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**ELECTROMAGNETIC  
WAVES                      PIERL 04**

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**Progress**

**In**

**Electromagnetics**

**Research Letters**

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## CONTENTS

### **DIRECTIVITY OPTIMIZATION IN PLANAR SUB-ARRAYED MONOPULSE ANTENNA**

*P. Rocca, L. Manica, and A. Massa*

1	Introduction .....	1
2	Mathematical Formulation .....	2
3	Numerical Assessment .....	4
4	Conclusions .....	4

### **FRACTAL-LIKE SQUARE LATTICES OF AIR HOLES**

*H. T. Hattori*

1	Introduction .....	9
2	Band Diagrams of Fractal-like Square Lattices of Air Holes (FLSL) .....	10
3	FDTD Simulations of Fractal-like Square Lattices of Air Holes .....	12
4	Conclusions .....	14

### **BROADBAND STACKED U-SLOT MICROSTRIP PATCH ANTENNA**

*J. A. Ansari and R. B. Ram*

1	Introduction .....	17
2	Theoretical Considerations .....	17
3	Calculations and Discussion of Results .....	23
4	Conclusions .....	23

### **COMPACT ULTRA-WIDEBAND BANDPASS FILTER WITH DEFECTED GROUND STRUCTURE**

*M. Shobeyri and M. H. Vadjed Samiei*

1	Introduction .....	25
2	High Pass Filter Design and Simulation .....	25
3	Lowpass Filter Design and Simulation .....	26
4	Conclusions .....	30

**AN ELABORATE FREQUENCY OFFSET ESTIMATION FOR OFDM SYSTEMS***S.-H. Nam, J.-S. Yoon, and H.-K. Song*

1	Introduction . . . . .	33
2	System Model Description . . . . .	34
3	Frequency Offset Estimation . . . . .	35
4	Simulation Results and Discussions . . . . .	36
5	Conclusions . . . . .	39

**SCATTERING OF DIPOLE FIELD BY A PERFECT ELECTROMAGNETIC CONDUCTOR CYLINDER***A. Illahi, M. Afzaal, and Q. A. Naqvi*

1	Introduction . . . . .	43
2	Scattering by a PEMC Cylinder . . . . .	44
3	Application to Scattering Calculations . . . . .	49

**A PRINTED VOLCANO SMOKE ANTENNA FOR UWB AND WLAN COMMUNICATIONS***G.-P. Gao, X.-X. Yang, J.-S. Zhang, and J.-X. Xiao*

1	Introduction . . . . .	55
2	Antenna Structure and Design . . . . .	56
3	Simulation and Measurement . . . . .	58
4	Conclusion . . . . .	60

**A NOVEL CROSS-SLOT GEOMETRY TO IMPROVE IMPEDANCE BANDWIDTH OF MICROSTRIP ANTENNAS***M. Albooyeh, N. Komjani, and M. Shobeyri*

1	Introduction . . . . .	63
2	General Antennas' Configurations . . . . .	64
3	Simulation Results . . . . .	67
4	Conclusions . . . . .	70

**DESIGN METHOD OF THE RING-FOCUS ANTENNA  
WITH A VARIABLE FOCAL DISTANCE FOR FORMING  
AN ELLIPTIC BEAM**

*Lu Z.-Y.*

1	Introduction . . . . .	73
2	The Design Course of the Antenna . . . . .	73
3	Measurement Results . . . . .	78
4	Conclusion . . . . .	79

**WIDEBAND CO-PLANAR MICROSTRIP PATCH  
ANTENNA**

*A. Danideh, R. Sadeghi-Fakhr, and H. R. Hassani*

1	Introduction . . . . .	81
2	Antenna Geometry . . . . .	82
3	Simulation and Measurement Results . . . . .	84
4	Conclusion . . . . .	88

**ANALYSIS OF CO-CHANNEL INTERFERENCE AT  
WAVEGUIDE JOINTS USING MULTIPLE CAVITY  
MODELING TECHNIQUE**

*D. K. Panda, A. Chakraborty, and S. R. Choudhury*

1	Introduction . . . . .	91
2	Formulation of Theory . . . . .	92
3	Evaluation of the Internally Scattered Field . . . . .	94
4	Evaluation of the Cavity Scattered Field . . . . .	94
5	Solving for the Electric Field . . . . .	96
6	Reflection Coefficient and Transmission Coefficient . . . . .	96
7	Numerical Results and Discussion . . . . .	96

**SIMULATION RESEARCH ON TURBO EQUALIZATION  
ALGORITHM BASED ON MICROWAVE FADING  
CHANNEL**

*S. X. Guo, Y. Gao, and L. X. Zhang*

1	Introduction . . . . .	99
2	The Principle of Turbo Equalization . . . . .	100
3	Improved Max-Log-Map Equalization Algorithm Based on the Microwave Channel . . . . .	101
4	Simulation and Analysis . . . . .	104

5	Conclusion .....	105
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### THE QUASI-YAGI ANTENNA SUBARRAY FED BY AN ORTHOGONAL T JUNCTION

*X. C. Zhang, J. G. Liang, and J. W. Xie*

1	Introduction .....	109
2	Configuration of Novel Orthogonal T Junction .....	109
3	$2 \times 2$ Quasi-Yagi Array Fed by Novel Orthogonal T Junction .....	110
4	Conclusion .....	111

### MINIATURIZATION OF WILKINSON POWER DIVIDERS BY USING DEFECTED GROUND STRUCTURES

*H. Oraizi and M. S. Esfahlan*

1	Introduction .....	113
2	Design Procedure .....	114
3	Conclusion .....	118

### INFLUENCE OF TIME AND TEMPERATURE ON RESISTIVITY AND MICROSTRUCTURE OF $\text{Cu}_x\text{Co}_{1-x}\text{Fe}_2\text{O}_4$ MIXED FERRITES

*B. K. Bammannavar, L. R. Naik, R. B. Pujar, and B. K. Chougule*

1	Introduction .....	121
2	Experimental Details: .....	122
3	Results and Discussion: .....	123
4	Conclusion .....	126

### HALF MODE SUBSTRATE INTEGRATED WAVEGUIDE BROADBAND BANDPASS FILTER

*C.-L. Zhong, J. Xu, Z.-Y. Yu, M.-Y. Wang, and J.-H. Li*

1	Introduction .....	131
2	HMSIW Filter Analysis and Design .....	132
3	Experimental Result .....	135
4	Conclusion .....	136



**MEASUREMENT OF RF PCB DIELECTRIC PROPERTIES AND LOSSES***Y.-H. Chou, M.-J. Jeng, Y.-H. Lee, and Y.-G. Jan*

1	Introduction . . . . .	140
2	Quarter-wavelength Open Stub Resonator Measurement Method . . . . .	140
3	Experimental Results and Discussion . . . . .	142
4	Conclusions . . . . .	147

**SIMULTANEOUS SWITCHING NOISE MITIGATION CAPABILITY WITH LOW PARASITIC EFFECT USING APERIODIC HIGH-IMPEDANCE SURFACE STRUCTURE***C.-S. Chang, M.-P. Hwang, D.-B. Lin, K.-C. Hung, and I.-T. Tang*

1	Introduction . . . . .	150
2	Structure Design . . . . .	151
3	Power Integrity and Signal Integrity Performance . . . . .	152
4	Conclusion . . . . .	157

**A NEW METHOD TO AVOID CROWDING PHENOMENON IN EXTRACTING THE PERMITTIVITY OF FERROELECTRIC THIN FILMS***Y. Wu, Z. Tang, Y. Xu, and X. He*

1	Introduction . . . . .	159
2	Theory . . . . .	160
3	Results . . . . .	163
4	Conclusion . . . . .	164

**A NOVEL RADIATION PATTERN AND FREQUENCY RECONFIGURABLE MICROSTRIP ANTENNA ON A THIN SUBSTRATE FOR WIDE-BAND AND WIDE-ANGLE SCANNING APPLICATION***J. Ouyang, F. Yang, S. W. Yang, Z. P. Nie, and Z. Q. Zhao*

1	Introduction . . . . .	167
2	Antenna Structure . . . . .	168
3	Result and Discussion . . . . .	169
4	Conclusion . . . . .	171

**PSO-BASED FAST OPTIMIZATION ALGORITHM FOR BROADBAND ARRAY ANTENNA BY USING THE CUBIC SPLINE INTERPOLATION**

*J.-F. Li, B.-H. Sun, Q.-Z. Liu, and L. Gong*

1	Introduction . . . . .	173
2	PSO Algorithm . . . . .	174
3	Array Antenna Optimization . . . . .	175
4	Cubic Spline Interpolation . . . . .	176
5	Antenna Array Design and Numerical Results . . . . .	178
6	Conclusion . . . . .	179

**COMPARISON OF THE RADIATION PATTERN OF FRACTAL AND CONVENTIONAL LINEAR ARRAY ANTENNA**

*R. T. Hussein and F. J. Jibrael*

1	Introduction . . . . .	183
2	Conventional Linear Array Antenna . . . . .	184
3	Fractal Linear Array Antenna . . . . .	185
4	Computer Simulation Results . . . . .	187
5	Conclusion . . . . .	189

**DESIGN, FABRICATION AND TEST OF PARABOLIC CYLINDER REFLECTOR AND HORN FOR INCREASING THE GAIN OF VLASOV ANTENNA**

*M. Fazaelifar and M. R. Fatorehchy*

1	Introduction . . . . .	191
2	Parabolic Cylinder Reflector . . . . .	193
3	Gain Increase Using Horn . . . . .	197
4	Conclusion . . . . .	202