

IEEE TRANSACTIONS ON
AEROSPACE AND ELECTRONIC SYSTEMS

APRIL 2025

VOLUME 61

NUMBER 2

IEARAX

(ISSN 0018-9251)

PAPERS

Nonholonomic Trajectory Planning of Postcapture Space Base–Manipulator–Target System for Attitude Reorientation Inspired by Free-Falling-Cat Self-Righting Reflex	<i>Y. Wei, X. Yang, X. Bai, and Z. Xu</i>	1256
Multisubaperture Backward Projection Positioning Algorithm for Radiation Sources by Single Satellite	<i>J. Yang, H. Huan, and R. Tao</i>	1267
Cooperative Time-Guidance Strategy for Multihypersonic Vehicles With Irregular No-Fly Zones: A Transformer-Based Real-Time Planning Method	<i>Q. Li, J. Yu, Y. Hua, X. Dong, Q. Li, J. Lü, and Z. Ren</i>	1283
Dynamics and Moving-Mass Parameter Design of Single Moving-Mass Roll and Trim Control Hypersonic Vehicle	<i>Q. Du, Y. Hu, W. Jing, and C. Gao</i>	1298
A Robust H_∞ Adaptive Feedforward Controller Method for Tiltrotor Aircraft/Turboshaft Engine System	<i>S. Li, Y. Wang, B. Huang, and H. Zhang</i>	1313
Improving Efficiency and Reliability in Information Offloading for LEO Satellite Networks by Intersatellite Communication Techniques	<i>V. F. Adanvo, S. Mafra, S. Montejo-Sánchez, F. A. Tondo, and R. D. Souza</i>	1336
Safety-Critical Attitude Tracking of Spacecraft With Data-Based Parameter Identification	<i>K. Xia, J. Wang, and F. Liu</i>	1353
Online Parameter Estimation for Fixed-Wing UAV Based on DREM Method and Adaptive Control	<i>Z. Du, Y. Yang, J. Zhu, and Y. Lyu</i>	1363
SAR-PAA: A Physically Adversarial Attack Approach Against SAR Intelligent Target Recognition	<i>Y. Ma, J. Pei, W. Huo, Y. Zhang, Y. Huang, K. Chen, and J. Yang</i>	1377
SEMUS—An Open-Source RF-Level SAR Emulator for Interference Modeling in Spaceborne Applications	<i>N. Hendy, F. G. Kurnia, T. Kraus, M. Bachmann, M. Martorella, R. J. Evans, M. Zink, H. M. Fayek, and A. Al-Hourani</i>	1394
Quadrotor Fault-Tolerant Constrained Control Using Interval Contractor-Based Adaptive Reference Governor	<i>G. Magnani, M. Cassaro, J.-M. Biannic, H. Evain, and L. Burlion</i>	1409
Imbalanced Aircraft Data Anomaly Detection	<i>J. Gao, H. Yang, D. Zhang, Y. Yuan, and X. Li</i>	1422
Joint Detection Threshold Optimization and Multidimensional Resource Allocation Scheme for Multitarget Tracking in Radar Networks Based on Low Probability of Intercept	<i>C. Shi, X. Zhang, Z. Shi, J. Zhou, and J. Yan</i>	1433
A Distributed Discrete Jaya Algorithm for Space-Ground Integrated Data Transmission Resource Scheduling	<i>S. Ren, Y. Feng, X. Li, K. Xing, and Y. Yang</i>	1454
Enhancing Resolvable Group Target Tracking: Integration of Labeled MultiBernoulli Filter With Deep Learning Approaches	<i>Y. Yu, M. Liu, and B. Li</i>	1472
Joint Deceptive Jammer and Clutter Suppression via 3-D-ANM With EPC-MIMO Radar	<i>J. Gao, S. Zhu, L. Lan, J. Sui, X. Li, and G. Liao</i>	1487
Uncompromised Accuracy: Fast and Reliable Multivariate Anomaly Detection for Satellite Signals	<i>M. A. M. Sadr and M. Qaraqe</i>	1505
Bayesian Fault Detection, Identification, and Adaptation for GNSS Applications	<i>Y. Yu, L. Yang, Y. Shen, and A. El-Mowafy</i>	1518
Specific Emitter Identification With Different Transmission Codes and Multiple Receivers	<i>L. J. Diedericks and W. P. du Plessis</i>	1536

(Contents Continued on Page 1246)

A Range Super-Resolution Scheme Based on Polarimetric Partially Coherent Radar	D. Zhu, F. Wang, J. Zhou, N. Li, T. Wang, C. Pang, and Y. Li	1545
LarsNeRF: Fast and Effective View Synthesis From Low-Altitude Remote Sensing Scenarios	Z. Chen, S. Wang, and L. Liu	1563
Fault Detection for Satellite Reaction Wheel Based on Zonotopic Set-Membership Estimation	Z. Wang, C. Xu, Z. Liu, and Y. Shen	1577
Adaptive Distributed Fuzzy Control for Prescribed-Time Formation of Multiple Autonomous Aerial Vehicles	D. Jin, C. K. Ahn, and Z. Xiang	1589
H_∞ Antidisturbance Event-Triggered Control for Aeroengine Systems via Switched Affine Models	Y. Zhao, X. Ni, S. Wen, and B. Niu	1600
Magnus-Effect Winged Hybrid UAV System: Improved Energy Efficient and Autonomy Through Control Allocation Strategy	Z. Azaki, J. Dumon, A. Offermann, N. Meslem, P. Susbielle, A. Negre, and A. Hably	1610
Guidance Scheme for Gun-Launched Gliding Guided Projectiles	B. Kim, M. Shin, C.-H. Lee, J.-W. Kim, Y.-K. Lee, and S.-W. Park	1630
Visible Light Positioning Under Luminous Flux Degradation of LEDs	I. Iddrisu and S. Gezici	1648
A Deep Neural Network Approach for Classification of GNSS Interference and Jamming	I. E. Mehr and F. Dovis	1660
Sliding Surface-Based Integral Reinforcement Learning for Optimal Tracking Control of Quadcopters Considering Uncertainties	H. Lee, J. Kim, and Y. Kim	1677
3-D Trajectory Optimization for UAV-Assisted Hybrid FSO/RF Network With Moving Obstacles	X. Zhang, S. Zhao, Y. Wang, X. Wang, X. Song, X. Li, and J. Li	1692
Assessing Pilot Workload During Takeoff and Climb Under Different Weather Conditions: A fNIRS-Based Modeling Using Deep Learning Algorithms	C. Zhang, C. Jiang, Y. Xie, S. Cao, J. Yuan, C. Liu, W. Cao, and Y. Li	1705
MsPF-Trans: A Generative Transformer for Multistep Probabilistic Forecasting of Radar Pulse Repetition Interval Sequences	Z. Wang, Y. Li, Z. Gong, and M. Zhu	1725
Convex Formulation and Efficiency Enhancement for Powered Landing Guidance With Second-Order Cone Probability Constraints	W. Li and S. Gong	1742
Transient-State Adaptive Optimal Control of Aircraft Engine Systems With Input Saturation	S. Liu, Y. Shi, T. Sun, P. Li, and X. Zhao	1764
Integration of Prescribed Performance With Control Barrier Functions for Attitude Control and Allocation With Reaction Wheels	H. Yang, H. Dong, and X. Zhao	1775
Performance Analysis of Beam Position Design for a Spaceborne Radar MMTI System	L. Wang, J. Ma, P. Huang, X.-G. Xia, P. Xi, and Q. Lu	1787
Fuzzy Approximation-Based Fixed-Time Attitude Control for a Hypersonic Reentry Vehicle With Full-State Constraints	Z. Yin, W. Wang, Z. Liu, and Y. Wang	1807
Accurate Microwave Near-Field Imaging of Deep Concave Objects Using a Sequential High-Order Scattering Reconstruction Algorithm	B. Xing, X. Zhuge, J. Yang, and J. Miao	1821
Artificial Intelligence Based Spacecraft Resilience Optimization in Space Informatics Digital Twins	Z. Lyu, J. Guo, R. Lou, and H. Lv	1834
Prescribed-Time Fault-Tolerant Flight Control for Aircraft Subject to Structural Damage	Y. Li, C.-Y. Wen, X. Liu, W. Zhang, and Y. Zheng	1848
Adaptive Fractional-Order Fault-Tolerant Coordinated Tracking Control of Heterogeneous Multiagent Systems Against Multiple Faults Under Deception Attacks	S. Liu, B. Jiang, Z. Mao, Y. Zhang, and J. Huang	1860
Observability-Based Space Noncooperative Target Motion Estimation	Y. Zhang, J. Wang, B. Sun, B. Hou, D. Wang, and X. Zhou	1871
Radar Modulation Recognition of Intra-Pulse Overlapping Signals Based on Object Detection	S. Xu, L. Liu, and M. Guo	1888
Deinterleaving of Pulse Streams With Conditional Autoregressive Kernel Mixture Network	H. Cong Feng, K. Li Jiang, Z. Zhou, Y. X. Zhao, K. L. Tian, and B. Tang	1901
Theoretical Form and Numerical Calculation of Detection Threshold for DP-TBD in Processing Plot-List Data	Y. Zhu, Y. Li, Y. Zhang, Q. Zhang, and H. Huang	1914
Quantitative Precision Second-Order Temporal Transformation-Based Pose Control for Spacecraft Proximity Operations	Y. Xiao, Y. Yang, D. Ye, and J. Q. Zhang	1931
Phase-Coded Passive Jamming Suppression via Squaring Nonlinear Transform and Fractional Fourier Transform	G. Cui, J. Su, C. He, M. Tao, Y. Fan, L. Wang, and S. Li	1942

Gain-Scheduling Tracking Control for Quadrotors Under Ground Effects via NTSMC-sLPV	<i>L. Zhang, T. Gao, Z. Lin, Y. Liang, Y. Dong, and Y. Ding</i>	1958
Multi-Missile Phased Cooperative Interception Strategy for High-Speed and Highly Maneuverable Targets	<i>C. Luo, C. Zhou, and X. Bu</i>	1971
Safe Dispatch Corridor: Toward Efficient Trajectory Planning for Carrier Aircraft Traction System on Flight Deck	<i>X. Wang, Z. Deng, H. Li, L. Wang, J. Jin, and X. Su</i>	1997
Explicit Frequency Resolution Limit of Uniform Line Array via Scattering Information	<i>X. Kong, D. Zhao, N. Wang, and D. Xu</i>	2011
Intelligent Health and Mission Management for UAS-Assisted Wireless Networks	<i>N. E.-D. Safwat, K. Ranasinghe, A. Gardi, and R. Sabatini</i>	2023
Spatial Contrast and Semantic Difference Perception Network for Aeroengine Blade Damage Segmentation	<i>C. Wang, H. Chen, Y. Wang, S. Zhao, and K. Liu</i>	2040
Doppler Radar-Based Target Localization Algorithm Combining Adaptive Linear Chirplet Transform and Frequency Compensation	<i>Y. Peng, Y. Ding, J. Cao, B. Tang, and Y. Jiang</i>	2057
Integrated Missile Guidance and Control Scheme via Coupling Effect Utilization and Transformation Mechanism.....	<i>Z. Guo, L. Yao, S. Cao, Y. Ding, R. Yuan, L. Huang, and J. Guo</i>	2068
A Reduced-Complexity Trajectory Generation Algorithm for Three-Body Regimes With Minimum Predefined Data	<i>B. Baker-McEvilly, H. Aluvihare, S. M. Perera, and D. Canales</i>	2078
Discrete-Time Net Capture Against an Intruder Using Multiple UAVs	<i>J. Wang, L. Zhao, K. Xia, and C. Wang</i>	2094
Real-Time Lateral Predictor-Corrector Entry Guidance With Terminal Heading Angle Constraint	<i>P. Shi, J. Xu, L. Cheng, C. Dong, and X. Huang</i>	2106
Finite-Time Observer-Based Antidisturbance Control for Quadrotors Without Velocity Measurements	<i>Y. Gao, S. Su, Y. Zong, and L. Zhang</i>	2120
Sensor Placement Strategies for Target Localization via 3-D AOA Measurements	<i>A. Aubry, P. Babu, P. Braca, A. De Maio, and K. Panwar</i>	2134
Hierarchical Reinforcement-Learning-Based Joint Allocation of Jamming Task and Power for Countering Networked Radar	<i>Y. Wang, Y. Liang, and Z. Wang</i>	2149
Parameterized Design for Moon-to-Earth Transfer Trajectories Considering Re-Entry and Landing Constraints	<i>H. Wang, X. Bai, M. Xu, L. Tian, H. Zeng, Z. Hou, and Q. Peng</i>	2168
Transfer Learning-Based Dual GCN for Radar Active Deceptive Jamming Few-Shot Recognition	<i>Z. Wu, T. Wang, Y. Cao, M. Zhang, W. Guo, and L. Yang</i>	2185
Airborne Radar Multitarget Detection for Tracking in Clutter Using Nonuniform Pulse Interval Transceivers Design	<i>T. Fan, X. Yu, Y. Li, J. Xiong, and G. Cui</i>	2198
Multiple-to-One Orbital Pursuit: A Computational Game Strategy	<i>Y. Liu, Y. Zhang, J. Jiang, and C. Li</i>	2213
Energy-Conserving Fault-Tolerant Event-Based Attitude Control for Multiple Rigid Bodies	<i>X. Xie and T. Sheng</i>	2226
PETC-EM-PMBM Filter for Tracking Point and Extended Targets With Type Conversion.....	<i>X. Xue, D. Wei, and S. Huang</i>	2235
IM-TD3: A Reinforcement Learning Approach for Liquid Rocket Engine Start-Up Optimization	<i>Y. Liu, Y. Li, Y. Cheng, W. Pan, and J. Wu</i>	2250
Adaptive Integrated Guidance and Control for HSV in Ascent Phase With Time-Varying State Constraints	<i>D. Chao, R. Qi, and B. Jiang</i>	2263
Earth Observation Satellite Downlink Scheduling With Satellite-Ground Optical Communication Links	<i>H. Li, Y. Li, Y. Liu, B. Deng, Y. Li, X. Li, and S. Zhao</i>	2281
Generalized Gridless Formulation of Reweighted $\ell_{2,1}$ Minimization for DoA Estimation	<i>Y. Cheng, T. Liu, J. Shi, D. Guan, Z. Liu, Y. Liu, and X. Li</i>	2295
Design and Analysis of Low-Power IoT in Remote Areas With NTN Opportunistic Connectivity	<i>G. Giambene, E. O. Addo, Q. Chen, and S. Kota</i>	2309
MIMO-DFRC Hybrid Beamforming Design via Transmit Pattern Optimization	<i>W. Chen, B. Liao, H. Huang, and J. Liang</i>	2329
Bit-Limited Sub-Nyquist Pulse-Doppler Radar	<i>Y. Wang, F. Xi, S. Chen, and Z. Liu</i>	2340
Covert Satellite Communication Over Overt Channel: A Randomized Gaussian Signalling Approach	<i>H. Yu, J. Yu, J. Liu, Y. Li, N. Ye, K. Yang, and J. An</i>	2355
QoE-Centric Resource Management for NOMA-Based LEO Satellite–Terrestrial Integrated Networks	<i>X. Shen, Z. Ji, K. Zhao, T. de Cola, and W. Li</i>	2369

Sensor Selection for TOA-Based Multitarget Localization With Nonshared Sensors	Y. Lin, Y. Li, D. Song, and W. Wang	2383
FDA Jamming Against Airborne Phased-MIMO Radar-Part I: Matched Filtering and Spatial Filtering	Y. Sun, W.-Q. Wang, Z. He, and S. Zhang	2397
FDA Jamming Against Airborne Phased-MIMO Radar-Part II: Jamming STAP Performance Analysis	Y. Sun, W.-Q. Wang, Z. He, and S. Zhang	2419
Task Scheduling in Cognitive Multifunction Radar Using Model-Based DRL	S. Akbar, R. S. Adve, Z. Ding, and P. W. Moo	2434
Cross-Domain PolSAR Image Classification Using Complex-Valued Few-Shot Learning Network	Y. Cao, Z. Wu, J. Chen, Z. Huang, and L. Yang	2450
Imbalanced Flight Test Sensor Temporal Data Anomaly Detection	D. Zhang, H. Yang, J. Gao, and X. Li	2466
Artificial-Intelligence-Assisted Geomagnetic Navigation Framework	A. Cuenca, H. Moncayo, and G. Gavilanez	2477
Retrieval of Ship Radial Velocity From Single-Channel Complex-Valued Spaceborne SAR Imagery	C. H. Gierull and K. El-Darymli	2491
Probabilistically Robust Joint Transmit Code and Receive Filter Design for Extended Targets: A Mixed-Integer Programming Approach	G. Chen, C. Wang, X. Zhang, J. Gong, and M. Tan	2503
Robust CFAR Detection in Heterogeneous Weibull Background via Bayesian Area Interference Control	X. Zhu, C. Yang, C. Zhou, W. Liu, and Z. Shi	2516
Spatiotemporal Staggered Projection Imaging for Video-SAR Under the Resource-Constrained Platform	X. Yang, J. Shi, B. Zhang, C. Zang, P. Li, L. Xin, Y. Zhou, and J. Wu	2532
A Low-Complexity Deep Learning Model for Modulation Classification and Detection of Radar Signals	B. Bhavana and S. L. Sabat	2548
Two-Stage Spatial Whitening and Normalized MUSIC for Robust DOA Estimation of GNSS Signals Under Jamming	C. Wang, X. Cui, G. Liu, and M. Lu	2557
A Symmetry-Based Unscented Particle Filter for Rapid State Estimation for SAL Guided Vehicles	J. A. Rebollo, F. Gavilan, and R. Vazquez	2573
BiGAT: A Model for Recognizing Motion Intentions of Space Noncooperative Targets	Q. Sun, L. Zhao, and Z. Dang	2586
Asteroid Descent Trajectory Optimization With Online Thrust-Loss Identification	W. Feng, Z. Fan, J. Qi, M. Huo, and N. Qi	2601
Pose Estimation and Neural Implicit Reconstruction Toward Noncooperative Spacecraft Without Offline Prior Information	B. Han, C. Wang, X. Zhang, Z. Zhao, Z. Zhai, J. Liu, N. Liu, and X. Chen	2612
Region-Based Global-Local Contrastive Representation Learning for Fine-Grained Ship Classification in Remote Sensing Images	K. Li, Z. Liu, and Z. Zhang	2631
LRTA-SP: Low-Rank Tensor Approximation With Saliency Prior for Small Target Detection in Infrared Videos	D. Pang, T. Shan, Y. Ma, P. Ma, T. Hu, and R. Tao	2644
An Online Gas Path Fault Diagnosis for Aircraft Engine Transient Behavior Using iB-EKF Algorithm	Z. Zou, X. Zhou, J. Huang, W. Jiang, and F. Lu	2659
Data-Driven Intelligent Multiframe Joint Tracking Method for Maneuvering Targets in Clutter Environments	X. Chen, Y. Wang, C. Zang, X. Wang, Y. Xiang, and G. Cui	2679
Cooperative Mission Planning of Multiple Spacecrafts Using a Multiobjective Optimization Algorithm Based on Reinforcement Learning	Y. Qi, D. Gu, Y. Liu, and J. Zhu	2703
Distributed Information-Weighted Consensus Filter for Extended Object Tracking With Nonlinear Measurements	Z. Li, C. Liu, Y. Jin, L. Zhou, and S. Liu	2719
Multi-AAV Formation Search Using Variable Resolution Cognitive Map and Tree-Type Topologies Under Limited Sensing Environments	D. Zhang and H. Duan	2734
Suppressing the Impact of Random Pulsed Load on Bus and Improving the Distribution Quality in Spacecraft DC Power System	X. Zhu, D. Zhang, W. Gao, and H. Zhu	2752
Adaptive Iterative Learning Control for Spacecraft Close-Proximity Operations With Uncertainties	X. Lang, X. Liu, Y. Qin, and Z. Chen	2762
LKPF-YOLO: A Small Target Ship Detection Method for Marine Wide-Area Remote Sensing Images	J. Chen, Z. Hu, W. Wu, Y. Zhao, and B. Huang	2769
Deep Feature Matching of Different-Modal Images for Visual Geo-Localization of AAVs	X. Zhang, H. Qin, L. Ma, Y. Yu, Y. Ma, and Y. Hu	2784

Adaptive Multiagent Reinforcement Learning Solver for Tactical Conflict Resolution in Diverse Urban Airspace Configurations	<i>R. Fremond, Y. Xu, and G. Inalhan</i>	2802
Surface Target Ship Localization Utilizing Multiple Line Array Sonars	<i>J. Kim</i>	2821
Underdetermined DOA Estimation of Quasi-Stationary Signals Exploiting Frequency Pairs	<i>K. Li, Q. Shen, W. Liu, Z. Zhang, Y. Zhao, W. Li, and W. Cui</i>	2828
Simultaneous Stabilization Control of Position and Orientation for Nonholonomic Vehicle in 3-D Space: Geometric Reference Trajectory	<i>R. Yi, X. Peng, P. Wang, and Y. Lv</i>	2843
Distributed Riemannian Manifold Optimization for Unimodular Waveform Set Design Toward AAC/CAF Shaping	<i>X. Qiu and W. Jiang</i>	2854
SCLMR: An End-to-End Network for Long-Tailed Modulation Recognition Based on Supervised Contrastive Learning	<i>W. Kong, X. Jiao, B. Liu, Y. Xu, and Q. Yang</i>	2871
Suppressing Mainlobe Deceptive Jammers via Two-Low-Rank Matrix Decomposition in FDA-MIMO Radar	<i>L. Lan, Y. Zhang, J. Xu, G. Liao, and H. C. So</i>	2885
Joint Antenna Selection and Beamforming for Area Surveillance With Spatially Distributed Array Radar	<i>C. Yang, W. Yi, and B. Champagne</i>	2899
Recursive Polynomial Method for Fast Collision Avoidance Maneuver Design	<i>Z. Pavanello, L. Pirovano, and R. Armellin</i>	2914
Tracking of Extended Object Using Random Triangle Model	<i>M. Li, J. Lan, and X. R. Li</i>	2926
A Learning-Based Scheme for Safe Deployment of Tethered Space Robot	<i>A. Jin, F. Zhang, G. Shen, Y. Ma, and P. Huang</i>	2941
A Radar Signal Deinterleaving Method Based on Enhanced Sparse Subspace Clustering	<i>Q. Guo, S. Huang, L.-C. Liu, M. Kaliuzhnyi, and S. Douplii</i>	2956
Joint Iterative Adaptive Approach for Sidelobe Suppression and Migration Correction of Migrating Targets	<i>J. Tian, B. Zhang, W. Cui, and S. Wu</i>	2973
Distributed Recursive Grouping-Based Fault Self-Healing of UAV Swarm With Individuals Failure	<i>Z. Pan, J. Feng, T. T. Yu, B. Cui, and Y. Xia</i>	2996
Impact of a Civil Aviation GNSS Receiver Temporal Blanker in the Presence of RFI DME/TACAN Signals	<i>A. Garcia-Pena and C. Macabiau</i>	3009
Infrared Small Target Detection Improvement via Hybrid Data Augmentation Using Diffusion Models and GAN	<i>H. Ding, N. Huang, Y. Wu, and X. Cui</i>	3031
Adaptive Finite-Time Fuzzy Fractional Sliding Mode Control for Uncertain QUAV With Actuator Faults and Slung Load	<i>F. Li, Z. Liu, and B. Jiang</i>	3046
Max-Sum-Based Data Associations for Tracking Point and Extended Targets	<i>W. Ma, Z. Jing, P. Dong, and H. Leung</i>	3059
Multispectrally Compatible Transceiver Design for MIMO-STAP Radar and Communication Coexistence	<i>D. An, J. Hu, K. Zhong, T. Liu, F. Sun, X. Tai, Y. Zuo, H. Li, X. Xiao, and F. Gini</i>	3076
Radar Noncoherent Integration Detection for High-Speed Multiple Targets via Doppler Frequency Compression	<i>L. Zhang, H. Chen, Q. Qu, and Y. Wang</i>	3092
Deceptive Jamming Suppression Via Segmented Modified Radon-Fourier Transform for Moving Target Detection	<i>Y. Bu, X. Yu, J. Yang, G. Cui, and X. Yang</i>	3106
Micromotion Parameter Extraction of Precession Cone Based on Analytical Solution in Monostatic Radar	<i>H. Yuan, Y. Luo, Y.-J. Chen, J. Liang, Y.-X. Liu, and K.-M. Li</i>	3121
User-Centric Communication With Aerial Network for 6G: A Reinforcement Learning Approach	<i>S. K. Kasi, F. A. Khan, S. Ekin, and A. Imran</i>	3137
Filtering Suppression for Large Peak Conducted EMI From High-Speed Axial Flow Fan	<i>J. Yang, Y. Wei, X. Zhao, Z. Pan, B.-L. Nie, and P. Du</i>	3152
Code-Assisted Broadband Jamming Suppression in Multisatellite Collaborative Secure Communication	<i>S. Qiao, Y. Shao, G. Kang, J. Zhao, P. Yue, R. Zhang, S. Ke, and S. Wang</i>	3162
An Adjacent Area Jamming Method Against SAR Based on Partial-Pulse-Reception and Full-Pulse-Recovery Scheme	<i>L. Huang, C. Song, G. Jin, P. Lu, and L. Li</i>	3176
Satellite Network Slice Planning With Handover Trigger and DRL-Based Virtual Network Embedding	<i>T. Kim, S. Kim, J. Kwak, and J. P. Choi</i>	3193
MCST: An Adaptive Tracking Algorithm for High-Speed and Highly Maneuverable Targets Based on Bidirectional LSTM Network	<i>K. Shen, W. Yuan, J. Yan, and K. Ma</i>	3205

mRadHPRS: Human Pose Recognition System From Point Clouds Generated Through a Millimeter-Wave Radar	3227
Receive-Coherent Synthesis Method of Moving Target for Airborne Distributed Coherent Aperture Radar Based on Parameter Space Division	3243
Target Localization and Measurement Association in PCL-PET Hybrid Heterogeneous Network	3261
Distributed Event-Triggered Model Predictive Control for Spacecraft Swarm	3273
Dynamic Event-Triggered Robust Feedback Model Predictive Tracking Control of Air-Breathing Hypersonic Vehicle Based on Disturbance Preview	3291
A Segmentation-Based CFAR Detector With Spatial Continuity Constraint in Nonhomogeneous Weather Clutter	3306
Constrained Quaternion Filtering for Single-Frame Attitude Determination	3323
Decoupled Incremental Nonlinear Dynamic Inversion Control for Aircraft Spin Recovery	3336
Per-User Dynamic Controllable Waveform Design for Dual Function Radar-Communication System	3346
Sliding Optimal Tracking Control of Autonomous Underwater Vehicles With Adaptive Dynamic Programming	3361
Multiparameter Joint GNSS Spoofing Detection Based on TSVAE	3373
Practical Finite-Time Attitude Reorientation Control for Rigid Spacecraft With Forbidden Pointing Constraints and Physical Limitations	3387
Discrete-Time Optimal Control Ensuring Fixed-Time Prescribed Performance for SSP	3398
Partial-State Feedback Consensus Model Reference Adaptive Control for Nonaffine Drag-Free Spacecraft Inner-Formation System	3408
JSMWO: Joint Radar Spectrum Management and Waveform Optimization Strategy for Maneuvering Target Tracking in Congested Spectrum Environment	3425
Pulse Diversity Phase-Coded Waveform and Mismatched Filter Bank Design Via Periodic Ambiguity Function Shaping	3440
Omnidirectional Human Motion Recognition With Monostatic Radar System Using Active Learning	3456
A Mode-Switchable Photonic Radar System for Aerial LSS Targets Detection and Classification	3470
Max-Mahalanobis Centers Guided Adversarial Network for Generalized Few-Shot Radar Target Recognition	3483
Characterization and Validation of GNSS Multipath-Induced Doppler Measurement Error	3498
Adaptive Snapshot-Based Elastic Route Reconstruction for Distributed LEO Satellite Networks	3516
Time-Synchronized Attitude Tracking Control for a Hypersonic Re-Entry Vehicle System With System Uncertainties and Disturbances	3531
Multiscale Feature Learning Based on Deep Pyramid Residual Shrinking Network for Radar Target Detection	3544
Fixed-Time Neural Network-Based Dynamic Surface Control for Hypersonic Flight Vehicle With Historical Data Online Learning	3564
Modern FDA-LFM Radar System and Efficient Range-Angle-Doppler Processing Algorithm	3577
A Two-Step Multiframe Assignment Method for Multiple Extended Target Tracking With Azimuth Ambiguity Based on Pseudo Measurement Set	3589
RCS Reduction for Multiple-Sparsity-Rate Arrays With a Feature Multitask Network	3610
A Data-Driven Approach for Performance Evaluation of Autonomous eVTOLs	3626
One-Shot Architecture Search and Transformation for Robust DOA Estimation	3642
Multiple Variational Kalman-GRU for Ship Trajectory Prediction With Uncertainty	3654

Filling and Disentanglement: Toward Low- and High-Order Parallel Single-Domain Generalization for SAR Ship Detection	Y. Yuan, L. Tang, Y. Xu, C. Lin, C. Chen, Y. Huang, and X. Ding	3668
Belief-Propagation-Based Resolvable Group Target Tracking With Unknown Detection Probability	G. Li, G. Li, and Y. He	3683
Joint ML-Bayesian Approach to Adaptive Radar Detection in the Presence of Gaussian Interference	C. Yin, T. Wang, L. Yan, C. Hao, A. Farina, and D. Orlando	3701
Joint Design of Transmit and Receive Weights for Subarrayed FDA With Partial Prior Knowledge Using Approximated Consensus-ADMM	W. Jia, A. Jakobsson, P. Li, J. Jian, B. Huang, and W.-Q. Wang	3714
Enhanced Low-Redundancy Restricted Array for Direction of Arrival Estimation	S. Zhang, Z. Zhou, G. Cui, X. Tang, and P. Fan	3731
Neural Network-Inspired Phase-Coded Waveform Design for MIMO Radar Based on Gradient Descent	J. Cao, J. Sun, G. Wang, Y. Zhang, W. Wang, and J. Wang	3748
A Stability Guaranteed Variational Bayesian Converted Measurement Kalman Filter for Radar Tracking With Unknown Noise Covariances	S. Li, D. Zhou, Y. Li, R. Du, and J. Liu	3763
Barrier Function-Based Three-Dimensional Guidance for Position-Constrained Interception	S. Chen, W. Wang, J. Fan, and Y. Zou	3782
Transferable Anti-Intelligence Recognition Radar Waveform Design Based on Adversarial Attacks	R. Zhang, Y. Li, and J. Liu	3798
Efficient Online Trajectory Planning for Fast Flight in Dynamic and Cluttered Environment	X. Huang, Y. Luo, X. Zhang, Z. Li, H. Yang, and C. Luo	3813
Feature-Enhanced PointPillars for 3-D Millimeter-Wave Object Detection	Y. Chang, S. Wan, Y. Gao, Z. Bu, P. Li, and L. Ding	3828
Source Localization Using Changing Rate of Phase Difference Only: A Convex Optimization Approach	M. A. Nuhoglu and H. A. Cirpan	3840
Reinforcement Learning-Based Antijamming Strategy for Self-Defense Jammer-Aided Radar Systems	Y. Gao, Y. Yuan, H. Li, and W. Yi	3852
Fusion-Based Adaptive Coherent Detection of Small Targets in Dual-Polarimetric Correlated Sea Clutter	T.-Y. Duan, P.-L. Shui, J.-M. Wang, and S.-W. Xu	3868
Classification-Aided Robust Multiple Target Tracking Using Neural Enhanced Message Passing	X. Bai, Z. Wang, Q. Pan, T. Yun, and H. Lan	3882
Robust Adaptive Beamforming With Nonconvex Union of Multiple Steering Vector Uncertainty Sets	Y. Huang, X. Lin, H. C. So, and J. Xu	3904
Skewed Unscented Kalman Filter Using Gaussian Sum	H. Liu, X. Sun, J. Yang, M. Xu, and S. Bai	3917
Multidomain Joint Spoofing Detection Based on a Semi-Supervised Detection Network for GNSS-Based Train Positioning	S.-Q. Wang, J. Liu, B.-gen Cai, J. Wang, and D.-biao Lu	3936
Hybrid Ordinary-Welsch Function-Based Robust Matrix Completion for MIMO Radar	H. N. Sheng, Z.-Y. Wang, Z. Liu, and H. C. So	3950
Efficient MVDR Beamformer Employing Multistage Forward/Backward Averaging Scheme	S. Jiang, S. Liu, M. Jin, and Z. Lin	3963
Transverse Formation of Sail-Assisted Spacecraft With Complex-Shaped Self-Differential Bounded Control	L. Chen, M. Xu, X. Bai, X. Gao, and S. Guo	3977
A Parameterized Solution to Optimal Guidance Law Against Stationary Target With Impact Angle Constraint	Y. Zhu, C. Zhou, S. Chen, X. Song, K. Li, and C. Li	3993
Addressing Non-Co-Visible Regions in SAR and Optical Image Registration: A Two-Stage Matching and Ensemble Method	B. Ding and G. Yang	4004
Weak Loss Convexification for Sequential Convex Programming	Y. Deng, Y. Xia, Z. Sun, C. Li, and R. Hu	4020
Worst-Case Riemannian Optimization With Uncertain Target Steering Vector for Slow-Time Transmit Sequence of Cognitive Radar	X. Zhang, W. Jiang, X. Qiu, and Y. Liu	4030
Target Motion Analysis With Passive Measurements and Partial Prior Information	M. P. Lowney, Y. Bar-Shalom, T. Luginbuhl, and P. Willett	4045
Navi-Based Distributed Adaptive Clustering and Estimation Over Multitask Networks	Y. He, L. Hu, F. Chen, X. Ren, and S. Duan	4059
Optimal Guidance for Quasi-Planar Lunar Ascent Based on Local Degradation	B. Du, X. Bai, M. Xu, and Y. Liu	4070
LEO Internet Satellite Constellation Design for Regional Civil Aviation Airways With Multiple Repeat Ground Tracks	P. Han, C. Li, C. Huang, H. Huang, Y. Guo, and G. Pan	4088

A Motion Camouflage-Inspired Path Planning Method for UAVs Based on Reinforcement Learning	J. Li, Y. Zhu, C. Li, and Z. Song	4105
Mission Planning on Autonomous Avoidance for Spacecraft Confronting Orbital Debris	X. Chen, T. Wang, J. Qiu, and J. Feng	4115
Moving Target Detection for FDA Radar With Array Errors in Mainlobe Jamming Scenarios	L. Huang, S. Zhang, S. Xiao, and W.-Q. Wang	4127
A Fast Transient Interference Suppression Method for OTHR Based on ℓ_p Norm and Overlapping Block Sparse	Z. Chen, Y. Ji, Y. Zhang, Z. Dong, W. Liu, and J. Song	4138
State Estimation With Nonlinear Inequality Constraints for Small Celestial Body Flexible Landing	P. Cui, Z. Chen, D. Ge, S. Zhu, and S. Cui	4155
Self-Triggered 6-DOF Formation Control for Multispacecraft Systems With Restricted Communication and Computation Resources	X. Xie and T. Sheng	4168
Robust Bayesian Acoustic DOA Estimation With Passive Synthetic Aperture Arrays	J. Yang, Y. Yang, and B. Liao	4178
Collision-Free Approximate Optimal Control of Spacecraft Formation With Predefined Performance	Y. Sun, Y. Gong, J. Mei, Y. Guo, G. Ma, and W. Wu	4192
Transmit Beampattern Synthesis for Active RIS-Aided MIMO Radar via Waveform and Beamforming Optimization	S. Chen, M. He, L. Ran, H. Li, F. Xi, S. Tian, and Z. Liu	4208
Hierarchical Passivity-Based Force-Position-Configuration Coordinated Control of Multi-Branch Spacecraft	L. Lu, C. Yue, Q. Shen, and X. Cao	4223
Optimal Sparse Array Design for Airborne Weather Radar With Integrated Communications	X. Wang, J. Huang, X. Wang, T. Huang, and M. Amin	4238
Distributed Fusion of Highly Maneuvering Multitarget Under Limited Field of View Sensors	Q. Guo, L. Teng, and L. Qi	4255
Enhancing Flight Condition Recognition Performance Through Functional Similarity	J. Leoni, E. Villa, G. Cazzulani, A. Baldi, U. Mariani, and M. Tanelli	4270
Fractional-Order Meta-Reinforcement Learning for Space Noncooperative Object Active Visual Tracking	Z. L. Yu, X. J. Su, and G. H. Sun	4284
Neighborhood Selection-Based Distributed Maximum Correlation Accumulation Direct Position Determination	B. Ding, D. Song, Z. Yang, and W. Wang	4296
Augmented Coprime Array Design via Hole Analysis for Direction of Arrival Estimation	Y. Zhang, J. Shi, G. Zheng, H. Zhou, Y. Song, and G. Hu	4313
Robust Fault-Tolerant Flush Air Data Sensing Algorithm via Incorporating Physical Knowledge	Y. Liu, W. Yang, W. Liu, X. Yan, Z. Liu, and C.-A. Zhang	4329
Removal of Mainbeam Jamming Signals With Dual-Compensation-Phase Coding Radar	X. Zhang, L. Lan, S. Zhu, G. Liao, and X. Li	4343
A Sparse Method for Joint Range and Angle Estimation in OFDM SonarCom Systems With Phase Errors	M. Wu, C. Hao, L. Wang, Y. Wu, and D. Orlando	4357
A Persymmetric Algorithm for Distributed Target Detection in Subspace Interference Plus Partially Homogeneous Clutter	T. Jian, J. He, H. Wang, S. Wang, and G. Wei	4369
Optimal Scheme of Pyramid Deorbit Sail in the Atmosphere and Solar Environment	R. Zhang, J. Zhang, and K. Yang	4381
FDA-MIMO Transceiver Design for Deceptive Jammer Suppression	J. Qi, L. Lan, and G. Liao	4394
Moving Human Target Tracking Method Based on Rotation Kernelized Correlation Filter for Through-the-Wall Radar	Z. Ma, X. Qu, H. Zhang, H. Meng, and X. Yang	4409
Parametric Adaptive Target Detection in Colocated MIMO Radar	X. Jing, H. Su, R. Yang, Y. Zhu, and X. Ma	4421
A Two-Stage Emitter Metric Identification Method With Variable Operating Parameters	W. Zhang, L. Liu, Y. Jiang, and Y. Liu	4435
Parameter Estimation With Bistatic MIMO Radar: A Coarray Tensor Decomposition Framework	W. Wang, X. Wang, Y. Guo, and G. Gui	4450
Lagrangian-Based Energy-Efficient Route Learning Considering Expected Guaranteed Delay for Satellite Network	Q. Huang and L. Yang	4466
Information Theory of Compressive Sensing in Sensor Array	N. Wang, D. Xu, H. Zhang, and X. Kong	4480
AAV MiniSAR Long-Integration-Time Imaging by Modeling Spatial Variance as Sinusoidal Series	C. Liu, Z. Yu, J. Yu, C. Li, X. Wu, and J. Tian	4492

Clutter Suppression for STAP-Based Radar Using Synthesized Subarray Beampattern	<i>F. Wan, J. Xu, Y. Xu, L. Lan, W. Wang, and G. Liao</i>	4507
HRRP Few-Shot Target Recognition for Full Polarimetric Radars via SCs Optimal Matching	<i>Z. Guo, Z. Liu, R. Xie, and L. Ran</i>	4526
Text-to-Speech Application for Training of Aviation Radio Telephony Communication Operators	<i>O. Ohneiser and U. Ahmed</i>	4542
Integrated Predictor–Observer Feedback Control for Vibration Mitigation of Large-Scale Spacecraft With Unbounded Input Time Delay	<i>B. Lyu, C. Liu, and X. Yue</i>	4561
Micro-Doppler Separation Based on RSS Net	<i>Z. Zhao, D. Yang, X. Wang, and W. Zhong</i>	4573
Polarization-Agnostic DOA Estimation With Noncollocated Dual-Polarized Array	<i>Y. Pan, A. Yang, J. Zhang, and H. Fan</i>	4584
Quality of Service Radar Resource Management With Task Dependencies	<i>C. Vollweiter</i>	4598
Energy-Efficient Optimization in Aerial IAB Networks for Emergency Communications	<i>Y. Zhang, M. A. Kishk, and M.-S. Alouini</i>	4614
Underwater Moving Object Localization by TOA and FOA Modeled With Isogradient Sound Speed Profile	<i>Q. Qin, G. Wang, and K. C. Ho</i>	4627
Approximating the Lower Bound on the Arithmetic Average-Based Distributed State Estimation	<i>Y. Yuan, X. Liu, W. Li, W. Yi, and P. K. Varshney</i>	4642
Satellite Magnetic Attitude Control in Sun-Safe Mode Using Control Lyapunov Function	<i>S. Yang, Z. Wang, X. Pan, D. Li, and A. Zolghadri</i>	4658
A Super-Resolution Method Based on Iterative Weighted Atomic Norm Minimization for UAV Swarms	<i>J. Fu, Y. Cao, T.-S. Yeo, Y. Cheng, Y. Zhang, Y. Wang, and J. Han</i>	4669
Dynamics Modeling and Configuration Optimization of a Flexible Transportation System Using Two Space Robots	<i>Y. Zhang, S. Jia, G. Chen, T. Chen, and Y. Wang</i>	4685
Resource Allocation in Networked Joint Radar and Communications	<i>S. Şahin and T. Girici</i>	4697
Finite-Time Complementary Filter-Based Attitude Control of Autonomous Aerial Vehicles With Gyro Bias	<i>L. Wang, G. Wen, H. Du, and J. Zhou</i>	4707
Generalization of Adler’s Three-Dimensional Proportional Navigation Law	<i>Y. A. Antipov and B. T. Dickinson</i>	4719
DenoDet: Attention as Deformable Multisubspace Feature Denoising for Target Detection in SAR Images	<i>Y. Dai, M. Zou, Y. Li, X. Li, K. Ni, and J. Yang</i>	4729
A Low-Cost Polarimetric Radar System Based on Mechanical Rotation and Its Signal Processing	<i>B. Shen, T. Liu, G. Gao, H. Chen, and J. Yang</i>	4744
A Threshold Insensitive Open-Set Recognition Scheme for AAV Targets Based on HRRP	<i>S. Tao, M. Mei, J. Luo, L. Yan, and X. Huang</i>	4766
Persymmetric GLRT-Based Detectors With Training Data for FDA-MIMO Radar	<i>C. He, B. Huang, Y. Jin, J. Wang, R. Zhang, and L. Liu</i>	4776
Adaptive Predefined-Time Dual-Channel Event-Triggered Deployment Control of Triangle Space Tethered System	<i>F. Zhang, B. Huang, and P. Huang</i>	4796
Fault-Tolerant Game Control for Quadrotor Helicopters’ Formation: A Fully Actuated System Approach	<i>Y. Xu, B. Jiang, M. M. Polycarpou, and B. Li</i>	4808
Robust Direction-of-Arrival Estimation With Outliers and Partly Calibrated Uniform Linear Array	<i>W. Xiao, Y. Li, C. Yu, L. Zhao, M. Pan, and R. C. de Lamare</i>	4825
Tracklet Association for Geosynchronous Space Objects Taking Impulse Maneuver	<i>J. Zhang, Y. Jiang, H. Cai, and Y. Yang</i>	4835
Massive MIMO Uplink Transmission for Multiple LEO Satellite Communication	<i>Z. Xiang, R. Sun, X. Gong, X. Gao, K.-X. Li, W. Liu, and X.-G. Xia</i>	4852
Onboard Mission Planning for Autonomous Avoidance of Spacecraft Subject to Various Orbital Threats: An SMT-Based Approach	<i>X. Chen, J. Qiu, T. Wang, and M. Li</i>	4866
Fault Interval Estimation and Accommodation via Zonotopic Kalman Estimator for Aeroengine System: A Hybrid Approach	<i>S. Fu, R. Wang, and W. Tang</i>	4879
Toward Efficient Detection and Tracking for Tiny Airborne Object	<i>Z. Liu, Y. Lyu, D. Guo, H. Li, and Y. Fu</i>	4891
Distributed MIMO Radar Target Detection in Multipath Clutter Environments With Time Reversal	<i>H. Lian, M. Yang, D. Zhou, and M. Liu</i>	4907
Modified Unscented Kalman Filter Considering Maximum Point of Probability Density Function	<i>H. Liu, X. Sun, and S. Bai</i>	4926

Target Situation Awareness via Electromagnetic Spectrum Mining Based on TSACGCN	G. Sun, T. Chen, and Q. Xin	4945
3-ISL Topology: Routing Properties and Performance in LEO Megaconstellation Networks	Q. Chen, L. Yang, Y. Zhao, Y. Wang, H. Zhou, and X. Chen	4961
Consensus-Based Distributed Nonlinear Filtering With Kernel Mean Embedding	L. Guo, J. Wang, Y. Zhao, and J.-F. Zhang	4973
Automatic Segmentation Annotation of Space Target Using Segment Anything Model and Object Detection Prompts...	Z. Zhang and Z. Dang	4988
CNN-Based Pose Estimation of a Noncooperative Spacecraft With Symmetries From LiDAR Point Clouds	L. Renaut, H. Frei, and A. Nüchter	5002
Strategy Optimization for Range-Velocity Gate Pull-off Jamming	Z. Ma, T. Zhang, Y. Wang, and L. Kong	5017
Control of Multiconverter Based Microgrid for Unified Power Transfer to Local Loads and Charging Station in Unusual Grid Conditions	K. Tiwari and B. Singh	5030
Performance Analysis and Preliminary Verification of Novel Milli-Hertz Band Capacitive Displacement Sensing Circuits for Inertial Reference of Space-Borne GW Detection	Y. Zhang, H. Ma, H. Zhang, H. Yang, J. Zang, L. Chen, X. Wang, and K. Huang	5041
Design and Evaluation of a Radiation-Hardened FDSOI SRAM With High-Reliable Elements and Power Management Circuits for Space Application	C. Cai, M. Hu, L. Shen, J. Yu, and G. Chen	5057
Powered Descent Guidance Using a Tunable Segmented Acceleration Profile	Z. Liang, B. Lu, S. Zhu, and D. Guo	5067
Designing High-Power Density MVDC Bipolar Power Cables for Power Transmission on the Moon	A. Saha and M. Ghassemi	5079
AOT: Aggregation Optimal Transport for Few-Shot SAR Automatic Target Recognition	Y. Li, W. Chen, X. Hu, B. Chen, D. Wang, C. Qu, F. Meng, P. Wang, and H. Liu	5088
Multimodal Image Registration of Electrical Equipment Based on Feature Triangle	J. Zhu and C. Liu	5104
Joint Optimization of Resource Utilization and Jamming Method Selection for Cluster Asymmetrical Multifunction Radars Based on Deep Reinforcement Learning	S. Sizhe and S. Yanling	5116
ASC-BSS-Based Parameter Estimation Method for Multiple LFM Pulses With Aliasing Effect From Passive Radar	J. Deng, Z. Sun, X. Li, and G. Cui	5132
Robust Range Super-Resolution Imaging With Multicriteria Joint Constraints via Double Smoothed l_0 -Norm Under Limited Resources	Z. Liu, S. Shao, H. Liu, and T. Su	5145
Hierarchical Guidance for Spacecraft Proximity via Iterative State Transitions	S. Yuan, Y. Wang, Z. Zhang, and F. Fabiani	5166
Poisson Multi-Bernoulli Mixtures for Sets of Trajectories	K. Granström, L. Svensson, Y. Xia, J. Williams, and Á. F. García-Fernández	5178
Generalizable Indoor Human Activity Recognition Method Based on Micro-Doppler Corner Point Cloud and Dynamic Graph Learning	X. Yang, W. Gao, X. Qu, and H. Meng	5195
Robust Adaptive Beamforming Based on Sparse Representation and Blocking Matrix Construction	H. Fan and C. Zhao	5210
A Health Assessment Method for Satellite Components Based on a Two-Dimensional Baseline Model	Y. Hui, Y. Cheng, B. Jiang, and X. Han	5222
Efficient Algorithms for Designing Sparse Linear Arrays With Desired Beampattern for Dual-Function Radar and Communication Systems	P. Varshney, U. Sharma, and P. Babu	5238
Modulation Identification for 6G Multibeam Satellite Systems Using Symbol-level Reconstruction and Physics-informed Scattering Transformation With Partial Channel Knowledge	Y. Xu, Z. An, Q. Chen, G. F. Pedersen, and M. Shen	5253
Three-Dimensional Micromotion Parameter Extraction of Smooth-Symmetrical Cone in Monostatic Radar	H. Yuan, Y. Luo, Y.-J. Chen, J. Liang, and L. Kang	5272
Range-Only UWB 6-D Pose Estimator for Micro UAVs: Performance Analysis	J. Lyu, T. Song, and S. He	5284

CORRESPONDENCE

Extending the Multitone Sinusoidal Frequency Modulation Signal Model by Fourier Expansions With Arbitrary Periods	D. J. Bekers	5302
A High-Precision Joint Smoothing Method for Interspacecraft Radio Frequency Doppler and Distance Measurements Using P-Spline Approximation	J. Sun, Y. Wang, and Y. Shen	5315
Performance Analysis of Antenna Array-Aided RTK Positioning	X. Liu, T. Ballal, and T. Y. Al-Naffouri	5325

An Interpolation-Based Blind CFO Estimator for Faster-Than-Nyquist Signaling Over LEO Satellite Channel	5337
X. Liang, H. Niu, H. Liang, A. Liu, Z. Gao, X. Lin, and S. Zhang	
Practical Method of Control Allocation of Jets and Aerosurfaces for Reusable Launch Vehicle at Entry Phase	5343
Y. Yang	
TF-BiFPN Improves YOLOv5: Enhancing Small-Scale Multiclass Drone Detection in Dark	5354
M. Misbah, F. A. Orakazi, L. Tanveer, Z. Kaleem, and C. Yuen	
Lightweight and Computationally Efficient YOLO for Rogue UAV Detection in Complex Backgrounds	5362
Z. Kaleem	
Joint Phase Shift and Receive Combiner Design for RIS-Based Satellite Communications	5367
H. Son, T. Kim, and M. Jung	
Estimating Parameters of Signals With Hybrid Sinusoidal and Polynomial Modulation Using RANSAC-Based Approach	5377
I. Djurović and A. Wojciechowski	
Solar Sail Trajectory Design With Pulsed Radial Thrust	5388
A. A. Quarta and G. Mengali	
Semiglobal Finite-Time Rendezvous Control of Saturated Spacecraft by Dynamic Time-Varying Event-Triggered Strategy	5395
K. Zhang, X. Yang, Z. Hu, M. Li, and T. Li	
Design of Two-Impulse Soft-Landing Trajectories From Unstable Periodic Orbits Around an Irregular Asteroid by Gravity Model Continuation	5402
Z. Liu and F. Jiang	
Random Slope Coding for Jamming Attack Mitigation in FMCW Radars	5416
A. Coluccia, A. Fascista, J. Nicolazzo, and S. Coronese	
Analysis of MIMO Radar Detection Algorithms With Location Capabilities: CFAR Property and Selectivity	5426
T. Wang, C. Yin, D. Xu, C. Hao, D. Orlando, and G. Ricci	
An Efficient and Generalizable Transfer Learning Method for Weather Condition Detection on Ground Terminals	5436
W. Zhang and P. Hu	
Depth-Independent Augmented Dynamics Visual Servoing of Multirotors	5444
A. K. Kamath, Z. Zheng, and M. Feroskhan	
Group Sparsity-Based Wideband 3-D Localization Using a Distributed Linear Array Network	5454
H. Wu, Q. Shen, J. Zhou, W. Liu, W. Li, and W. Cui	
A Radar System With Adaptive Waveform Selection Against Dynamic Spoofing Attacks	5461
C. Xie, G. Liu, Y. Xu, X. Lu, and T. Jiang	
A Computer Search of New OBZCPs of Lengths up to 49	5469
P. Kazakov and Z. Liu	
Noniterative Convex Programming-Based Optimal Guidance With Field-of-View and Acceleration Limits	5477
C.-G. Jung, B. Kim, and C.-H. Lee	
Performance of Uplink NOMA With Hybrid Long and Short Packets in Satellite Systems	5488
Y. Dai, M. Lin, Y. Guo, X. Liu, and J. Wang	

LETTERS

A Cross-Eye Jamming Mitigation Approach for Polarized Monopulse Radars	J. Ma, D. Lu, J. Liu, and L. Shi	5495
--	----------------------------------	------
