

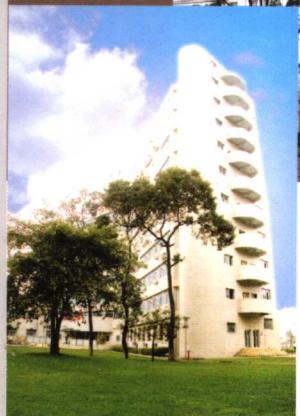


2006 China-Japan Joint Microwave Conference Proceedings

August 23-25
Chengdu, China



晓看红湿处
花重锦官城

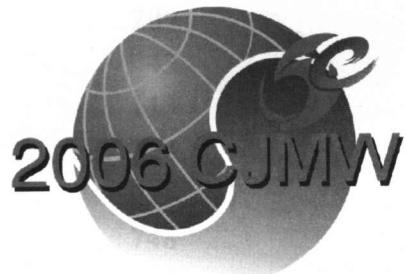


Vol.2



UESTC Press

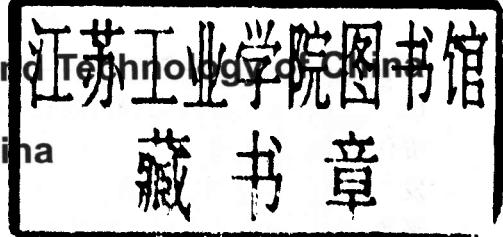
2006 China-Japan
Joint Microwave Conference
Proceedings
Volume.2



Aug 23~25, 2006

University of Electronic Science and Technology of China

Chengdu, China



Proceeding Editors: Ruimin Xu, Shiwen Yang, Qike Chen



UESTC Press

图书在版编目(CIP)数据

2006年中日微波会议论文集/徐锐敏主编. —成都: 电子科技大学出版社, 2006. 7

ISBN 7-81114-164-7

I. 2... II. 徐... III. 微波技术-文集

IV. TN015-53

中国版本图书馆CIP数据核字(2006)第074877号

2006年中日微波会议论文集(卷二)

主编 徐锐敏

副主编 杨仕文 陈其科

出 版: 电子科技大学出版社(成都建设北路三段四号 邮编: 610054)

责任编辑: 黄礼玲

发 行: 新华书店经销

平面设计: 成都领先盛世广告有限公司

印 刷: 四川西南建筑印务有限公司

开 本: 889mm×1194mm 1/16 印张 52(彩插2页) 字数 1265千字

版 次: 2006年8月第一版

印 次: 2006年8月第一次印刷

书 号: ISBN-7-81114-164-7/TN. 10

定 价: 300.00元

■版权所有 侵权必究■

Proceedings of CJMW2006

Volume.1

2006-8-24 PM

Oral Session T1(6 Presentations)

Place:Room A

Active Devices and Circuits I

T1-1	(Invited Paper) New Developments in Space Mapping CAD Technology <i>John W. Bandler, Qingsha S. Cheng (Canada)</i>	1
T1-2	Design of a CMOS Driver Circuit Connected to Transmission Line for High Speed and Low Power Optical Switch <i>H. Kanaya, S. Uehara, S. Nakatsuka, R. K. Pokharel, K. Yoshida(Japan)</i>	5
T1-3	X/Ku-Band Power Amplifier Using 0.15 μm pHEMT and Coplanar Waveguide Microstrip-Line Technologies <i>Chia-Song Wu , Hsien-Chin Chiu, Jun-Nan Wang (Taiwan)</i>	8
T1-4	A Wideband Low Noise Amplifier in 0.35um SiGe <i>Jun Li, Jinling Zhou , Song Ye(China)</i>	13
T1-5	Development of a Single-chip Power Amplifier with Transmission Line Based Input and Output Matching Circuits <i>Haruichi Kanaya, Sangtae Kim, Fuminori Koga, Ramesh K. Pokharel, Keiji Yoshida(Japan)</i>	17
T1-6	Self Bias SRD Based Frequency Multiplier for Satellite based Applications <i>Kamaljeet Singh , R.Ramsubramanian , Surendra Pal(India)</i>	20

2006-8-24 PM

Oral Session T2(6 Presentations)

Place:Room A

Active Devices and Circuits II

T2-1	Recent advances in microwave active components <i>Yijie Qiu (China)</i>	
T2-2	Fabrication and characterartion of 150um total gate periphery 4H-SiC MESFET <i>Chen Gang , Bai Song , Wang Hao , Wang Lin, Zhang Zhen, Jiang YouQuan (China)</i>	23
T2-3	A New Structure of Dual-Frequency Push-Push Oscillator <i>Y. H. Kim , H. J. Kim, J. K. Min, H.S. Yu, H. K. Lee , U. S. Hong(Korea)</i>	26
T2-4	The Design of RF Power Amplifier with Protection to the Load Variation <i>Pou-Tou Sun, Shry-Sann Liao, Po-Hao Chang,Jr-Hua Shiau, Chien-Cheng Lin, Hung-Long Liu(Taiwan)</i>	29
T2-5	A Balanced SAW Oscillator for Short Range Transmitter <i>Jon-Hong Lin, Yao-Huang Kao(Taiwan)</i>	33

T2-6	Accurate Characterization and Digital Predistortion of Wideband RF Power Amplifiers	37
	<i>Taijun Liu, Yan Ye, Slim Boumaiza, Tiefeng Xu(China)</i>	

2006-8-24 PM Oral Session T3(6 Presentations) Place:Room B

Microwave Theory and Techniques I

T3-1	(Invited Paper) Simulation of Electromagnetic Propagation through Nanowire Using the FDTD Techniques	41
	<i>Li Erping(Singapore)</i>	
T3-2	Thin Wave Absorber with Fine Weatherability for ETC	41
	<i>Yu Miura , Kouta Matsumoto , Osamu Okada , Osamu Hashimoto(Japan)</i>	
T3-3	An Idea to Realize Negative-Index Media by G-Chiral Materials	45
	<i>Cheng-Wei Qiu, Hai-Ying Yao, Le-Wei Li , Said Zouhdi(Singapore)</i>	
T3-4	Development Of 50MW S-Band Klystron In IECAS	49
	<i>WANG Yong, XIE Jing-xin , DING Yao-gen, LIU Pu-kun(China)</i>	
T3-5	Calculation of Propagation Eigenmode for Stripline based on Lateral Equivalent Network	51
	<i>Kai Ding, Akira Hirota, Takaharu Hiraoka, Jui-Pang Hsu(Japan)</i>	
T3-6	Analysis On Complex PFL Discharging Process Based On Traveling Wave Propagation Method	55
	<i>Xu Jianjun, Xiao Kaiqi, Liao Cheng(China)</i>	

2006-8-24 PM Oral Session T4(6 Presentations) Place:Room B

Microwave Theory and Techniques II

T4-1	Semi-vectorial Beam Propagation Method for Calculating Wave Propagation Properties of Multilayer Dielectric Waveguide	58
	<i>Ryosuke Tatsumi, Chun-Ping Chen, Tetsuo Anada, Zhewang Ma(Japan)</i>	
T4-2	94GHz Measure System for Smoke Screen Loss	62
	<i>S.S.Peng, G.F.Zhao, X. H. Yin, Z. C. Xu(China)</i>	
T4-3	Optical Propagation in Photonic Crystal Waveguides beyond Cutoffs	66
	<i>Dan Zhang , Kiyotoshi Yasumoto, Hongting Jia(Japan)</i>	
T4-4	Guiding Modes of Two-Dimensional Photonic Crystal Waveguides with a Defect Chain	70
	<i>Hongting Jia , Kiyotoshi Yasumoto(Japan)</i>	
T4-5	Ultra-fast Calculation of Resonator Coupling Based on Evanescent Field Integral in Time Domain	74
	<i>Ikuro Awai , Tetsuya Ishida(Japan)</i>	

T4-6	A Single Field-Based Equivalent Circuit for Stripline Discontinuities and Its Applications	78
	<i>Cheng Lu, Wanchun Tang, Puke Zhou(China)</i>	

2006-8-24 PM

Oral Session T5(6 Presentations)

Place:Room C

Microwave Antennas I

T5-1	Parallel Computing of Fast MoM Calculation for Antenna Design by Non-heuristic Algorithm	82
	<i>Ken Takei , Morihiko Ikegaya(Japan)</i>	
T5-2	Accurate Prediction of Pattern of Antenna in Complex Environments	86
	<i>Hu Jun, Lei Lin, Nie Zaiping , Wang Jun(China)</i>	
	Flexible Monopole Antenna for Mobile Phone Co-Design and 3D Far-Field	
T5-3	Antenna Scanning Technique Apply to Total Radiation Efficiency and Mean Effective Gain Measurement	89
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	
T5-4	Study on the Pattern Synthesis of Antenna Array Using Genetic Algorithm	93
	<i>Jiang Tiehua, Su Donglin, Wang Guoyu, Xiao Haifeng(China)</i>	
T5-5	Characteristics analysis of antennas with metal cases for lunar radio telescope	96
	<i>Gong Liyuan , Chen Zhiyu(China)</i>	
T5-6	Monopulse Radial Line Slot Array Antenna At Millimeter Wavelengths	99
	<i>L. Z. You, W.B. Dou(China)</i>	

2006-8-24 PM

Oral Session T6(6 Presentations)

Place:Room C

Microwave Antennas II

T6-1	Small-Sized Traveling-Wave Antenna Eached on Heavily-High Permittivity Substrate	103
	<i>Futoshi Kuroki , Yu-suke Takigawa , Shinya Kashihara(Japan)</i>	
T6-2	Research on the Transient Scattering Properties of Dipole Array	107
	<i>Xueqin Zhang , Junhong Wang , Zengrui Li(China)</i>	
T6-3	Semi-Minkowski fractal monopole antenna	111
	<i>Mingmei Chen, Binjie Hu(China)</i>	
T6-4	Research on the Multiple-beam dielectric lens antenna system	113
	<i>Jinghui Qiu, Ying Suo, Wei Li , Xiaohang Xing(China)</i>	
T6-5	An EBG Structure for Square Patch Micro-strip Antenna	117
	<i>Han Guo-dong, Gu Chang-qing(China)</i>	
T6-6	The Time-Domain Computation Scheme in the Planar Near-Field Measurement	120
	<i>Jin Cheng, Zhenghui Xue, Benqing Gao, Nan Wang, Ruixiang Liu(China)</i>	

2006-8-24 PM	Poster Session P1(45 Presentations)	Place:Room D
13:30~17:50		
P1-1	Voltage Controlled Oscillator tuned with a CPW line	123
	<i>H. J. Kim, J. K. Min, Y. H. Kim, H.S. Yu, H. K. Lee , U. S. Hong(Korea)</i>	
P1-2	An Improved Fast and Accurate Synthesis Method of the Triplet Filters with Transmission Zeros	125
	<i>Mingzhou. Zhan, Ruimin. Xu(China)</i>	
P1-3	Modulate the center frequency of Hair-Pin bandpass filter	129
	<i>Shao Changchun, Wangling, Tang xiaohong(China)</i>	
P1-4	The Stop-band Characteristics of Microstrip Lines Based on Complementary Split Ring Resonators	132
	<i>Sheng Zhang, Min Wang, Jian-Kang Xiao, Ying Li(China)</i>	
P1-5	Design of Wide Bandwidth Parallel-coupled Microstrip Filters	136
	<i>Shui LanYing Xu RuiMin, ,Zhang Yong(China)</i>	
P1-6	Design of Coaxial Bandpass Filters Using Stepped Impedance Resonators	139
	<i>Tao Lin, XiLiang Wang, ShiHu Han(China)</i>	
P1-7	Simulations of Multi-stage Depressed Collector for Gyrotron	143
	<i>WANG Li, Li Hongfu(China)</i>	
P1-8	Radial-line Stubs Lowpass Filter Optimized Design	146
	<i>Zhao Quanming, Teng Jianfu, Zhou Guofei, Guan Xin, Li Qiang(China)</i>	
P1-9	Rectangle Waveguide Filter With Out-off-band Extracted Poles	150
	<i>Zhang lei, Yang kai(China)</i>	
P1-10	The calculation methods of the forward bias equivalent resistance of PIN diodes	152
	<i>Song Kaijun, Fan Yong, Zhang Yonghong(China)</i>	
P1-11	The Laminating Tunable Notch Filter with Single Split Ring Resonator	155
	<i>Xiao Yongxuan , Wang Yazhou, Su Donglin(China)</i>	
P1-12	Analysis and Design of High-selective Generalized Chebyshev Coaxial Comline Filters	158
	<i>Zi-ang Liu, Xiliang Wang(China)</i>	
P1-13	Compact Microstrip Dual-Mode Ring Resonator Wideband Bandpass Filter with Reduced Return Loss and Widened Stopbands	162
	<i>Peng Cai, Zhewang Ma, Xuehui Guan, Guoxin Zheng(China)</i>	
P1-14	1-D PBG Coplanar Waveguide	166
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	
P1-15	Quasi-ideal Multilayer Directional Coupler and it's Artificial Neural Network Model	169
	<i>Yuxia Xin,Bing-Zhong Wang,Jun He, Qingqiang He(China)</i>	
P1-16	Broadband Metal Waveguide to Substrate Integrated Waveguide Transition	173

Lei Xia, Ruimin Xu, Bo Yan(China)

P1-17	Accurate Design Methods of Microwave Comb-Line Band-Pass Filters	175
	<i>DENG Xianjin YANG Yonghui, XIAO Shiwei, LI Jiayin(China)</i>	
P1-18	New Design Method of Cavity Band-stop Filters	178
	<i>Zhaner He , Xiliang Wang , Shihu Han(China)</i>	
P1-19	Analysis and Design of a Ka Band Ridged Waveguide	182
	<i>Liping Zhao, Ruimin Xu(China)</i>	
P1-20	Improved Slotted-Waveguide Spatial Array Power divider/combiner	186
	<i>Zhao chenxi, Xu ruiming, Xie xiaoqiang(China)</i>	
P1-21	The experimental investigation of a Ka-band 0/π phase shifter	190
	<i>Wang Yi Jie, Yang Kai(China)</i>	
P1-22	HTS Filter Design for the Modern Communication System	193
	<i>Zhang tao , Yang kai(China)</i>	
P1-23	Integrated Microwave Filters and Applications of CAD Technology	195
	<i>Liu Bojiang , Zeng Bing, Tan Pu(China)</i>	
P1-24	Cross-Coupled Bandpass Filter Design Using Miniaturized Hairpin Resonators	198
	<i>Rui-Jie Mao, Deng-Xue Liu, Xiao-Hong Tang(China)</i>	
P1-25	Design of Frequency Synthesizer with Frequency-hopping Regulation Controlled Based on AD9858	202
	<i>He Jun-Cen , Tang, Xiao-Hong(China)</i>	
P1-26	An optimization approach of W-band IMPATT oscillator design	205
	<i>Wu Tao,Tang Xiaohong(China)</i>	
P1-27	Effect of PAPR on Performance of Power Amplifiers	209
	<i>Guo Wei, Jing-Fu Bao , Song-Bo He (China)</i>	
P1-28	Design of Wide Band Frequency Synthesizer in Frequency Hopping Source	212
	<i>Liu Hong, Bao Jingfu, He Songbai, Xu Wei(China)</i>	
P1-29	A Comparison of CMOS and BJT LNA for WLAN application	216
	<i>Wei Yanfeng , Tang Guang , Han Lei(China)</i>	
P1-30	Technology Analysis of Sigma-Delta Modulation in Fractional Frequency Synthesizer	220
	<i>Xiao-Yan Tang , Song-Bo He, Jing-Fu Bao , You Fei(China)</i>	
P1-31	Design of Microwave Linear Power Amplifier	223
	<i>Y.Q.Wu, Z.X.Tang, B.Zhang, J.W. .Xu(China)</i>	
P1-32	A Design of PLL Signal Generator with 4.6GHz Output	226
	<i>Pin Zhang, Yuan-ci Gao , Jing-fu Bao(China)</i>	
P1-33	A Rapidly Convergent Hybrid method-JMRES+RPFMA for Analysis of Three-Dimensional Electrically Large Complex Cavity	230
	<i>Luowei , Gao zhenping(China)</i>	

P1-34	Microwave PLL Phase Noise Analysis and Its Optimal Design	234
	<i>Ke-Ji Zhou, Xiao-Hong Tang, Fei Xiao(China)</i>	
P1-35	An Analysis of DDS Spurs	238
	<i>Xu Wei, Bao Jingfu, He Songbai, Liu Hong(China)</i>	
P1-36	The Design of a Ka-band Doppler Speedometer's Front-end	241
	<i>Li Liang, Tang Xiao Hong(China)</i>	
P1-37	L Band Cryogenic Low Noise Amplifier	244
	<i>Dekuan He, Zhengxiang Luo, Kai Yang, Shirong Bu(China)</i>	
P1-38	The Research and Realization on System of Microwave Real-Time Monitoring Water Pollution	248
	<i>Liqun Zhao, Tang pu , Xiaohua Li(China)</i>	
P1-39	An Equivalent Circuit Model For X-Band Capacitors in LTCC	252
	<i>Zeng Yong, Xu Ruimin, Yan Bo(China)</i>	
P1-40	Design RF MEMS SWITCH for Power Applications	255
	<i>Zhou Tao(China)</i>	
P1-41	A 0.18um CMOS 2.4GHz VCO for 802.11g	258
	<i>SHEN Hua,SU Jian-kun,LV Xin(China)</i>	
P1-42	A Novel Broadband LTCC Waveguide to Microstrip Transition for Millimeter-Wave Applications	261
	<i>Kai Zhang, Lei Xia, Bo Yan, Ruimin Xu(China)</i>	
P1-43	Physical Modelling of the Spiral Inductors on GaAs	265
	<i>Lei Wang, Rui-Min Xu(China)</i>	
P1-44	Consideration of Noise for Efficient Energy Design of Deep Submicron VLSI Chips	269
	<i>WANG Jun, XUE Yong(China)</i>	
P1-45	A New Extraction Method for the Parasitic Parameters of SiC MESFET	273
	<i>Yuehang Xu, Ruimin Xu, Bo Yan, Lei Wang, Hongliang Zhang(China)</i>	

2006-8-25 AM

Oral Session F1(6 Presentations)

Place:Room A

Passive Devices and Circuits I

F1-1	(Invited Paper) Spiral (Chiral) Interconnects and Their Applications in RF(MM)ICs	
	<i>Wen-Yan Yin(China)</i>	
F1-2	Signal Simulation of a Passive Millimeter Wave Detector	276
	<i>S.S. Peng , L.Wu, J.Z. Yu(China)</i>	
F1-3	Broadside Coupled-Line Balun	279
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	

F1-4	The Study of a New Multiple-Frequency Millimeter Diplexer <i>Yuemin Ning(China)</i>	283
F1-5	Eigenmode Analysis of Photonic Bandgap Waveguides Formed by Rectangular Cylinders <i>Koki Watanabe(Japan)</i>	287
F1-6	Investigation on Substrate-Integrated Rectangular Waveguide Short-Circuit Load and Equivalent Rectangular Waveguide Short-Circuit Load <i>Lei Xu, Wenquan Che, Liang Geng, Dapeng Wang, Kuan Deng(China)</i>	291

2006-8-25 AM

Oral Session F2(7 Presentations)

Place:Room A

Passive Devices and Circuits II

F2-1	Ultra-wideband (UWB) Bandpass Filter Using Shunt Stub with Lumped Capacitor <i>Yasuhisa Yamamoto, Keren Li, Osamu Hashimoto(Japan)</i>	294
F2-2	Broadband Traveling-Wave Power Divider/Combiner with Isolated Branch Port Pairs <i>Minoru Sanagi, Keisuke Tanaka, Kazuhiro Fujimori, Shigeji Nogi(Japan)</i>	298
F2-3	Design of Parallel-Plate Coupled-Line Balun for Silicon RF Integrated Circuits <i>Zhou Tao(China)</i>	302
F2-4	NRD Guide Detector Using Vertical Strip Transmission Line at 60 GHz <i>Futoshi Kuroki , Yu-suke Murata , Ryo-ta Masumoto , Tsukasa Yoneyama(Japan)</i>	306
F2-5	The design of a Low-Cost Post Waveguide Filter at 35GHz <i>Qingyuan Wang,Kexing Xu(China)</i>	310
F2-6	A 2.5 Octave Bandwidth Microstrip Power Divider <i>Zhuanhong Jia, Qinglin Zhu, Faliang Ao(China)</i>	313
F2-7	Electromagnetic Field Properties Simulation For Cassinian Curve Wave Guide <i>Zhanxian Xu, Weigan Lin(China)</i>	318

2006-8-25 AM

Oral Session F3(6 Presentations)

Place:Room B

Computational Electromagnetics I

F3-1	Extrapolated Absorbing Boundary Condition for FDTD Analysis <i>Xuefeng LI,Hiroshi MAEDA,Kazunori UCHIDA(Japan)</i>	321
F3-2	Study of Scattering from Body of Revolution using FEM-PML <i>Zhang Hua, Deng Yun, Xu Jiadong(China)</i>	325
F3-3	Analysis of Large 2D Radomes Using Hybrid PO-BI-FEM Method <i>H. F. Meng , W. B. Dou(China)</i>	329

F3-4	An Efficient Multigrid Solver for Fast Hierarchical TVFEM Analysis	333
	<i>X.W. Ping, R.S. Chen(China)</i>	
F3-5	Electromagnetic Scattering by Buried Objects: A Study Using the FDTD Method	337
	<i>X. Y. Zhang, X. Q. Sheng(China)</i>	
F3-6	A Novel Variable Step Size Method for the Nonuniform FDTD Method	340
	<i>ZHENG Yang-ming, CHEN Zhi-hui, CHU Qing-xin(China)</i>	

2006-8-25 AM

Oral Session F4(6 Presentations)

Place:Room B

Computational Electromagnetics II

F4-1	A Bi-directional Antenna Mounted on Ceiling for 2.4GHz WLAN applications	343
	<i>Zhen Qi Kuai, Wei Hong, Jian Yi Zhou, Jia Ning Zhao(China)</i>	
F4-2	The Research of FEM PML Method with Mixed Order Hierarchical Vector Base Function for 3D Radiation Problems	345
	<i>Feng Nian, Lezhu Zhou, Mingyao Xia, Shuo Dong(China)</i>	
F4-3	Multidomain Pseudospectral Time Domain Based On Unstructured Nodal Elements	349
	<i>Yan Shi, Chang-Hong Liang(China)</i>	
F4-4	Transient Electromagnetic Scattering by Bodies of Arbitrary Shape with Anisotropic Surface Impedance Boundary Conditions	352
	<i>Xiao Dongshan, Yuan Fei, He Siyuan, Zhu Guoqiang(China)</i>	
F4-5	Large-Scale Simulations of Scattering by Objects Buried in Lossy Media Using the MPSTD Algorithm	356
	<i>Yang Hu, Jiang Yongjin, Mao Junjie(China)</i>	
F4-6	Accurate Calculation of TD-EFIE Impedance Matrix Elements	360
	<i>Dong-Ming Zhou, Ming-Juan Cai, Feng Liu, Meng Ren, Jian-Guo He (China)</i>	

2006-8-25 AM

Oral Session F5(6 Presentations)

Place:Room C

Scattering and Propagation I

F5-1	Analysis of Dead Zone in RFID System	363
	<i>Mitsuo Taguchi, Hiroyuki Mizuno(Japan)</i>	
F5-2	Accurate Analysis of Dielectric Loaded Rectangular Waveguides by 2D-FDTD Method	367
	<i>Yavuz Erol, Hasan H. BALIK(Turkey)</i>	
F5-3	A New Partitioning Algorithm for Electromagnetic Scattering and Its Monte Carlo Simulation	371
	<i>Yuemin Ning, Hongbo Zou(China)</i>	

F5-4	An Effective Scattering Analysis for Conducting Bodies at the Interior Resonances	375
	<i>Yunfeng Zhang, Wei CAO(China)</i>	
F5-5	Study on the Chaotic Characteristic of Sea clutter	379
	<i>Guo Lixin, Guo Hua, Wang Yunhua(China)</i>	
F5-6	Parallel AWE Technique for the Electrically Large Objects Scattering	383
	<i>Liu Xueguan, Cai Wenfeng, Guo Huiping(China)</i>	

2006-8-25 AM

Oral Session F6(6 Presentations)

Place:Room C

Scattering and Propagation II

F6-1	Electromagnetic Scattering from Doubly Periodic Rectangular Gratings	386
	<i>Vladimir Yachin , Kiyotoshi Yasumoto , Shuji Taguchi(Japan)</i>	
F6-2	Scattering of Arbitrary Targets using Multiresolution Time Domain Scheme	390
	<i>Qunsheng Cao(China)</i>	
F6-3	Ribbon Integral of Physical Optics for the Ruled Trimmed NURBS Surfaces	393
	<i>Chao Wang, HongCheng Yin , PeiKang Huang(China)</i>	
F6-4	A Nonorthogonal ADI-FDTD Algorithm for Solving Two Dimensional Scattering	397
	<i>H. X. Zheng(China)</i>	
F6-5	The Scattering from Ships on Rough Half-Space Interface excited by a plane wave	401
	<i>Le Xu, Yongjun Xie, Xiaowei Shi(China)</i>	
F6-6	The absorb of electromagnetic wave on Active Periodical Structure's surface	405
	<i>Yan Zhou, Donglin Su(China)</i>	

Volume.2

2006-8-25 AM	Poster Session P2(42 Presentations)	Place:Room D
8:00~12:00		
P2-1	On The Design and Development of Feed Network For 4×4 Array Antenna	408
	<i>Maisarah Abu , Zainol Abidin(Malaysia)</i>	
P2-2	Monopole Antenna Design and Study of Different Ground Plane Effect for Radiation Restriction Issues	412
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	
P2-3	Manufacture, Design, Measurement and FPC Antennas Integration for PDA Phone	416
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	

P2-4	Optimum Design of Yagi-Uda Antennas using DPGA Combined with FDTD	420
	<i>Fei Shang , Jin Cheng , Zhenghui Xue(China)</i>	
P2-5	Particle Swarm Optimization Based Algorithm for Vehicular Antenna Position Design	425
	<i>Gao Yinhan , Chang Xin , Liu Feng , Xie Jun , Wei Mingrui(China)</i>	
P2-6	A Tri-band PIFA Antenna for Mobile Handset Application	429
	<i>Lin Wang , Bing-Zhong Wang(China)</i>	
P2-7	Study on Broadband Microstrip Antenna	432
	<i>Qiu Jinghui , Sun Bo , Deng Hao(China)</i>	
P2-8	Design of A Single-Feed Annular-Ring Microstrip Antenna for Circular Polarization	435
	<i>Wang Yazhou , Han Yuan , Xiao , Yongxuan , Su Donglin(China)</i>	
P2-9	Analysis of Mutual Coupling Effects in Finite Triangular-Grid Phased Arrays	438
	<i>Xin Li , Jian Wang , Chaoran Wang(China)</i>	
P2-10	Wideband CPW-fed Y-shaped and triangle slotted monopole antenna	442
	<i>Yuanzhu Liu, Zhiyuan Yu , Qi Wang(China)</i>	
P2-11	Frequency Reconfigurable CPW-Fed Coplanar Dipole Antenna	446
	<i>Zhong-Liang Yin , Bing-Zhong Wang , Qing-Qiang He , Jun He(China)</i>	
P2-12	A new remote calibration method based on CCE algorithm and REV method	449
	<i>Fang Min , Zhang Yong-hong , He Zong-rui, Fan Yong(China)</i>	
P2-13	Phase-Shifting Performance of Different Elements in Microstrip Reflectarrays	453
	<i>Hua Li, Bing-Zhong Wang, , Yun-Xiu Wang, De-Shuang Zhao(China)</i>	
P2-14	Smart Antenna Technology for Wireless Communication	455
	<i>Liming Zheng , (China)</i>	
P2-15	Analysis of the HF Four-line Phased-array Antenna	461
	<i>Sun zhanjun , Luo xiaowu , Xin qi(China)</i>	
P2-16	Null Well Analysis in Phased Array Antennas by Simulation Post Treatment Method	465
	<i>WANG Chao-ran , WANG Jian, Li Xin(China)</i>	
P2-17	Research on Parallel Simulation Algorithm of Reconfigurable Antenna System	469
	<i>Yu Feiqun , Luo Xiaowu , Xin Qi(China)</i>	
P2-18	Beam forming of an antenna used in low orbit satellite communications	473
	<i>YANG Fang , Zhang Peng , GUO Chen Jiang , XU Jia Dong(China)</i>	
P2-19	A Switched Parasitic Yagi-Uda Antenna Used for MIMO Base Station	476
	<i>Yan Cheng, Zaiping Nie(China)</i>	
P2-20	Analysis and Design of a Wideband Double-Ring-Slot Antenna with a finite ground	480
	<i>Lu Qing , Xu Xiaowen , Li Yong(China)</i>	

P2-21	A Novel 5.8GHz Rectenna for Microwave Power Transmission <i>Hu Hao, Kong Li(China)</i>	484
P2-22	The Comparison Between Group Path and Phase Path of High Frequency Ray Propagating in Ionosphere <i>Yanhui Liu, Zaiping Nie, Shiwen Yang(China)</i>	487
P2-23	A Simple Method to Analyze the Propagation of Electromagnetic Wave in Rectangular Coal Mine Tunnel <i>SUN Ji-ping, ZHANG Hong-wei(China)</i>	490
P2-24	Accurate Calculation of Impedance Matrix Elements in Analyzing Transient Scattering of Dielectric Bodies <i>Mingjuan Cai, Dongming Zhou, Feng Liu, Meng Ren, Jianguo He(China)</i>	493
P2-25	Analysis of Scattering by a Flat Plate Using Sub-Entire-Domain Function Method <i>Ping Du , Bing-Zhong Wang(China)</i>	495
P2-26	The Study of Active Periodical Structure's Reducing the Surface's RCS <i>Yan Zhou, Donglin Su(China)</i>	499
P2-27	Modeling of Rain Attenuation of Microwave Propagation in the Atmosphere <i>Zhuanhong Jia, Qinglin Zhu, Faliang Ao(China)</i>	502
P2-28	Effects of EM Radiation Power on Similar Phantom <i>Sheng-Yi Huang , Jwo-Shiun Sun , Shuang-Yuan Chen(Taiwan)</i>	506
P2-29	A Task Scheduling Method in Grid Computing Based on Genetic Simulated Annealing Algorithm <i>Wanneng Shu, Shijue Zheng, Xiong Wang(China)</i>	510
P2-30	An Unconditionally Stable Compact Method for Exact Attenuation Constants Extraction <i>Wei Shao, Bing-Zhong Wang, Xiao-Hua Wang(China)</i>	516
P2-31	Study of the Stability and Numerical Dispersion of Separable Backward-Central Finite Difference Time Domain Method <i>Sheng-Jian Lai, Bing-Zhong Wang, Jing Xue(China)</i>	520
P2-32	Higher Order Hierarchical Vector Basis Functions Used in the Frequency Domain <i>Y. Ren, Yanwen Zhao, Zaiping Nie(China)</i>	523
P2-33	A Compact 2-D Marching-on-in-order Scheme for Exact Attenuation Constant Extraction of Lossy Transmission Lines <i>Xiaofei Liu, Bing-Zhong Wang, Wei Shao(China)</i>	527
P2-34	Design philosophy for Neural Networks with SET <i>Xuejun Chen,CongLi Pan(China)</i>	530
P2-35	Investigation of the accuracy of CFIE based on three different basis functions <i>ZHAO Huapeng, HU JUN, NIE Zaiping, LIN YUN(China)</i>	533

P2-36	Application of SSOR Preconditioning Technique in TDFEM for 2-D Computational Electromagnetics	536
	<i>Xiaoxiang He , Meilin Liu , Shaobin Liu , Yonggang Zhou(China)</i>	
P2-37	Object-Oriented Design for Electromagnetic Simulation Software Base On Finite-Difference Time-Domain Method	539
	<i>Jing Xue, Bing-Zhong Wang , Sheng-Jian Lai(China)</i>	
P2-38	A fourth-order accurate low-dispersive and low-dissipative EMS-FDTD method with relaxed stability limit	542
	<i>Fei Xiao, Xiaohong Tang, Ling Wang(China)</i>	
P2-39	Discontinuous Galerkin Method Based On the Hybrid Domains	545
	<i>Yan Shi , Chang-Hong Liang(China)</i>	
P2-40	Efficient Analysis of Electromagnetic Devices With Hierarchical Vector Finite Elements	548
	<i>X.W. Ping, R.S. Chen(China)</i>	
P2-41	The Design of Convergent Pierce Guns Based on Artificial Neural Network	554
	<i>Chiru Yang, Baofu Jia, Zhaojun Zhu(China)</i>	
P2-42	Thermal Response of GaAs MESFET under the Radiation of High Power Electromagnetic Pulses	558
	<i>Zhang Han-qiao, Huang Ka-ma(China)</i>	

2006-8-25 PM

Oral Session F7(6 Presentations)

Place:Room A

Radar and Communications I

F7-1	A Prototype UWB System Supporting Both Low-rate Communications and High Precision Ranging	562
	<i>Huan-Bang Li, Iwao Nishiyama, Kenichi Takizawa, Ryuji Kohno(Japan)</i>	
F7-2	An Integrated Gaussian Modulated Pulse Generator for Ultra-wideband Wireless Localization System	566
	<i>Xi Fan, Prabir Kumar Datta ,Gunter Fischer(Germany)</i>	
F7-3	A Novel Ultra-Wideband Pulse Waveform	570
	<i>Liu-Lei Zhou, Hong-bo Zhu(China)</i>	
F7-4	An Integrated Power Control Algorithm in WCDMA	574
	<i>Deng Yun, Zhang Hua, Zeng Yuan, Xu Jiadong(China)</i>	
F7-5	Design of a Doherty Amplifier with Digital Predistortion for WCDMA Base Station	577
	<i>Hao Huang, Zhenghe Feng(China)</i>	
F7-6	Performance Analysis and Comparison of Different Modulation Schemes for UWB Systems in the Presence of Multiple-Access Interference	581
	<i>Qinglin Zhu, Chuanyun Zou, Zhuanhong Jia(China)</i>	

2006-8-25 PM	Oral Session F8(6 Presentations)	Place:Room A
--------------	---	--------------

Radar and Communications II

F8-1	A Novel Method to Investigate Ground Feature Blockage using GPS Receivers as Microwave Sensors on Distributed Vehicles	586
	<i>Masato Takahashi(Japan)</i>	
F8-2	Footprint Analysis of High Altitude Platforms Cellular Communications	590
	<i>Moawad Dessouky, Hamdy Sharshar, Yasser Albagory(Egypt)</i>	
F8-3	Time-Frequency Analysis of SAR Target Characteristics	595
	<i>Xiao Wei, HongCheng Yin(China)</i>	
F8-4	SAR Imaging Simulation Based on Electromagnetic Model	598
	<i>K.Y. Guo, X. Q. Sheng, X. M. Pan(China)</i>	
F8-5	Blind identification and equalization with HF channel	601
	<i>Lv Yingbin, Ma Hong, Sun Mingquan(China)</i>	
F8-6	No-Wave Approaches and its Application to Received Power of Radio Wave Propagation	605
	<i>Luoquan HU, Hongbo Zhu(China)</i>	

2006-8-25 PM	Oral Session F9(6 Presentations)	Place:Room B
--------------	---	--------------

Microwave Devices and Circuits

F9-1	Circuit analysis of four coupled rectangular-waveguide resonators based on mode corresponding equivalent network	610
	<i>Takaharu Hiraoka , Takahiro Ogawa , Jui-Pang Hsu(Japan)</i>	
F9-2	A High Power 50W LDMOS RFIC for 2 GHz TD-SCDMA and WCDMA Cellular Wireless Applications	614
	<i>Chuming David Shih, Reza Bagger, Yinglei Yu, Rick Hooper, Johan Sjöström, Paul(USA)</i>	
F9-3	Optimization Design and Implementation of High Order Mode Rectangular Cavities	616
	<i>Yan Ye, Taijun Liu, Jiaming He, Xingbin Zeng, Cevdet Akyel(Germany)</i>	
F9-4	Characteristics of Rectangular Waveguide Bends Integrated into Thin Substrate and Compensation of the Right-Angled Bends	620
	<i>Dapeng Wang, Wenquan Che, Liang Geng, Lei Xu, Kuan Deng(China)</i>	
F9-5	Design of Zeroth-Order Resonator Using Simplified Structures of Conventional CRLH-TLs	623
	<i>Xian Qi Lin, Ruo Peng Liu, Xin Mi Yang, Hui Feng Ma, Tie Jun Cui(China)</i>	
F9-6	Analysis of Active and Passive Circuits Using Incorporated FDTD+SPICE	626
	<i>Shou-qing Jia, Xiao-hui Zhou, Ming-yao Xia(China)</i>	

2006-8-25 PM

Oral Session F10(6 Presentations)

Place:Room B

Microwave Antennas III

F10-1	A Stacked structure Couple Fed Circular Polarization Microstrip S-Ring Antenna	630
	<i>Huan-Cheng Lien , Huei-Chiou Tsai(Taiwan)</i>	
F10-2	Smart Antenna Design and Envelope Correlation Coefficient for Diversity Antenna Measurement Facility	634
	<i>Guan-Yu Chen, Jwo-Shiun Sun , Sen-Yi Huang(Taiwan)</i>	
F10-3	Folded Monopoles Polarization Diversity Antenna for 3G Portable Terminal	639
	<i>Xuexin Li , Binjie Hu(China)</i>	
F10-4	Multiple-pattern Time-Modulated Linear Arrays with Single Prefixed Amplitude Distribution	643
	<i>Xiaowen Zhu , Shiwen Yang, Zaiping Nie(China)</i>	
F10-5	Analysis on a Novel UWB Antenna of Double-Printed Circular Disc	646
	<i>Yi-Min Lu , Xue-Xia Yang , Guo-Xin Zheng(China)</i>	
F10-6	Modified Bow-tie Slot Antenna Fed by Coplanar Waveguide	650
	<i>Zhao Lu(China)</i>	

2006-8-25 PM

Oral Session F11(6 Presentations)

Place:Room C

Microwave Industrial/Biological Applications

F11-1	Non-Invasive Measurement of Blood Glucose Level by Millimeter-Waves	653
	<i>Yoshio Nikawa(Japan)</i>	
F11-2	Experimental Study on Influence of Microwave Irradiation on Calcium Sulphate Crystal	657
	<i>Kama Huang, Xiaoqing Yang, Wei Hua, Yanyan Zhao (China)</i>	
F11-3	Moisture Measurement In Food Industry Using Microwave Technology	661
	<i>Jayanthi.T, Sreeja.B.S, Jobin Mathew Thomas ,Raghavendra Rao. R(India)</i>	
F11-4	Theoretical analysis and NO detection of long-period fiber grating with sol-gel coating	664
	<i>Peng yong, Cao Wanghe(China)</i>	
F11-5	The Influence of Microwave Radiation on Calcium Sulfate Crystal	668
	<i>Xiao-Qing Yang, Ka-Ma Huang, Zhao-Lun Wang(China)</i>	
F11-6	Research Progress of Microwave Assisted Decontamination of Waste Gas	672
	<i>Xu Jianghe, Zhou Xiaoxia,Liu Zuohua, Tao Changyuan(China)</i>	