maneuvering target tracking using novel estimation algorithm	2016	International Journal of Oceans and Oceanography
120	Jagan B.O.L.; Rao S.K.; Jawahar A.; Karishma S.K.B.	Unscented kalman filter with application to bearings-only passive target tracking	2016	Indian Journal of Science and Technology
121	Lakshmi Prasanna K.; Koteswara Rao S.; Omkar Lakshmi Jagan B.; Jawahar A.; Karishma S.B.	Data fusion in underwater environment	2016	International Journal of Engineering and Technology
122	Lakshmiprasanna K.; Koteswara Rao S.; Jawahar A.; Karishma S.B.	Application of Pseudo Linear Estimator for target tracking	2016	Indian Journal of Science and Technology
123	Lakshmiprasanna K.; Koteswara Rao S.; Jawahar A.; Karishma S.B.	Ownship strategies during hostile Torpedo attack	2016	Indian Journal of Science and Technology
124	Kumar D.V.A.N.R.; Rao S.K.; Raju K.P.	Integrated Unscented Kalman filter for underwater passive target tracking with towed array measurements	2016	Optik
125	Ravi Kumar D.V.A.N.; Koteswara Rao S.; Padma Raju K.	A novel stochastic estimator using pre-processing technique for long range target tracking in heavy noise environment	2016	Optik
126	Sampath Dakshina Murthy A.; Koteswara Rao S.; Thiagarajan G.; Suresh V.	Noise cancellation in Monte Carlo simulation	2016	Indian Journal of Science and Technology

127	Omkar Lakshmi Jagan B.; Koteswara Rao S.; Jawahar A.; Karishma S.B.	Passive target tracking using intercept sonar measurements	2016	Indian Journal of Science and Technology
128	Teeparti S.P.; Kota C.B.R.; Putrevu V.K.C.; Sanagapallea K.R.	Advanced parallel structure Kalman filter for radar applications	2016	Lecture Notes in Electrical Engineering
129	Baji S.K.; Revathi R.; Lakshminarayana S.; Koteswara Rao S.; Ramesh K.S.	Application of multiple signal classification algorithm on GPS TEC for earthquakes	2016	Indian Journal of Science and Technology
130	Rajitha D.; Koteswarao Rao S.; Suneetha P.; Aamani R.	State space time domain AR signal processing for Kalman filter	2016	Indian Journal of Science and Technology
131	Revathi R.; Lakshminarayana S.; Koteswara Rao S.; Ramesh K.S.; Uday Kiran K.	Application of maximum entropy method for earthquake signatures using GPSTEC	2016	Proceedings of SPIE - The International Society for Optical Engineering
132	Jawahar A.; Koteswara Rao S.	Modified polar extended Kalman filter (MP-EKF) for bearings - only target tracking	2016	Indian Journal of Science and Technology
133	Revathi R.; Lakshminarayana S.; Koteswara Rao S.; Ramesh K.S.; Uday Kiran K.	Observation of ionospheric disturbances for earthquakes (M>4) occurred during June 2013 to July 2014 in Indonesia using wavelets	2016	Proceedings of SPIE - The International Society for Optical Engineering
134	Goutham C.; Rakesh K.; Ramesh K.S.; Revathi R.; Koteswara Rao S.; Chitra P.; Ramakrishnan V.N.	Analysis of seismogenic perturbations using bartlett method for earthquake signatures on GPS TEC	2016	Indian Journal of Science and Technology
135	Lakshmi Prasanna K.; Koteswara Rao S.; Jawahar A.; Karishma S.B.	Modern estimation technique for undersea active target tracking	2016	International Journal of Engineering and Technology
136	Santhosh M.N.; Rao S.K.; Das R.P.; Raju K.L.	Underwater target tracking using Unscented Kalman Filter	2015	Indian Journal of Science and Technology
137	Jahan K.; Koteswara Rao S.; Das R.P.	Cannon fired ball with relative velocity	2015	Indian Journal of Science and Technology
138	Annabattula J.; Koteswara Rao S.; Sampath Dakshina Murthy A.; Srikanth K.S.; Das R.P.	Underwater passive target tracking in constrained environment	2015	Indian Journal of Science and Technology
139	Annabattula J.; Koteswara Rao S.; Sampath Dakshina Murthy A.; Srikanth K.S.; Das R.P.	Multi-sensor submarine surveillance system using MGBEKF	2015	Indian Journal of Science and Technology
140	Jawahar A.; Rao S.K.; Karishma Sk.B.	Target estimation analysis using data association and fusion	2015	International Journal of Oceans and Oceanography
141	Sampath Dakshina Murthy A.; Koteswara Rao S.; Srinavasa Naik K.; Das R.P.; Jahan K.; Lova Raju K.	Tracking of a manoeuvering target ship using radar measurements	2015	Indian Journal of Science and Technology
142	Ravi Kumar D.V.A.N.; Koteswara Rao S.; Padma Raju K.	Underwater bearings-only passive target tracking using estimate fusion technique	2015	Advances in Military Technology
143	Kishore V.; Koteswara Rao S.; Srikanth K.S.; Jawahar A.	Application of chi-square test and F distribution to target maneuver detection in undersea tracking	2015	International Journal of Oceans and Oceanography

144	Annabattula J.; Koteswara Rao S.; Sampath Dakshina Murthy A.; Srikanth K.S.; Das R.P.	Advanced submarine integrated weapon control system	2015	Indian Journal of Science and Technology
145	Jawahar A.; Koteswara Rao S.	Recursive multistage estimator for bearings only passive target tracking in ESM EW systems	2015	Indian Journal of Science and Technology
146	Pitchaiah T.; Sridevi P.V.; Rao S.K.	Adaptive noise cancellation using LMS algorithm in Monte Carlo simulation	2015	2nd International Conference on Electronics and Communication Systems, ICECS 2015
147	Kumar N.A.; Rao S.K.	Notice of Removal: Performance analysis of modified gain extended Kalman filter in underwater passive target tracking for stationary and manoeuvring observer	2015	International Conference on Electrical, Electronics, Signals, Communication and Optimization, EESCO 2015
148	Raju K.L.; Rao S.K.; Das R.P.; Santhosh M.N.; Dakshina Murthy A.S.	Passive target tracking using unscented kalman filter based on monte carlo simulation	2015	Indian Journal of Science and Technology
149	Dakshina Murthy A.S.; Rao S.K.; Jyothi A.N.; Das R.P.	Analysis of effect of ballistic coefficient in the formulations and performance of ekf with emphasis on air drag	2015	Indian Journal of Science and Technology
150	Hari J.; Prasad A.S.; Rao S.K.	Separation and counting of blood cells using geometrical features and distance transformed watershed	2014	Proceedings of the IEEE International Caracas Conference on Devices, Circuits and Systems, ICCDCS
151	Kumari B.L.; Rao S.K.; Padma Raju K.	Simplified target location estimation for underwater vehicles	2013	International Symposium on Ocean Electronics, SYMPOL
152	Rao A.S.; Rao M.S.; Rao S.K.; Prasad A.M.	Design aspects of signal waveform for underwater acoustic communication system	2013	International Symposium on Ocean Electronics, SYMPOL
153	Rao S.K.; Kumar D.V.A.N.R.; Padma Raju K.	Combination of Pseudo Linear Estimator and modified gain bearings-only extended Kalman filter for passive target tracking in abnormal conditions	2013	International Symposium on Ocean Electronics, SYMPOL
154	Bharati P.V.; Rao S.K.; Krishna A.R.	Generation and analysis of tactics for anti-torpedo defense system	2013	2013 IEEE Conference on Information and Communication Technologies, ICT 2013
155	Bramaramba K.; Koteswara Rao S.; Raja Rajeswari K.	Performance evaluation of noise subspace methods of frequency estimation techniques	2012	Advances in Intelligent and Soft Computing
156	Babu V.S.; Shankar M.R.; Majumdar S.; Rao S.K.	IMM - Unscented Kalman Filter based tracking of maneuvering targets using active sonar measurements	2011	ICCSP 2011 - 2011 International Conference on Communications and Signal Processing
157	Roy A.K.; Rao S.K.	Multi-track association and fusion	2011	ICCSP 2011 - 2011 International Conference on Communications and Signal Processing
158	Rao S.K.	Doppler-bearing passive target tracking using a parameterized unscented kalman filter	2010	IETE Journal of Research
159	Rao S.K.	Maximum likelihood estimator for bearings-only passive target tracking in electronic surveillance measure and electronic warfare systems	2010	Defence Science Journal
160	Koteswara Rao S.; Linga Murthy K.S.; Raja Rajeswari K.	Data fusion for underwater target tracking	2010	IET Radar, Sonar and Navigation

161	Rao S.K.; Rajeswari K.R.; Lingamurty K.S.	Unscented Kalman filter with application to bearings-only target tracking	2009	IETE Journal of Research
162	Akhil K.R.; Ghose D.; Koteswara Rao S.	Optimizing deployment of multiple decoys to enhance ship survivability	2008	Proceedings of the American Control Conference
163	Koteswara Rao S.; Sunanda Babu V.	Unscented Kalman filter with application to bearings-only passive manoeuvring target tracking	2008	Proceedings of ICSCN 2008 - International Conference on Signal Processing Communications and Networking
164	Koteswara Rao S.	Maneuvering target tracking using pseudo linear estimator with active sonar measurements	2007	Proceedings of ICSCN 2007: International Conference on Signal Processing Communications and Networking
165	Koteswara Rao S.	Processing of noisy passive sonar measurements	2007	Proceedings of ICSCN 2007: International Conference on Signal Processing Communications and Networking
166	Rao S.K.	Simplified target location estimation for underwater vehicles	2006	Record - IEEE PLANS, Position Location and Navigation Symposium
167	Rao S.K.	Pseudo linear Kalman filter for underwater target location using intercept sonar measurements	2006	Record - IEEE PLANS, Position Location and Navigation Symposium
168	Rao S.K.	Application of statistical estimators for underwater target tracking	2006	Record - IEEE PLANS, Position Location and Navigation Symposium
169	Koteswara Rao S.; Arun A.; Neelima P.	Application of Kalman Filter and input estimation for underwater target tracking	2005	Proceedings - 2005 International Conference on Intelligent Sensing and Information Processing, ICISIP'05
170	Koteswara Rao S.	Target maneuver detection algorithm	2005	Proceedings - 2005 International Conference on Intelligent Sensing and Information Processing, ICISIP'05
171	Rao S.K.	A recursive multistage estimator for bearings - Only passive target tracking	2005	Proceedings - 3rd International Conference on Intelligent Sensing and Information Processing, ICISIP 2005
172	Koteswara Rao S.	Modified gain extended Kalman filter with application to bearings-only passive manoeuvring target tracking	2005	IEE Proceedings: Radar, Sonar and Navigation
173	Koteswara Rao S.; Anupama Sravanthi D.; Madhuri K.L.	Minimum-norm with an application to estimation of bearing angles in passive underwater multi target scenario	2005	Proceedings - 2005 International Conference on Intelligent Sensing and Information Processing, ICISIP'05
174	Koteswara Rao S.	Pseudo-linear estimator for bearings-only passive target tracking	2001	IEE Proceedings: Radar, Sonar and Navigation
175	Koteswara Rao S.	Algorithm for detection of manoeuvring targets in bearings-only passive target tracking	1999	IEE Proceedings: Radar, Sonar and Navigation
176	Rao S.K.	Comments on "Bearings-Only and Doppler-Bearing Tracking Using Instrumental Variables"	1999	IEEE Transactions on Aerospace and Electronic Systems
177	Rao S.K.	Comments on "A new model and efficient tracker for a target with curvilinear motion"	1998	IEEE Transactions on Aerospace and Electronic Systems
178	Rao S.K.	Comments on "discrete-time observability and estimability analysis for bearings-only target motion analysis"	1998	IEEE Transactions on Aerospace and Electronic Systems
179	Rao S.K.	Comments on "optimal guidance of proportional navigation	1998	IEEE Transactions on Aerospace and Electronic Systems

180	Rao S.K.	Comments on "passive target tracking using maximum likelihood estimation	1998	IEEE Transactions on Aerospace and Electronic Systems
181	Rao S.K.	Comments on "uncertainty ellipses and their applications to interval estimation of emitter position	1998	IEEE Transactions on Aerospace and Electronic Systems
182	Rao S.K.	Comments on "Low observable target motion analysis using amplitude information"	1998	IEEE Transactions on Aerospace and Electronic Systems
183	Rao S.Koteswara	Modified gain extended Kalman filter with application to angles only underwater passive target tracking	1998	International Conference on Signal Processing Proceedings, ICSP
184	Koteswara Rao S.	Comments on â€œImproved Tracking of Maneuvering Targets: The Use of Turn-Rate Distributions for Acceleration Modelingâ€•	1998	IEEE Transactions on Aerospace and Electronic Systems
185	Rao S.K.	Comments on "canonical transform for tracking with kinematic models	1998	IEEE Transactions on Aerospace and Electronic Systems
186	Rao S.Koteswara	Target tracking using recursive Pseudo Linear Estimator using highly aperiodic measurements	1998	International Conference on Signal Processing Proceedings, ICSP
187	Ramakrishna K.; Rao K.S.	Selection of an Optimal Road Transport Refrigeration System	1998	Journal of the Institution of Engineers (India): Mechanical Engineering Division
188	Rao S.Koteswara	Maximum likelihood and Cramer-Rao lower bound estimators for (nonlinear) bearing only passive target tracking	1998	Conference Record of the Asilomar Conference on Signals, Systems and Computers
189	Rao S.K.	Comments on "A Jerk Model for Tracking Highly Maneuvering Targets	1998	IEEE Transactions on Aerospace and Electronic Systems
190	Rao S.K.	Comments on "estimation of singularities for intercept point forecasting	1998	IEEE Transactions on Aerospace and Electronic Systems
191	Rao S.K.	Comments on "Digital tracking filters with high order correlated measurements"	1998	IEEE Transactions on Aerospace and Electronic Systems
192	Rao S.K.	Comments on "Maneuvering Target Tracking with Colored Noise	1998	IEEE Transactions on Aerospace and Electronic Systems
193	Rao S.K.	Comments on "properties and performance of extended target motion analysis"	1998	IEEE Transactions on Aerospace and Electronic Systems
194	Rao S.K.	Comments on "Observability in Passive Target Motion Analysis"	1998	IEEE Transactions on Aerospace and Electronic Systems
195	Koteswara Rao S.	Comments on true proportional navigation with maneuvering target	1997	IEEE Transactions on Aerospace and Electronic Systems
196	Rao S.K.	Advances in aircraft-height estimation using distance-measuring equipment	1997	IEE Proceedings: Radar, Sonar and Navigation
197	Rao S.K.	Comments on "reducing geometric dilution of precision using ridge regression	1997	IEEE Transactions on Aerospace and Electronic Systems
198	Koteswara Rao S.	Advantages of recursive MLE and PLE over song and speyer's EKF and pseudo linear EKF	1997	IEEE Transactions on Signal Processing
199	Koteswara Rao S.	Recursive weighted multistage estimator with application to bearing-only position location	1996	IEEE Transactions on Signal Processing
200	Koteswara Rao S.	A recursive multistage estimator for bearings only passive target tracking	1996	IEEE Transactions on Signal Processing
201	Rao S.Koteswara	Recursive maximum likelihood estimator with application to bearing only position	1996	International Conference on Signal Processing Proceedings, ICSP

		location		