Contents

LTE Baseband DSP/FPGA for Beamspace MIMO RF Antenna	27
Dynamical and Stochastic Approach to Non-linear Polarization Optics	31
Calculations of Inductance and Induced EMF in a Planar Pickup Coil	36
Time Delay Module Design, Simulation and Synthesis Based on FPGA for Dielectric Dispersion Logging	
Geometry and Its Physical Meaning	
Efficient Analysis of EM Scattering from Rotating Structures Using a Fast Iterative Physical Optics	40
Method	51
Modeling the Scattering by Small Holes	56
Compact Circularly Polarized RFID Tag Antenna with an Embedded L-shaped Feedline for Metallic	
	61
Microwave Dielectric Properties of BiNbO ₄ Ceramics	
Chaos Generation Utilizing Optically Square-wave-injected Semiconductor Lasers	69
Photonic Band Structure and Field Distribution for TE Polarization. High Plasmon Concentration in the Corners of Metallic Rods of a 2D Photonic Crystal	73
The Dispersion Properties of Three-dimensional Magnetized Plasma Photonic Crystals as the Mixed Polarized Waves Considered	78
Zn Concentration, Shape and Size Effects on the Band Structure of Photonic Crystals Based on Ferrofluids with $(Co_{1-x}Zn_xFe_2O_4)$ Nanoparticles	83
Analysis on the Aperture Averaging Weight Factor for Equidistant Dual-aperture Receiver	88
Trend Technology's Theory Model and Experiment Verification for Atmospheric Optical Scintillation .	92
Electromagnetic Simulation of Coupled Silicon and Diamond Microdisks and Slab Waveguides in the Mid-infrared	95
A Photonic QPSK Modulator Aimed at Space Applications	
Optoelectronic Applications of Sapphire Microspheres	
Silicon Microspheres in Metrology	
A Moment-method Analysis of a Thin-wire Chireix-coil Antenna	
A Frequency Reconfigurable PIFA Design for Wireless Communication Applications	118
An Accurate Technique to Model the Substrate of Wearable Textile Antennas	
A CMOS I/Q Up-conversion Mixer and a Power Pre-amplifier for UHF RFID Reader Systems	
A UHF RFID Reader Receiver SoC in 0.18 μm CMOS Technology	130
Compact Substrate Integrated Waveguide BPF for Wideband Communication Applications	135
A Compact Dual-band Bandstop Filter Based on Fractal Microstrip Resonators	140
Design of Evaluation Board with a Built-in 25 Gb/s PRBS Source for Testing High-frequency Probe	145
The Optimized Electrode between a SMPM Connector and a Microstrip for High Frequency Applications	
1	
High Frequency Performance Comparison among Three Kinds of Board to Wire Connectors	153

An Investigation of Equatorial Ionospheric Irregularities under Solar Maximum in the 24th Solar Cycle in Middle and East Africa Using GPS
Assessment of the Forest Disturbances Rate Caused by Windthrow Using Remote Sensing Techniques 162
Monitoring Land Use Change in South-west Romania Using Multi-temporal Landsat Remote Sensing Imagery
Looking for a Biophysical Approach to Early Stages of Chronic Kidney Disease
Steps towards a Biophysical Approach to Refractory Gynecological Infections
FEM Evaluation of the Novel Cardiac Defibrillation Electrode Placement
Conductivity Estimation of Breast Cancer Using Stochastic Optimization
EM Exposure System with Well Defined Dosimetry
Mutual Coupling Evaluation within Waveguide Slotted Antennas
An Adaptive Spectroellipsometric Technology for the Diagnosis of Water Ecosystems
Wideband Dual-mode Dielectric Waveguide with Applications in Millimeter-wave Interconnects and Wireless Links
Development of Wireless Power Induction Cooker Using Magnetic Induction-based Technology207
Miniaturized Transmitter in Digital Modulation System with Non-constant Envelope for VHF Band $\dots 210$
Nonlocality in Discrete Metamaterials
Pure Electric and Magnetic Hotspots by Dielectric Cylindrical Dimers
Controlled Photonic Surface Modes in 'Cholesteric Liquid Crystal — Phase Plate — Metal' Structure .224
An Efficient and Innovative Modelisation for Nanolasers
THz Twist Polarizer Based on Supramolecular Fermat's Spiral Chiral Metamaterial
The Lidar Sounding of the Atmosphere in St. Petersburg
A 16-Element Wideband Microwave Applicator for Breast Cancer Detection Using Thermoacoustic Imaging
High Resolution Range Imaging via Model-based Compressed Sensing
Fast Level Set Based Method for High Contrast Microwave Imaging
On the Connection between Jones Matrix and Sinclair Matrix
Detection of Breast Tumors by Applying FDTD Modelling of Holographic Radar
Characterization of the Electromagnetic Propagation through Building Rubble by Means of Numerical Random Models
Combined Breast Microwave Imaging and Diagnosis System
Internal Photoeffect under the Action of Ultrashort Electromagnetic Pulses: Dependence of Pulse Duration
High Definition Multimedia Interface in the Process of Electromagnetic Infiltration
Analze the Impact of Discretization on the Structure of the Simulation Result
Directed Energy Applications to the Destruction of Informatic Devices
Measurement of the Pulses Generated by the High Power Electromagnetic Pulse Generator 297
Theoretical and Experimental Analysis of the Impact of Conformal Surface on Parameters of Microstrip Antennas
Analysis of Distinctive Features and Database Conception for Hardware Interface of It Devices in the Process of Their Identification Based on Radiated Emission
The Analysis of the Radius Impact on the Properties of Cylindrical Antenna with Coaxial Feed $\ldots312$
Implementation of Universal RF-shielded Enclosure for IT Equipment Protection
The Exposure Level of High Power Microwave Pulses
Electromagnetic Compatibility Studies of Selected Components for Present Day Cars

Bandwidth Enhancement of a Microstrip Patch Antenna Using the Metamaterial Planar Periodic Structure	Э
Computing the Electric and Magnetic Green's Functions in General Gyrotropic Media	5
On the Theory of Transition Radiation in the Anisotropic Magneto Dielectric Plate in a Waveguide 340	0
Scattering of an Obliquely Incident Electromagnetic Plane Wave by an Array of Magnetized Plasma Cylinders	4
Theorem for the $G_1(c,n)$ Numbers	9
Inverse Spectral Theory and Kramers-Kronig Relations	ô
Algebraic Regularization of Universal Functions in EM via Self-induced Hadamard Finite Parts 359	9
On the Accuracy of Method of Moments for Solution of Full 3D Vectorial Electromagnetic Forward Scattering Problem	5
Fast Model Order Reduction Approach to Uncertainty Quantification in Electrokinetics	9
Uncertainty Quantification for Complex RF-structures Using the State-space Concatenation Approach 374	4
Application of Krylov-type Parametric Model Order Reduction in Efficient Uncertainty Quantification of Electro-thermal Circuit Models	9
Broadband Analysis Including Beam Steering of Phased Array Antennas by Order Reduction 385	5
Parametric Near-field-to-far-field Transformation by Precomputed Empirical-interpolation Patches 390	0
Electromagnetic Scattering-matrix Theories Based on Plane Waves and Complex-source Beams 398	8
Flow Aggregation and Migration Scheme Based on Real-time Monitoring for Time-varying Traffic in Optical Networks	3
Impact of Protection to Converged Access Networks Planning in Rural Areas	8
Programmable Photonics in Data Centers: Architectures and Algorithms	3
Dissipation-induced Super Scattering from <i>PT</i> -synthetic Plasmonic Metafilms	8
Statistical Models of Noise Distribution in Broadband PLC Networks	3
High Quality InAlAs on InP for High Sensitivity Photodiodes	0
Finite Element Analysis of Separation Force on Non-ferrous Metals Induced by Eddy Current Separator 434	4
Numerical Estimation of Muscle Conductivity in Terms of Human Body Internal Resistance 439	9
A Necessary Condition for Application of Topological Derivative in Limited-aperture Inverse Scattering Problem	2
Subspace Migration for Imaging of Thin Electromagnetic Inhomogeneities without Shape Information .44	7
Analysis of Matching Media Effect on Microwave Brain Stroke Imaging via a Spherically Symmetrical Head Model	2
High Resolution Ka-band Backscattering Measurement of Deciduous and Coniferous Tree	7
Investigation of Switched Reluctance Machine for EV Propulsion Unit with Torque Smoothening Strategy	3
Achieving Tunable Mode Splitter and Omnidirectional Absorber by Semiconductor Photonic Crystal 469	9
Tunable Electromagnetically Induced Transparency Like Transmission in Graphene Metamaterials with Indirect Coupling	3
Reversal of Microwave Propagation Nonreciprocity in Metastructures by Voltage Application under Ferromagnetic Resonance Excitation near Resonance of Dipole or Chiral Elements	7
Millimeter-wave Metamaterial Antenna in Standard CMOS Technology	2
Enhanced Group Velocity Characteristics of a ENG Cladded Metamaterial Loaded Helical Guide $\ldots486$	6
Influence of Optical Fiber Dispersion on Mamyshev Type Regenerator Performance	9
Characteristics of Femtosecond Pulse in Silicon Nanowire Embedded Photonic Crystal Fiber: Variational Approach	3
Ontical WDM-PON Access System with Shared Light Source	7

Estimation of EDFA Performance in 40 Gbit/s 8 Channel DWDM Transmission System	502
Bidirectional Radio-on-Fiber Transport Systems Using Fiber Nonlinearity and Injection Locked Technique	
Transponder and 3R Regenerator Impact on Energy per Bit and Optical Bandwidth Required for Data Transmission over 10-40-100 Gbps Mixed-line Rate WDM Links	
Diffraction Effects on a Dual External Cavity Tunable Laser ECTL Source	514
A Generalized Vector-potential Integral Formulation for the Paraboloidal Reflector Antenna	519
A Compact Dual-band Balanced Slot Antenna for LTE Applications	524
Novel Quadrifilar Helical Antenna for RFID Applications Using Genetic Algorithms	528
A Compact Tri-band Monopole Antenna with Multiple Meander Lines for WLAN and WiMAX Communication Applications	
Low-cost Implementation of a Waveguide-based Microwave Filter in Substrate Integrated Waveguide (SIW) Technology	
Band-pass Filter Based on Magnetoelectric Composite at Electromechanical Resonance	542
Yagi Rectenna Application to Increase the Battery Lifetime of Sensor Nodes	545
A Model-free Method for Real-time High Precision Carrier Phase Observation	549
Real-time Processing Technique for Panoramic Infrared Imaging System	553
Monitoring for Resonant Mode of High-way System at Impulsive Impact	558
Examples of Electromagnetic Field Sources in an Indoor Distribution Substation	561
Emission of Smart Meter Electric Fields (50–100 kHz) in Finland	565
Smart Receiver for Multi-antenna Transmitters with Constellation Shaping	568
Impact of Aeronautical Mobile Telemetry System on MFCN SDL Operating Co-channel in Frequency Band 1452–1492 MHz	
The Influence of Atmospheric Radio Refractivity on the WiMAX Signal Level in the Areas of Weak Coverage	
Evaluation of LTE 700 and DVB-T Electromagnetic Compatibility in Adjacent Frequency Bands	585
Möbius Strip with Back-to-back CPW Transmission Line: Simulation and Microwave Characterization	590
Microwave Magnetoelectric Isolator-attenuator Based on Coplanar Line	594
Modeling of Microwave Magnetoelectric Devices	597
Equalization of EDFA Gain Spectrum and Increase of OSNR through Introducing a Hybrid Raman-EDFA Solution	
Beam-footprint Detection for Non-cooperative Spaceborne/Airborne Bistatic SAR	604
Studies of the RF Energy Delivery Mechanism and Its Reformation in the Low Pressure ICP Discharge	609
Single Feed Dualband Miniaturized E-shaped/U-slot Patch Antenna	615
Simulation and Study of the Effects of EM Radiations on Cantilever Beams with RF Functionality \dots	622
Performances Evaluation of a Magnetic Gear with High Transmission Ratio Used for High Speed Applications	
An Efficient Progressive Phase Distribution Consideration of Reflectarray Antennas	632
Problems of Statistical Decisions for Remote Monitoring of the Environment	639
Simulation Evaluation of the IEEE 802.11ac ad-hoc Network for Voice Communication in Emergency Scenario	
Improvement of the Radiated Immunity Test Using a Broadband Signal	650
Study of a Wide-band Strip Line Couplers' Susceptibility Based on the Number of Transmission Lines with Non-uniform Impedances	
Steady-state Analysis of Permanent Magnet Synchronous Machine for Integrated Starter-alternator Applications	658

Prediction of Temperature and Stress in a Multi-stage Depressed Collector under Different Enviornmenta Conditions	
Erbium-doped Fiber Laser with Distributed Feedback from a Fiber Grating Array	666
Conditions for Negative Refraction and Negative Refractive Index in Lossy Media	670
Spatially Dispersive Inhomogeneous Dielectric Wire Media with Periodic Structure	675
Efficient Imaging of Dielectric Targets Based on Contrast Source Inversion Method	681
On Constructing Globally Convergent Algorithms: Applications to GPR and Marine CSEM Sounding	685
Raw Data Generation of Maritime Scenes Using MOCEM V4 and PHYS-IQ V1	690
Prediction of Signal Fadings in Air Radio Communications	695
The Reflectivity of the Ni-Zn Ferrite Tiles in the Microwave Frequency Range	700
Modelling of the Angle of Arrival Scattering Using the Von Mises Function for Compatibility Analysis	705
Influence of the Environment on the Cross-sector Compatibility in Wireless Access System	. 709
Mobile Recorder for Electrical Activity of the Heart	713
Implementation of a Steganographic Algorithm in an Internet VoIP Phone	. 718
Multimedia Filter for Data Hiding Counteraction	. 722
A Dualband Circularly Polarized Rectangular Dielectric Resonator Antenna with L-shaped Slots on the Ground	
Bidirectional Dielectric Resonator Antenna Using Slotted Ground Structure	729
Impact of Bending on the Performance of Circularly Polarized Wearable Antenna	. 732
Design and Optimization of Miniaturized Dual-band Implantable Antenna for MICS and ISM Bands $$.	. 738
A New Approach to Diffraction in Volume Gratings and Holograms	. 742
Regular Coulomb Wave Function Method for Analysis of the Azimuthally Magnetized Circular Ferrite Waveguides	
Undersampling to Regularize the Source Reconstruction Problem for an Electric Point Source \dots	. 754
Cascades of π Circuits Modeled by Independent Matrix Equations for Each Infinitesimal Unit	759
Whistler Modes Guided by Enhanced Density Ducts in a Nonresonant Magnetoplasma	. 766
Hybrid TEM Wave Radiation from a Coaxial Waveguide with a Semi-infinite PEC Outer Cylinder and an Infinite Inner Cylinder Loaded with Partial Impedance	
One Way Speed of Light and Why Nothing Can Be Faster Than Light	. 776
Experimental and Numerical Analyses of Leakage Flux Distribution in Core-type Voltage Transformers	780
Multi-layer Transmission of Spoof Surface Plasmon Polaritons	785
Analysis of EM Shielding Effectiveness of CNT Films Based on TEM Cell Electric and Magnetic Coupling Fields	
Thermal Imaging of RF Induced Heat Loss in a Microwave Metamaterial Absorber	793
Analog Multiplexer with an Improved High Linearity Bootstrapped Switch for Multi-channel Neura Signal Recording	
A 2 GSps 8 bit Folding & Interpolation ADC in 90 nm CMOS Technology	. 802
$10\mathrm{bit}\ 100\mathrm{MS/s}\ \mathrm{SAR}\ \mathrm{ADC}$ with Reduced Loop Delay	. 807
High Speed Pipelined ADC Uses Loading-balanced Architecture	811
A 30-GHz Low Phase Noise LC VCO and Frequency Divider in 90-nm CMOS Technology	816
A 45-GHz CMOS Low-power LNA Using Active Feedback	820
A Varactor-based Tunable Microstrip Band Pass Filter	824
An Optimized Opamp-sharing in 2nd Order $\Delta\Sigma$ Modulator Based on Changing the Stages Output Capacitance Timing Strategy	

A 4MHz-10-GHz, 10-ps/dec Dynamic Comparator Using Negative Resistance Combined with CMOS Input Pair83	1
Binary Mixtures of Chiral Gases	5
A Novel Ka-band Spatial Combiner Amplifier: Global Design and Modeling	0
Formation of One-dimensional Image by Pulsed Light Diffraction on Running Sound Wave84	6
RF Design of Input Cavity Structure of a Low Frequency, High Average Power IOT	0
Polarization Sensitivity Mitigation for AM-CO-OFDMA PON Uplink Transmission	4
Optically Controlled Triple Notched UWB Antenna	8
Multicomponent Rogue Waves	1
F-band Millimeter-wave Signal Generation for Wireless Link Data Transmission Using On-chip Photonic Integrated Dual-wavelength Sources	6
Design and Simulation of Ultra-compact 25-Gbit/s Directly-modulated V-cavity Tunable Laser at 1310-nm Band	0
Self-homodyne Detection in Optical Coherent Transmission Using Extracted Carrier as the Local Oscillator by Saturated SOA	5
THz Oscillations in DNA Monomers, Dimers and Trimers	9
Formation of Caustics by Refraction of Structured Laser Radiation in the Diffusive Layer of Liquid 88	64
Self-organizing And Filamentary Behaviour in Broad-area Lasers	8
Hydrogen and Humidity Sensing Based on WGMs of Elastic Polymer Optical Microresonators 89	12
Electron Beam Detection by Induced Resonance in Cylindrical Cavity	6
Low-loss Millimeter-wave Phase Shifters Based on Mechanical Reconfiguration90	12
Tunable Periodic Deflector Structure Based on Ferroelectric Materials	18
Point-to-point Radio Link Variation at E-band and Its Effect on Antenna Design	3
60 GHz Antenna on Metallic Nanowired Membrane Substrate	8
Analysis of Sampling Grids for Spherical Near-field Antenna Measurements	3
A Dual V-band Push-push VCO Using the 0.18 μm CMOS Process Technology	8
Spatial Power Combiner Technology	2
Using Microwave Radiation for Porcelain Tableware Sintering93	9
Design of Complex Metal-dielectric Diffraction Gratings	4
In Re Electric Switching Sense of Microwave Magnetic Field Rotation near Varactor-loaded Dipole Excited by a Plane Wave	9
Analysis of EMG Waves from a Pulse Source	4
Propagation of Fluorescence Radiation through μ -capillary Holes of Glass Micro-channel Plate95	9
Diffraction by Arbitrary-angled Dielectric Wedges: Closed Form High-Frequency Solutions96	4
Analysis and Design of a Wideband Low Phase Noise LC VCO	8
Adaptive Beam-forming Optimization Based Hybrid PSOGSA Algorithm for Smart Antennas Systems 97	3
Semiconductor Temperature Tunable Metameterial for Terahertz Applications	8
Noise Spectroscopy Tests in the Analysis of Materials and Periodic Material Structures	3
Supercontinuum Generation in a Silicon Nanowire Embedded Photonic Crystal Fiber	9
Dispersion Characteristics of Zinc Oxide Nanorods Organaized in Two-dimensional Uniform Arrays 99	4
Dynamical Evolution of the Laser Linewidth at Switch-on	9
Transmission Properties of THz Silicon Photonic Crystal Fiber	4
Collapse of Nonlinear Terahertz Pulses in <i>n</i> -InSb	9
Resonant Antenna Design Employing Equivalent Circuit Mode	4

Flexible PIFA Antenna Design for Wireless Sensor Networks in Wearable Healthcare Applications $\ldots1017$
Dual-band Printed Antenna for WLAN Applications
Unequal Power Divider Using Series RC Circuit for Improved Isolation
Microwave Amplifier Design for Solid State Radar Transceivers at X-band
THz Generation of Bloch Oscillators from SiC Structures due to Strong Electric Fields
Electromagnetic Emission Analysis of a Multiband EMI Filter Based on Sub-wavelength Resonators $$. 1038
Overhead and Cable Transmission Lines Magnetic Fields: Standardization, Estimation, and Design $\dots 1043$
Electromagnetic Compatibility of Contactless Power Transfer Modeled in FEM Analysis Software 1048
Parallel Imaging Based on Multicore DSP for FMCW SAR
Monitoring of Buoyancy Effects to Structures by Tsunami Water after Heavy Seismic Shocks1058
Monitoring of Orographic Patterns in Relation to Tsunami Earthquake
An Efficient Approach of Lengthening Battery Age and Working Hours through Redistributing Battery
Packs
$ An \ Accurate \ Estimation \ for \ the \ State \ of \ Health \ of \ Lithium-ion \ Batteries \ by \ Using \ Fuzzy \ Logic \ System 1068 $
Estimation of Equivalent Model Parameters for LiFeO 4 Batteries Based on Particle Swarm Optimization
Noncoherent Detection for Multi-hop Amplify-and-forward-based Multi-branch Cooperative Diversity
Systems
A New Design of High-speed Decimal Direct Digital Frequency Synthesizer $\dots 1083$
Coverage Impact for Data Traffic Profiling in WCDMA Networks
A Nyström-based Approach for Solving Time-domain Magnetic Field Integral Equation $\dots 1092$
A Hybrid Scheme for Solving Transient Electromagnetic Problems with Conductors $\dots 1096$
Influences of High Relative Humidity on Extremely Low Frequency Electric Field Measurements $\ldots1100$
Examples of Variation in Measured ELF Electric Fields under $400\mathrm{kV}$ Power Lines
Possible Methods for Limiting Exposure to the Electric Fields of High Voltage Power Lines on Active Implantable Medical Devices in the Human Body
Programmable Fiber-based in-band OSNR Monitoring for Flexgrid Coherent Optical Communication System
Dual Source Railway Vehicles
Design of Slot Plannar Applicator for Local Thermotherapy
Array of Spiral Applicators for Local Thermotherapy
Simulation on Power Handling Enhancement for the Ohmic Contact RF MEMS Switch with Micro-spring Structure
Evaluation of Electromagnetic Interference Emitted from Compact Fluorescent Lamps According to CISPR-15
Analysis of the SMOS, MODIS and GCOM-W1 Data during the Growing Season in the Southern Part of the Western Siberia
A Spread Spectrum Clock Generator Using Discontinuous Modulation Technique for Reduction of Time Interval Errors
Effect of Neutral Grounding Methods on the Earth Fault Characteristics
A Novel Ultrathin CdS/CdTe Solar Cell with Conversion Efficiency of 31.2% for Nano-area Application1152
High Gain Printed Monopole Arrays for Wireless Applications
Technology Advances in GNSS High Precision Positioning Antennas
Travelling Wave Antennas with Semitransparent Surfaces for Forming a Cutoff Pattern
Parametric Analysis and Optimisation of a 8–18 GHz Quad-ridged Horn Antenna
I distinctly the property of the control of the con

Suppression of Light Scattering with ENZ-metamaterials
THz Characterization of ITO Films on p-Si Substrates
Coupled Resonator Mediated Transmission of Light through Sub-wavelength Holes for Multispectral Imaging Applications
MM-wave-to-THz Modulation with Graphene-oxide-silicon Etalon Structures
High Sensitive Ammonia Gas Sensor Based on Graphene Coated Microfiber
High Resolution Demodulation Platform for Large Capacity Hybrid WDM/FDM Microstructures Sensing System Assisted by Tunable FP Filter
Diverging and Converging Beam Diffraction by a Wedge. Part II: Plane Wave Spectral Solutions and Complex Ray Solutions
Phase Behaviour of an Azimuthally Magnetized Two-layered Ferrite-dielectric Circular Waveguide $\dots 1209$
A Nonlinear Boundary Condition for Continuum Models of Biomolecular Electrostatics
Concerning the Circular- and Square-loop Antennas Mounted over a Ground Plane of Finite Extent $$. 1222
Electrical-optical Converter Using Electric-field-coupled Metamaterial Antennas on Electro-optic Modulator
Study of Change in Enzymatic Reaction under Radiowaves/Microwaves on Lactic Acid Dehydrogenase and Catalase at 2.1, 2.3 and 2.6 GHz
Principles and Methods of EMF Safety Maintenance by Individual Protective Means
Experimental Study of Digital Enhanced Cordless Telecommunication Devices Electromagnetic Field Possible Hazard Health Effects
Geographical Distribution of Childhood Acute Leukaemia in the Metropolitan Area of Guadalajara, Mexico and Its Correlation with the Wireless and High Voltage Network
Experimental Assessment of Influence Factors of Body Shadow Effect in Dosimetry Measurements in Indoor Enclosures
A Perturbative Solution to Plane Wave Scattering from a Rough Dielectric Cylinder
Evaluation of the Angular Spectrum of Scattered High Frequency Radio Waves in the Anisotropic Collision Magnetized Ionospheric Plasma
Stochastic Geometry for Electromagnetic Scattering Modeling
A Study of Periodic Multilayered Structure in Fractional Dimension Space and Euclidian Space1268
Electronic Counter-countermeasures in Bistatic Radars
The Nonlinear Fiber-optic Channel: Modeling and Achievable Information Rate
Flex-grid All-optical Interconnect Supporting Transparent Multi-hop Connection in Data Centers1284
The C-method as an Initial Value Problem: Application to Multilayer Gratings
Efficient Numerical Solution for Time-domain Volume Integral Equations
Analysis of EM Emission Characteristics by Arbitrarily Oriented Microstrip Lines Based on TEM Cell Electric and Magnetic Coupling Fields
Algebraic Function Approximation for Eigenvalue Problem in Rectangular Waveguide Partially Filled with Transversely Magnetized Ferrite
The Transmittance of Electromagnetic Waves and Field Correlations in Multilayered Microspheres with Quasi-periodic Structures
Evaluation of Power Transistors Figure of Merit for Hard Switching Commutation Mode through Experimental Analysis
Improvement of Standard EM Fields Distribution in 4-port TEM Cell with Slit-structured Septum1325
A Short Note on the Optimization of Halbach Arrays Used as Magnetic Springs

Propagation of EM Fields through a Rotating Circular Hollow Dielectric Cylinder: Numerical Simulatio in 2Ds	
Rapid High-accuracy Modeling Simulation Method for Full Trajectory of the Ballistic Missile	
Electromagnetic Forces in the Complex-octonion Curved Space	1343
Electromagnetic Force on Charged Objects with the Angular Velocity	1348
Power Spectrum Method for the Processing of the DNA in the Genome Sequencing	1353
Lorentz-like Transformations for the Velocity and Acceleration	. 1357
Realization of a Compact High Speed Mass Storage System	. 1362
Analyzing Five-layer Planar Optical Waveguides with Kerr-type Nonlinear Metamaterial Guiding Films	s1366
Permittivity of Thin Quantum Dot Film with Local Field Effects	1370
New Design of All-optical Flip-flop Device Based on Multimode Interference Photonic Crystal Waveguide	es
Ultrashort Pulse Generation in Tapered Photonic Crystal Fiber at 400 nm	
A Method of ISAR Sequences Quality Assessment for Aerospace Target	
$ \hbox{Compensation for System Distortion Using Low Signal-to-noise-ratio Echo from Spherical Satellite} \ \dots \\$	
Enhanced Efficiency of Second Harmonic Generation with Twelve-fold Photonic Quasi-crystal Fiber i Telecommunication Band	
Few-cycle Pulse Generation Using Solid-core Photonic Quasi-crystal Fiber	1393
Overcoming Bandwidth Limitation of LED by Using Multilevel Differential PAM in VLC $\ldots\ldots$	1397
Compact Waveguide Load with Thin Film Resistor	1402
Channel Equilibration in Wideband Digital Array Radar Test-bed	1406
An Ultra Low-power and Low-noise VCO Using Transformer Coupled Dual LC Tanks Topology $\ \ldots \ \ldots$	1411
A Reconfigurable Bandpass to Bandstop Filter Using PIN Diodes Based on the Square Ring Resonator	r 1415
Power Electronics for an Energy Harvesting Concept Applied to Magnetic Resonance Tomography \dots	. 1419
Fast Time-domain Imaging for One-stationary Bistatic Forward-looking SAR $$	1424
Rapid Echo Simulation for One-stationary Bistatic SAR Based on FFT and Subaperture Processing $% \left(1\right) =\left(1\right) +\left(1$	1429
Shielding and Mitigations of the Magnetic Fields Generated by the Underground Power Cables $ \ldots \ldots$	1436
Occupational Exposure Assessment of Power Frequency Magnetic Field in $154/31.5\mathrm{kV}$ Electric Power Substation in Turkey	
Effect of Renewable Energy Sources to the Stability of the Low Voltage Distribution Networks	1444
Sensor Design and Data Transfer in a Smart Grid	1449
Low-complexity Design of an 8×8 Modulation Configurable K-best MIMO Detector	1453
Analysis and Construction of Static Inverter with Multi-windings Transformer for High Power Voltage Source	
Modelling and Analysis of an Electro-optical System with an Off-quadrature Biased Modulator	1463
Studies on the Photoluminescence of a Novel Europium (III) Complex in Solution	1467
Metamaterial Terahertz Bandpass Filters: A Comparison between Metallic and Graphene-based Structures	
Some Effects of Specific Interest on the Brain of Children with Autism Spectrum Disorder (ASD): Functional Near-infrared Spectroscopy Study	
Broadband Cross Polarization Converter Formed by Twisted F-shaped Chiral Metamaterial	1479
Effect of Frequent Degree of Deceiving on the Prefrontal Cortical Response to Deception: A Functional Near-infrared Spectroscopy (fNIRS) Study	al
Light Moves Macro-objects	

Solar Cells
Spontaneous Formation of Square Optical Vortex Lattice in a Transverse Section of Broad-area Laser 1494
Thin Film Dielectric Gradient Optical Structures for Space Photonics
3-D Microwave Scanner for Biomedical Applications: A Preliminary Prototype
UWB Waveguide Breast Tumor Detection System Based on Delay and Sum Reconstruction Algorithm1506
Axiomatics of the Blondel-Park Transformation
Nonlinear Goubau Line: Numerical Study of TE-polarized Waves
Unified Description of Chirped Gaussian Pulse Propagation of Arbitrary Initial Width in a Multiple Resonance Lorentz Medium
Block LU Preconditioner for the Electric Field Integral Equation
Permittivity Reconstruction of a Diaphragm in a Rectangular Waveguide: Unique Solvability of Benchmark Inverse Problems
The Application of Non-linear Dynamics Methods for Radar Target Identification $\dots 1533$
$\label{thm:confliction} \mbox{ Verification of Computational Model of Transmission Coefficients of Waveguide Filters} \mbox{ 1538}$
Exponential Regularization of EM Dyadic Green's Functions via Green's Function-induced Dirac δ -functions
Superresolution Based on the Methods of Extrapolation
Analysis of Quasi-circular Polarization in Near Field of Smart Shelf RFID Antenna Radiation $\ldots\ldots1552$
Multichannel Filter Banks and Their Implementation Using Computers with a Parallel Structure $\ldots,1557$
Analysis of Multipactor Effect in Parallel-plate and Rectangular Waveguides
Power Line Noise Measurements and Statistical Modelling in the Time Domain $\dots 1569$
Wireless Transmission of Electromagnetic Energy Based on a Time Reversal Approach for Indoor Applications
Use Case Analysis of Wiegand-based Energy Harvester in Mechanical Sensing Devices $\dots \dots 1580$
Tunable and Reconfigurable Frequency Rejection Circular Slot Antenna for UWB Communication Applications
A Triple Band-notched UWB Antenna by Using an Arc-shaped Slot and a U-shaped Resonator Techniques
Design of a High Isolation Dual-band MIMO Antenna for WLAN and WIMAX Applications $\dots 1593$
A Compact Dual Band-notched UWB Band-pass Filter by Using a Stub and a Folded Stepped Impedance Resonator
${\bf Miniaturized~Tag~Antennas~with~Artificial~Magnetic~Conductor~for~UHF~RFID~On\text{-}body~Applications~\bf 1602}$
A Compact VHF Antenna for Smart Meters
A Miniaturized Metamaterial Inspired Hexaband Antenna for GSM, GPS-L1, WLAN and WiMAX Applications
Quad Band Split Koch Snowflake Antenna for LTE/WLAN/WiMAX Applications
${\bf Miniaturized~Multiband~Antenna~with~Modified~Split-ring~Resonator~for~WLAN/WiMAX~Applications {\bf 1623}}$
Research on Dual Bandpass of Wide Stopband Filter with Tunable Center Frequency
Effect of Slow Wave Structures on Scan Angles in Microstrip Leaky-wave Antennas $\dots 1632$
$ \hbox{Directional Emission from Chaotic Microdisk Lasers and the Role of Boundary Imperfections} \ \dots \dots 1637 $
Spherical Microresonators Coated with a High Refractive Index Coating for Different Applications $\dots 1642$
Wave-inspired Corrections for an Efficient Ray-optical Description of Micro-optics Devices $\dots 1647$
Modulation of Nanolaser Output for Information Encoding

Scheme
High Precision Range Measurement Processor Design with Low Complexity for FMCW Radar Systems1662
Dynamic Speckle Laser Technique for the Characterization of Electrotechnical-porcelain
Modeling of Electromagnetic Scattering from Simplified Leaf Structures by Using Spherical Wave Expansion
Behaviour of Conformal Conical Frequency Selective Surfaces
Time Domain Transient Analysis for Ellipsoidal and Hyperbolic Reflector Antennas
A Time Domain Analytic Solution to Predict the Transient Radiation for Phased Periodic Array1685
Local Field Effects for Left-handed Planar Metamaterials
Total Internal Reflection as a Technique for Study of Surface Optical Characteristics of Left-handed Materials
Evaluation of a Buckypaper's Electromagnetic Shielding Efficiency in X Band
$Secondary\ Instabilities\ of\ Steady\ Stationary\ Solution\ in\ Wide-aperture\ Lasers\ with\ Negative\ Detuning\ 1702$
Cerenkov Radiation in Presence of Squeezed Electromagnetic Vacuum
Frequency Characterization of Planar Resonators by THz Josephson Spectroscopy
Dynamical Model of Elastic-plastic Hysteresis in Fullerens Film
Binary Collision with Energetic Ions of Carbon Nanotubes
Applications of Carbon Nanotubs and Other Nanomagnetic Nanowires
Separating the Field Radiated by Two Rectilinear Sources
A Bowtie Antenna Using a Broadband Microstrip to CPS Transition Balun
Two Elements MIMO Antenna for a WLAN System
A Printed Inverted-F MIMO Antenna for WiFi Applications
Design and Analysis of a Phased-MIMIO Array Antenna with Frequency Diversity $\dots 1745$
A Simple Monopole Slot Antenna with High Band-notch Characteristics for Ultra-wideband Communication Applications
Design of Wideband Multi-way Power Divider with the Modified Impedance Transformer $\dots 1756$
Novel Module Including a Waveguide for $40\mathrm{GHz}$ High-gain Amplifier Applications
A Wideband Microstrip Line-to-waveguide Transition on LCP for 70 and $80\mathrm{GHz}$ -band Applications $$. 1764
Coaxial-line Structured SMT Pad for LTCC SiP Applications
InISAR Imaging of Dechirp Data under Squint Model
Moving Radar Target Detection Using an Improved OFDM Chirp Waveform Scheme $\dots 1777$
Methods and Experiments for the Sensing and Evaluation of Ionosphere Changes and Their Impact on the Human Organism $\dots 1782$
The Parameters of a Special High Voltage Function Generator
${\it Measurement of Tissue Cultures of Early Somatic Embryos of Norway spruce } \dots \dots 1792$
Comparison Study of Layered Homogeneous Models with Detailed Human Tissue Models for Throughbody Communications
Analysis on SAR Values of Commercial Mobile Phones
Parameter Identification of PMSM Nonlinear Part
Simulation of Circulation Module
Analysis of Light Absorbance on the Effects of Low Frequency Magnetic Fields on Cell Proliferation $$.1812
An Efficiency of Broadcast Mechanisms Based on Cluster Heads in Dependence on Clustering Algorithm Type
Restoration of Antenna Patterns Using Iterative Method

Wave Packet Propagation of Guided Optical Modes in a Thin Left-handed Film near a Frequency of Zero Power Flux
Mutual Coupling between Parasitic Elements of Split Ring Resonator on Antenna
An Formation Algorithm of the Synthetic Aperture in an Automotive Radar with Use of the MUSIC Algorithm
Bioradar in Study of Low-power Radio Frequency Radiation Influence on Sleep of Laboratory Animals 1839
Resonant Micro-strip Lines Analog to Electromagnetically Induced Transparency
Broadband Slotted Bow-tie Antennas for Terahertz Resonant Tunnelling Diode Based Oscillators $\ldots1847$
Spontaneous Hemodynamic Activity in Prefrontal Cortex of Depression Patients Assessed with Functional Near-infrared Spectroscopy
Strong Absorption in a 2D Materials-based Spiral Nanocavity
Advanced Building Blocks in Thick Silicon on Insulator Technology: Echelle Grating Multiplexers and Reflective Multimode Interference Couplers
Femtosecond Laser Irradiation of Fused Silica with a Nanometric Inhomogeneity $\dots \dots 1870$
Effect of the Rock/Water/Air Interaction on the Complex Dielectric Permittivity and Electromagnetic Waves Attenuation in Water-saturated Sandstones
The Electrical Characteristics of the Rocks with Different Texture
An Inverse Model for Sea Ice Thickness Retrieval Using Simulated Annealing $\dots 1885$
Adaptive Boundary Approach for EMF Exposure Assessment in Broadband Measurements $\dots 1889$
Topographic Effect on the Canopy Reflectance
A Study of Scattering of Scatterers Using Equivalence Principle Algorithm
The Wedding of Bioelectromagnetic and Biochemistry: Bridging a Molecule and Its Own Electromagnetic Information
Oversensing and Undersensing of Implantable Cardiac Medical Devices Exposed to EMI $\ldots\ldots1905$
Performance Evaluation of Dipole versus Modified Bow-Tie in Annular Phased Array Applicators $\ldots1909$
Ensemble Formalism of the Orbital-free Density Functional Theory
Microwave Tomography Technique for Concrete Diagnosis
$Auto-focused\ Imaging\ of\ a\ Moving\ Target\ Using\ an\ Ultra-wideband\ Array\ Radar\ \dots \qquad $
${\bf Microwave\ Imaging\ of\ Dispersive\ Scatterers\ Using\ Vectorial\ Lagrange\ Multipliers\ }{\bf 1926}$
Analysis of Radiation from X-band Slotted-waveguide Antenna Arrays Using the Parallel DDA-FE-BI-MLFMA
Scattering of a Gaussian Beam by an Ellipsoidal Particle with Vectorial Complex Ray Model $\ \dots \ 1937$
${\bf Computation\ of\ Spheroidal\ Micro-organisms\ Cross\ Sections\ Using\ the\ Aperiodic\ Fourier\ Modal\ Method 1942}$
A Couple of Topics in Numerical Analysis of Diffraction by a Metal Grating Using Yasuura's Method of Modal Expansion
Dispersion Characteristic Analysis of Open Cylindrical Waveguide and Its Metalic Closed Model $\ldots.1952$
Research on Ka Rough Ocean Surface Channel Modeling Based on Stochastic Processes $\dots \dots 1958$
New Intuitive Metrics for Diversity Performance Evaluation of Multi-element Antenna Systems $\ldots\ldots1963$
Double Broadband Balun Structure Using CRLH TL for Differential Excitation of Dual-polarized Selfgrounded Bow-tie Antenna
Research on Random Wireless Channel of Radio Indicator for Mariners
Feasibility Study of Emulating Extended Spatial Channel Models in a Multi-probe MIMO OTA Antenna Test Setup
Statistical Physics of Multimode Ordered and Disordered Lasers
Meandering Waveguide Distributed Feedback Lightwave Elements: Phasor Diagram Analysis 1986

Magnetic Storms at High Latitudes and Slips in GPS Operating
Characteristics of HF Radio Waves Propagation along Subauroral and Mid-latitude Paths over Eastern Siberia during Magnetoactive Period in February 2014
Comparative Analysis of Geomagnetic Field and GPS-TEC Variations for Middle-latitude and Arctic Regions
TEC Response to Geomagnetic Storms and Solar Flares as Observed with SBAS L1/L5 Signals $\dots 2004$
Acoustic-gravity Waves in Space Generated by Near-ground and Volume Sources
Adaptation of IRI-2012 Model for Estimation of IAR Harmonic Structure
Comparison of Polar, Sub-polar and Mid-latitude Ionospheric Variability Using Ionosonde and Super-DARN Data
Geomagnetic Effects on GNSS Measurements
Investigation of Nanoantennas Using Surface Integral Equations and the Multilevel Fast Multipole Algorithm
Weigert-effect in the Recording Media on the Base of the Polarization-sensitive Compositions2031
Investigation of the Free-space Propagation Operator Eigenfunctions in the Near-field Diffraction $\ldots2035$
Shielding Effectiveness in Coaxial Cable Connectors in Ultra High Frequency — UHF — 1 GHz to 3 GHz
Optical Method for Investigation of the Parameters of the Thin Film
Patterned Nano Magnetic structures
Design of Double Cladding Photonic Crystal Fibers with Low-loss and Broad Dispersion2051
Investigation on Reflection of Brillouin Dynamic Grating in Single Mode Optical Fibers
Enhanced Femtosecond Optical Pulses Compression in Highly Nonlinear Photonic Crystal Fibers at 850 nm
A Universal Optical Network Unit for Hybrid TDM-PON and WDM-PON Transport Systems 2065
Analogy between the Ising Model and the Polarization Switching of Vertical-cavity Surface-emitting Lasers
Electromagnetic Modeling of Antenna Array Based on Circular Carbon Nanotubes Bundle2074
A Compact Printed Spiral FM Antenna
A Wideband Matching Technique for Polarization Versatile Applications
Design and Implementation of a Planar Slot Antenna for SSR
Design And Analysis of Uniplanar Compact Electromagnetic Bandgap Structures
A Wide Stopband Filter with Source-load Coupling Technique
Analysis and Implementation of a Dual Mode Cavity Band Pass Filter
Propagation of Electromagnetic Waves in Cylindrical Three-layers Waveguide with Metamaterial Layer2107
A Broad-band End Launch Double Ridge Waveguide to Coaxial Transition Using LPDA2110
3D ISAR Imaging of Realistic Target Model Based on General Purpose EM Simulators
A Comparison of SAR Imaging Performance between Matching Filter and Compressed Sensing 2119
Micro-motion Target Detection Based on Wall Envelope Alignment in Through-the-wall Ultra-wideband Radar
Analysis of a Polycarbonate RFID Tag for Blood Chain Tracking
$28\mathrm{GHz}$ Delay Spread Measurement Using a Broadband Channel Sounder in Small Urban City 2132
Minimum Sum Algorithm Decoder for LDPC Nonregular Parity Check Matrix in BPSK System 2136
Asymptotic Analysis of Scattering from Transmitarray for Near Field Focused
Investigation on Rudimentary Geometries of Dielectric Resonator Antenna
Two-sided Inverted F Antenna with LTE, GSM, WLAN, WiMax Frequency Bands for Mobile Phones 2153

Analysis of the Imaging Realization of Frequency Modulated Continuous Wave Circular SAR2158
A New Sidelobe Reduction Method for Circular SAR
${\it Terabit~WSDM~Optical~Access~Network~Using~Multicore~Fibers~and~Advanced~Modulation~Formats~~.~\bf 2168}$
RF Dynamics of Mode-locked Intracavity Frequency Doubled Laser
Photonic Integrated Circuits for Electro-optic Microwave Frequency Multiplication and Frequency Translation: Spurious Harmonics Suppression by Design
Design of a Printed Antenna for Mobile Terminals
A Wideband Circularly Polarized Antenna with Wilkinson Feed Network for Worldwide UHF Band RFID Reader
A Small Printed Antenna for Bluetooth Wireless Communication
${\it Measurement of the Dielectric Properties of Micaceous Minerals Using Scattering Parameters \ \dots \ 2195}$
An Intelligent Platform for Effective Management of Time-consuming Electromagnetic Simulation Problems
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$
$ \ \text{Development of ADI-FDTD Methods with Dispersion-Relation-Preserving Features} \dots \dots \dots 2209 $
A Variational Method to Solve Maxwell's Equations in Singular Axisymmetric Domains with Arbitrary Data
Semi-analytical Modeling of Single Loop Inductive RF Sensors Used to Sense and Locate Inclusions in Dielectric Media
Chaos Control in Virtual Cathode Oscillator by Cathode Structural Optimization $\dots 2225$
Rigorous Optimizations of Three-dimensional Antenna Arrays Using Full-wave Simulations $\dots 2230$
Numerical Modeling of Light/Matter Interaction at the Nanoscale with a High Order Finite Element Type Time-domain Solver
Photonic-based Millimeter Wave Wireless Link
Plasmonic Terahertz Emitters and Detectors for Sensing and Wireless Communications $\dots 2247$
Terahertz-wave Integrated Circuits Based on Photonic Crystals
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Simulation and Design of a Heterogeneously Integrated III-V/Silicon Dual-wavelength Laser $\ldots\ldots2264$
The Optimisation and Analysis of Multi-moded Feed Horn Structures at Terahertz Frequencies $\ldots2268$
Simultaneous Generation of Terahertz and X-ray Radiation with Ultrashort Femtosecond Laser Pulses in Nano-cluster Medium
$Optical\ Frequency-interleaving\ Full-duplex\ Technique\ for\ Fiber-optic\ Transmission\ of\ Millimeter-wave-band\ Frequency-modulated\ Continuous-wave\ Downlink\ Signal\ and\ 10-Gb/s\ On-off-keying\ Uplink\ Signal\ Continuous-wave\ Downlink\ Signal\ Continuous-wave\ Signal\ Continuous-wave\ Signal\ Signal\ Continuous-wave\ Signal\ Signal\ Continuous-wave\ Signal\ Sign$
2D and 3D Modeling of Electro-optic Effect in Whispering Gallery Mode Optical Microresonators2281
Optical FM-CW Signal Generation for a Terahertz Radar System by Higher-order Optical Modulation 2287
Compact 60 GHz Hybrid Integrated Photoreceiver Module with 1.5-µm InAs Quantum Dot SOA 2292
Enhancement of SPR-sensor Sensitivity in Magnetophotonic Plasmonic Heterostructures
A Simulation Based Distributed MIMO Network Optimisation Using Channel Map
Realization of a Flexible Technological Demonstrator for HF Sky-wave Data Links
GPU-accelerated Stochastic-FDTD Study of Lightning-induced EM Fields over Non-deterministic Terrains
On the Limits of Numerical Modelling of Electromagnetic Field Coupling through Small Apertures 2315

Determination of Optimal Pairs of Radii of Dielectric Samples for Complex Permittivity Measurement of Dispersive Materials
On the Possibility of Water Detection under Asphalt Layer Using Microwave Radar System2326
Detection of Discontinuities in the Samples of Changing Sizes with ANN-based Technique
The Scaled Gradient Projection Method: An Application to Nonconvex Optimization
Inverse Source in a Multipath Environment
Design and Analysis of Tunable Photonic Devices Based on the Co-integration of Graphene and Dielectric Waveguides
Dyakonov-like Plasmonic Localized Waves on Graphene Metasurfaces
Analysis of Graphene Plasmonic Waveguides and Switching Components via a Finite Element Formulation with Surface Conductivity
Reconfigurable Antenna Design
A Utility Maximization Approach to MAC Layer Channel Access and Forwarding
Multi Band Metamaterial Based Bowtie Antenna for Wireless Applications
Effect on Lefthandedness from SRR Rotational Disorder
Design and Analysis of Metafractal Antenna for Wireless Applications
Low Power WSN and Cloud Infrastructure for Remote Lake Water Quality Monitoring
Coplanar Waveguide Fed Coplanar Patch Antenna for Nanorectifiers at 2.45 GHz
UWB Antenna with Optically Controlled Notches
Efficient Optical Fiber Coupling to Whispering Gallery Modes of Optically Manipulated Emulsion Microdroplets
Operating Speed Extension of SOA External Modulator Using Microring Resonator
Developing Microwave Photonic Temperature Sensors
Magnetic Field Controlled Microwave Hybrid Oscillations in Composite Resonator Dielectric-weak Ferromagnet
Three Dimensional Ablation Flow Produced by Ultrashort Laser Pulse from Perfectly Flat Target 2413
On Different Regimes of Condensed Matter Ablation Depending on Intensity and Duration of Absorbed Electromagnetic Pulses
Femtosecond Laser Ablation of Thin Films on Substrate
All-laser Fabrication of Metallic Nanoantenna with Planar Lens for Surface Plasmon Polaritons 2427
Two-temperature Heat Conductivity of Gold
Dissipative Magnetorotational Instability: Wavelength Asymptotic Saturation
The Efficiency of a Hydrogen Circuit in a Smart Grid
Advanced Methods of UHF EM Diagnostic of Discharge Activity in High Voltage Transformers Dielectric
Numerical Model and Analysis of a Graphene Periodic Structure
Magnetic Field Shaping with Quasi-Periodic Resonators
Control of Breath Simulator
Golomb Ruler Sequences Optimization for FWM Crosstalk Reduction: Multi-population Hybrid Flower Pollination Algorithm
100-Gb/s Point-to-point Solutions for Long-reach Passive Optical Networks in Sparse Rural and Urban Areas
Numerical Analysis of Artificial Neural Network and Volterra-based Nonlinear Equalizers for Coherent Optical OFDM
Quantum-dot Semiconductor Optical Amplifiers: Novel Technique for Gain Management and Noise Suppression

Parameters Identification of Controlled Systems with Electrical Drives Using Genetic Algorithms	2482
Model of Voltage Source Inverter for Estimation Methods with Observers	2486
Model of Power Electronics Used for Electric Vehicles Contactless Charging	2490
Elimination of Undesirable Transients in Direct Torque Control of Induction Motor	2495
Compensation of Disturbed Load Currents Using Active Power Filter and Generalized Non-active Power Theory	
Combined Magnetic Bearing	2506
Induction Motor Drive Predictive Control Method Analysis and Comparison with Fundamental Dir Torque Control Method	
Electric Vehicle Control Based on GPS and GSM Path Parameters	2514
Railway Traction Vehicle Longitudinal Velocity Estimation by Kalman Filter	2518
Analysis of the Electromagnetic Field of Electric Machines Based on Object-oriented Design Principal	les2522
Locomotive Wheel Speed Measurement under Wheel Slip Conditions	2528
Ionosphere Response to Stratospheric Circulation in High-midlatitudes	2534
The Possibility for Full Profile Incoherent Scatter Data Processing on the Base of the Simplex-proces Algorithm	
Analysis of Speed and Acceleration of GPS/GLONASS Phase in the Polar Ionosphere	2544
Estimation of GPS/GLONASS Differential Code Biases and Their Long-time Variations	2548
Variations of O+/H+ Transition Height over East Siberia from Joint Analysis of Irkutsk Incoher Scatter Data and GPS Total Electron Content	
The Study of the Ionospheric Dynamics during Strong Sudden Stratospheric Warmings in the Russi Arctic Region	
The Stratosphere Jet Stream Effects in High-latitude Ionosphere according to Vertical Radio Sound Data	
Simulation of HF Ground Backscatter Measured by the Ekaterinburg SuperDARN Radar. Comparis with Observations	
Correction of the Ekaterinburg SuperDARN Data Mapping Using Ionospheric Vertical Sounding	2572
Space Weather Variations and Corpuscular Ionization	2576
Arctic Ionosphere Imaging and GNSS Tomography	2580
Identification of Abnormal Blood Cells Using Scattering of a Focused Laser Beam by a Cluster	2585
Waveguide Hyperthermia Applicator with Circular Polarisation	2589
Study of Hot Spots by Oncological Patients with Metal Implants in Head and Neck Region	2593
Novel Microwave Applicators Inspired by Metamaterials for Hyperthermia Treatment of Cancer	2598
Phased Arrays Pre-treatment Evaluation in Antitumoral Hyperthermia	2602
Complex Permittivity Measurement in Hyperthermia Treatment Planning	2608
Feasibility Study of Microwave Interstitial Applicator Array for Treatment Pancreatic Cancer	2613
Design of the Wide-tuning-range Notch Filter with Wide Constant Absolute Bandwidth	2618
Sierpinski Gasket Fractals Implemented as Electromagnetic Band Gap (EBG) Structures on a Multiba Antenna for WLAN/WiMAX Applications	
Improvement in Planar Array Antenna Performance by Using Center-fed Coaxial-to-SIW Transition a UC-EBG Structure for 60 GHz Wireless Communication	
S-band Proximity Coupled Patch Antenna Based on TiN/Ag Multilayer Material	2632
Effect of Complementary Split-ring Resonators on Beam Scanning in the CRLH-leaky Wave Antendased on Split-ring Resonators and Slotline	
A Compact Band Pass Filter with Wide Stop-band in LGA Package by Low-temperature Co-fired Cerar	mic 2639

$\label{thm:local_problem} A\ Compact\ Tunable\ Dual-band\ Bandpass\ Filter\ Using\ Varactor-loaded\ Step-impedance\ Resonators\ \ .$. 2642
Concentric Open End Rings Resonator Filter	. 2646
On the Characteristics of Spoof Surface Plasmons (SSP) in the High Frequency Limit	2651
Investigation the Possibility of Obtaining Spiral Light Beams with Adjustable Parameters	. 2656
Structured Laser Radiation in Optical Inhomogeneous Media Refractography	. 2660
The Effect of Iron Nano-inclusions in Multilayered Integrated Optical Waveguides	. 2665
Various Microbubbles Generation by Light Excited Graphene Oxide Heater	. 2670
A High Survivability Mesh Topology FBG Based Optical Sensing System with SDN Controlling \ldots	. 2675
Determination of the Parameters of Composites with Magnetic Particles from the Study of the Spect of Ferromagnetic Resonance in the Microwave Frequency Range	
Microwave Absorption Properties of Foam Glass Material Modified by Adding Ilmenite Concentrate	. 2684
Significantly Improved Absorption Properties at Microwave Bands for Multi-layer Hexaferrite Thick Fi Composites	
Nonlinear Optical Phenomena in Iron Oxide Containing Magnetic Nanocolloids	. 2692
Effects of Target Reflectivity on the Reflected Laser Pulse for Range Estimation	. 2695
Spatio-temporal Visual Saliency for Adaptive Weather Sensing	2700
A Novel Approach to Counter the Low Observable Characteristic of Stealthy Targets by Analyzing t Radar Cross Section	
Ultra Short and High Voltage Pulse Shaping for Atom Probe Tomography Improvement	. 2709
On the Coneigenvalue Decomposition of Sinclair Matrices	.2714
Current Control of the Matrix Converter Fed Induction Motor Drive	. 2719
Physical Meaning of an Induction Machine Dynamic Model	. 2723
Control Strategy of Grid Connected Converter under Unbalanced Conditions	. 2727
Windowing Effect on Electromagnetic Interference and Efficiency at Using Pulse Width Modulati Techniques	
Analysis of Multi-resonant Circuitin Overloading States	. 2736
${\it Mutual\ Inductance\ of\ Two\ Helical\ Coils-Theory,\ Calculation,\ Verification\}$. 2741
Application of Meta-materials in the Ports of Conveyor Belt Microwave Heating Systems	. 2749
Enhance the Protection Capability of Intentional Electromagnetic Interference with Inductive Gas D charge Tube	
Demonstration of Multi-beam Microwave Heating Based on the Wave Confinement of Hexagonal Photor Crystal Multilayered Cavity	
Design and Implementation of a Reliable Wireless Real-time Home Automation System Based on Ardui Uno Single-board Microcontroller	
Correlation Characteristics for an Event/Sports Center at $3.2\mathrm{GHz}$. 2765
Hidden Markov Models Based Channel Status Prediction for Cognitive Radio Networks	2770
Modified Lowest ID Algorithm for Practical Wireless Clustered Network	. 2774
Using Antenna Diversity to Improve Wake-up Range and Probability	. 2779
Interference Aware Iterative Receiver Performance for the Uplink of LTE-A	2784
Physical Layer Security Scheme Based on Power Efficient Multi-antenna Transmitter	. 2790
Experimental Characterization of In Vivo Radio Channel at MICS and ISM Bands	. 2796
Performance of Ultra-wideband Body-centric Wireless Networks	. 2800
A High-Q Linear CMOS Digitally Controlled Accumulation-mode Varactor Array for Multiband F. Circuits	
A V-band Balanced MMIC Power Amplifier	. 2809

Ultra-wideband Butler Matrix Fed MIMO Antennas	2815
CRLH Waveguide Based Ka-band Beam-steering Leaky-wave Antenna for Radar Application	2820
Aperture Coupled Microstrip Antenna with Three Resonants	2824
Design, Simulation, and Fabrication of Low-cost Inkjet Antennas	2829
Design of Integrated Triple Band Notched for Ultra-wide Band Microstrip Antenna	2834
Pattern Reconfigurable Antenna Using Non-uniform Serpentine Flexure Based RF-MEMS Switches	2840
Compact Band Notched UWB Filter Based on Open-load Stub	2844
Metamaterial Inspired Compact Antenna for UWB and GPS Applications	2848
A Low-profile Wideband RFID Tag Antenna Attached to Metallic Surfaces	2854
A Long Range UHF RFID Tag for Metallic Objects	2858
Measurement of Electromagnetic Activity of Living Cells	2863
Author Index	2868