

**2007 International Symposium on
Electromagnetic Compatibility**

23 - 26 October 2007

Qingdao, China

CONTENTS

Keynote

Comparison between High Altitude EMP and High Power Electromagnetic Effects on Equipment and Systems	1
<i>Michel Ianoz</i>	
2007 Status of the Development of High-Power Electromagnetic (HPEM) Standards in the IEC	6
<i>William A. Radasky</i>	
On the Mutual Coupling of the Finite Microstrip Antenna Arrays	10
<i>Wang,H. Fang,D.G. Xi,Y.P. Luan,C.Z. Wang,B.</i>	
Mobile Radio Base Stations and Handsets Radiation Effects: Analysis, Simulations and Mitigation Techniques	15
<i>Jacob Gavan & Motti Haridim</i>	
Comparison of Radiated Susceptibility of a Digital IC between Electric Field Coupling and Magnetic Field Coupling Based on a Circuit Approach	19
<i>Jianqing Wang</i>	

Session 1PA: Lightning, ESD & EMP (1)

Calculation of Lightning Radiation Field Considering the Effect of Ionosphere	23
<i>Zhang,MingXia Zhao,Zhibin Chen,Jiahong Cui,Xiang</i>	
Influence of Parameters of the Transient Grounding Model on Numerical Analysis and Experimental Verification	27
<i>He,Hongbing Zhou,Bihua Chen,Jiaqing</i>	
Measurement and analysis of Electromagnetic Fields Radiated by Corona Discharge	31
<i>Hu,Xiaofeng Liu,Shanghe Wei,Ming Wang,Lei</i>	
Limits of Discharge Parameters in Short-gap Human-metal ESD at Special Charge Voltage	35
<i>Ruan,FangMing Gao,YouGang Shi,Dan</i>	
<i>Wang,LiuPing Zhou,Feng</i>	
Relations of the Thunder-stroke Selectivity and Earth Resistivity	39
<i>Li,Shuchen He,Wei Fu,Xiaorui</i>	
<i>Fu,Kunpeng Shao,Shuai</i>	
Measurement of Discharge Currents due to Human-ESD	43
<i>Taka,Yoshinori Kagawa,Yoshihisa Fujiwara,Osamu</i>	
Transfer Impedance of SMA Receptacle as Wideband Measurement Electrode for Discharge Current from Charged Human	47

<i>Kagawa, Yoshihisa</i>	<i>Taka, Yoshinori</i>	<i>Fujiwara, Osamu</i>	
Characterization of Electric Field Pulses Produced by Cloud and Ground Lightning Discharges			51
<i>Nag, Amitabh</i>	<i>Rakov, Vladimir A.</i>		
Time Domain Measurement of Voltage Rise Time and Current Rise Time due to Low Voltage ESD Using 12GHz Experimental System			55
<i>Kawamata, Ken</i>	<i>Taka, Yoshinori</i>	<i>Minegishi, S.</i>	
<i>Haga, A.</i>	<i>Fujiwara, Osamu</i>		
Session 1PB: EMC in Communications			
State of Art of the EMC Standardization for Power Line Communication			59
<i>Koch, Michael</i>	<i>Hirsch, Holger</i>	<i>Ianoz, Michel</i>	
Electromagnetic Compatibility of UHF-RFID to GSM			63
<i>Hong, Weijun</i>	<i>Kan, Runtian</i>	<i>Li, Shufang</i>	
Research on the Mechanism of WRAN Self-Coexistence			67
<i>Liu, Hongjie</i>	<i>Li, Shufang</i>		
Analysis of Passive Interference on Radio Station from UHVDC Power Transmission Lines in Short-wave Frequency			71
<i>Liu, Jing</i>	<i>Zhao, Zhibin</i>	<i>Cui, Xiang</i>	<i>Wang, Qi</i>
Transmission Characteristic Analysis for UWB Body Area Communications			75
<i>Tayamachi, Takeyoshi</i>	<i>Wang, Qiong</i>	<i>Wang, Jianqing</i>	
Novel View: Frequency Spectrum and Harmonic Distortion of FM Signal based on DDS			79
<i>Zhou, Feng</i>	<i>Liu, Yinting</i>	<i>Shen, Yuanmao</i>	<i>Gao, Yougang</i>
A New Method of Positioning Interference in GSM-R Networks			83
<i>An, Hao</i>	<i>Zhou, Kesheng</i>		
Optimal Design of Smart Mobile Terminal Antennas for Wireless Communication and Computing Systems			88
<i>Lu, Junwei</i>	<i>Yang, Shiyu</i>		
Harmonic Analysis of HVDC Transformer using Harmonic Balance - Finite Element Method (HB-FEM)			92
<i>Lu, Junwei</i>	<i>Chui, Xiang</i>		
Impact of Cellular Phone Usage Duration on Power Control and Violation of EMC Regulations			96
<i>Matabishi, Lloyd</i>			
Model of Es Occurrence Probability in China at 1985~2006			102
<i>Hu, Dazhang</i>	<i>Liu, Yumei</i>	<i>Li, Jianru</i>	<i>Sun, Shuji</i>
Methods on Further Improving the Spectrum Management			106
<i>Song, Qijun</i>	<i>Su, Yanbing</i>	<i>Zhao, Wei</i>	<i>Wei, Du</i> <i>Tian, Tian</i>

Session 1PC: Others (1)

The Analysis of Crosstalk of Parallel Crewel	110
<i>Wang,Qiang Liu,Jiangling Sha,Fei</i>	
Simulation of Electromagnetic Induction on DC Transmission Lines from Parallel AC Transmission Lines	114
<i>Lu,Tiebing Zhao,Songtao Cui,Xiang</i>	
Crosstalk Analysis of High Speed Digital Microstrip Traces over a Slotted Ground Plane Using the Non-uniform FDTD Method	118
<i>Yang,Guang Lu,Yinghua</i>	
An Efficient Method for Transmission Line Simulation	122
<i>Huang,Xiaodi Wang,Gaofeng Jin,Xiaoqing</i>	
LCL Charasctarisitics of Parallel Transmission Line with Load Circuit	126
<i>Oguri,Yasunori Murano,Kimitoshi Xiao,Fengchao</i>	
<i>Kami,Yoshio</i>	
Circuit Model for Two Parallel Microstrip Lines on Slotted Ground Plane	130
<i>Nagakubo,Hitoshi Murano,Kimitoshi Xiao,Fengchao Kami,Yoshio</i>	
ABCD Network Function for Analysis of Crosstalk Between Microstrip Lines in Arbitrary Directions on Different Layers	134
<i>Park,SangWook Xiao,Fengchao Park,DongChul Kami,Yoshio</i>	
The Application on Active Noise Cancellation – Research on the Series-Parallel Compensated UPS Converter	138
<i>Xiong,Rui Liu,Jing Li,Fuzhong Wang,Zhi</i>	
Prediction of Common-mode Radiation from Printed Circuit Boards with Interconnections	142
<i>Toyota,Yoshitaka Sadatoshi,Akifumi Watanabe,Tetsushi</i>	
<i>Iokibe,Kengo Koga,Ryuji Wada,Osami</i>	

Session 2AA: EMC Test & Measurement (1)

Research and Application of the System on Measuring Magnetic Field in Complicated EMI Environment in Substation	146
<i>Liu,Yang Cui,Xiang</i>	
Development of the Measuring System for Lightning Current on High Tower	150
<i>Wan,Haojiang Shi,Lihua Zhao,Bin Li,Yanxin</i>	
<i>Zhu,Yichao</i>	
Optimization of Calibration Procedure for Reverberation Chamber Based on NI LabVIEW Platform	154
<i>Wang,Qingguo Cheng,Erwei</i>	
Research on Performance of Frequency-hopping Radio Services by Using Statistical Method	158
<i>Yang,Fei Cheng,Song Sha,Fei</i>	
Implementing APD Measurement in Monolithic Circuits	162

<i>Chen, Song</i>	<i>Sha, Fei Sha</i>	<i>Yang, Fei</i>	
Measurement of Pulsed Electric Field Shielding Effectiveness of Reinforced Grids Cubic Cages			166
<i>Chang, Yunfen</i>	<i>Gao, Cheng</i>	<i>Xu, Yuanzhe</i>	<i>Zhou, Bihua</i>
Study on the Propagation Characteristics of the Radio Noise form Electric Railway in Shortwave Band			170
<i>Shan, Qin</i>	<i>Wen, Yinghong</i>	<i>Li, Huanran</i>	
An Improved Vector Fitting Method for Parametric Identification of Transfer Functions in EMC Measurement			174
<i>Zhang, Li</i>	<i>Wang, Wei</i>	<i>Li, Qingmin</i>	<i>SIEW, W.H.</i>
Measurement of the Electromagnetic Properties of Materials Based on A Refined Transmission-Reflection Algorithm			178
<i>Jiang, Shan</i>	<i>Xu, Ke</i>		

Session 2AB: Lightning, ESD & EMP (2)

Design of Digital Filter Using Improved Prewarping Method			182
<i>Sun, Xubao</i>	<i>Wang, Shifan</i>		
Power Line Communication Applications within UMTS Scenarios			186
<i>Koch, Michael</i>	<i>Hirsch, Holger</i>	<i>Ianoz, Michel</i>	
Shielding Effectiveness of Metal Door in Circular Tunnel to Non-unclear EMP			190
<i>Duan, Yantao</i>	<i>Chen, Bin</i>	<i>Zhang, Liqun</i>	<i>Chen, Hailin</i>
Calculation of the Induced Current of a Shielded Inner Conductor Coupled by an EMP Field			194
<i>Zhou, Yinghui</i>	<i>Shi, Lihua</i>	<i>Zhou, Bihua</i>	
Suppressing EMI of Switching Converters Using Self-Excitation-Chaos			198
<i>Li, Qingnan</i>	<i>Xiong, Rui</i>		
Discussion on Electromagnetic Compatibility Index for Secondary System of Substation			202
<i>He, Jinliang</i>	<i>Gong, Xuehai</i>		
Electromagnetic Interference on Secondary Systems of Substation Caused by Short-circuit Fault			206
<i>Gong, Xuehai</i>	<i>He, Jinliang</i>		
Electromagnetic Interference on Secondary Systems of Substation Caused by Incoming Lightning Stroke			212
<i>Gong, Xuehai</i>	<i>He, Jinliang</i>		
Study on Gas Discharge at Atmospheric Air by Numerical Method			217
<i>Zhang, Yun</i>	<i>Zeng, Rong</i>	<i>He, Jinliang</i>	<i>Zhang, Bo</i>

Session 2AC: EMC Control (1)

Electromagnetic Interference Prediction in Transient Electromagnetic Environment	221
---	-----

<i>Yu,Zhiyong</i>	<i>Wang,Jiangfeng</i>		
Study on Suppression Technologies	of the Electromagnetic Radiation of		225
High Frequency welder			
<i>Li,Wei</i>	<i>He,Hong</i>	<i>Mo,Kai</i>	<i>Zhang,Dajian</i>
<i>Meng,Hui</i>	<i>Zhang,Yan</i>	<i>Ning,Shuyan</i>	
Research on the model for EMC problem of receiver at the same			229
frequency band			
<i>Qin,Miao</i>	<i>Yang,Xianqing</i>	<i>Zhao, Jiasheng</i>	<i>Hu,Haoquan</i>
The Anti-jamming Analysis and Simulation to UWB - Multiband OFDM			232
System based on Simulink			
<i>Li,Ping'an</i>	<i>Gao,Bin</i>	<i>Gao,Yougang</i>	
EMI Analysis for Two Types of Radar on the Same Platform			236
<i>Jiao,Shuyuan</i>	<i>Lu,Jing</i>		
Effect of the Load Property on the ESD Current			240
<i>Liu,Suling</i>	<i>Shi,Dan</i>	<i>Gao,Yougang</i>	
The Modeling Method for Interference Source of System-level			244
Electromagnetic Compatibility			
<i>Wang,Longfeng</i>	<i>Su,Donglin</i>	<i>Chen,Wenqing</i>	<i>Zhang,Xiuqiang</i>
The EMC Analysis and Estimation Method for Complicated			247
Electromagnetic Radiation System			
<i>Chen,Wenqing</i>	<i>Su,Donglin</i>	<i>Mo,Qinhua</i>	<i>Li,Jiantao</i>
Method of Systemic EMC Evaluation			251
<i>Gao,Wanfeng</i>	<i>Su,Donglin</i>		
Fast Calculation of Radiated Emissions from Arbitrarily Shaped PCB			255
with IC/LSI			
<i>Nishida,Masahiro</i>	<i>Toyota,Yoshitaka</i>	<i>Iokibe,Kengo</i>	
<i>Koga,Ryuji</i>	<i>Wada,Osami</i>		
Session 2PA: EMC Test & Measurement (2)			
A New Method of Measuring the Frequency Response Characteristics of			259
A Loop			
<i>Luo,Zhaonan</i>	<i>Zhao,Zhibin</i>	<i>Li,Lin</i>	<i>Chen,Jiahong</i>
Study on the Granularity Effect on Electromagnetic Wave Absorbing			263
Properties of Ni-SiC Composites			
<i>Tan,Yefa</i>	<i>Li,Liguang</i>	<i>Zhang,Shanbiao</i>	<i>Liu,Xuexia</i>
<i>Zhuang,Tieshuan</i>	<i>Liu,Zhenyu</i>		
Research on Distribution of Electric Field near Ground during			267
Thunderstorm Process			
<i>Yang,Bo</i>	<i>Zhou,Bihua</i>	<i>Gao,Taichang</i>	
Test Site Validation above 1GHz			271
<i>Li,Xiao</i>	<i>Zhu,Yun</i>	<i>Li,Jing</i>	

An Experimental Study on the Indoors Attenuation of Electromagnetic Wave for Transmitting the Standard Time Signal	275
<i>Ohta,Masayoshi Nitta,Shuichi Someya,Kaoru</i> <i>Abe,Hideo Mutoh,Atsuo</i>	
A Framework of Automatic Testing System for Electromagnetic Compatibility	279
<i>Cao,Cheng Su,Donglin Dai,Fei</i>	
Research on Low Reflection Material of Double Layer Medium Structure	284
<i>Li,Yanfei Lu,Guizhen Piao,Dazhi Guan,Yalin</i> <i>Zhang,Wenjie</i>	
Conversion and Comparison of the Test Results in Fully and Semi-Anechoic Chamber	287
<i>Zhou,Yu Tao,Hongbo Wang,Wenjian Li,Shufang</i>	
Session 2PB: Others (2)	
Study on the Transmission of Multi-Ridge Waveguides based on Finite Element Method	291
<i>Sun,Hai Lu,M.</i>	
Corona Characteristics under Lightning Surges	295
<i>Wang,Jia Zhang,Xiaoqing</i>	
Application of Modified Transmission Line Equation to the Conductors within the Cavity Resonator	299
<i>Pruksanubal,A. Phoomvutthisarn,S.Phoom</i>	
Electromagnetic Emanations of the Ics	303
<i>Ding,Guoliang Zhao,Qiang Chu,Jie Deng,Gaoming</i>	
Effects of Harsh Electromagnetic Environment on Inertial Measurement Unit of a Flight Vehicle	307
<i>Yu,Zhiyong Wang,Jiang-feng Chen,Guodong</i> <i>Xia,Jianping</i>	
EMC Design in Signal-Generating Circuit of Electromagnetic Position System	311
<i>Yin,Qin Chen,Bin Wang,Ying Zhou,Xushen</i>	
An Adaptive Channel Estimation Method based on Doppler Shift Estimation in Mobile WiMAX	315
<i>Liu,Peizhi Wu,Xiaoguang Zhang,Weiqiang Zhang,Hao</i>	
Some EMC Problems Possibly Faced By the Next-Generation Network	320
<i>Wu,Lei Song,Xiaoting</i>	
Research of Dual-helical Coupled Slow-wave Circuit Cold-Test Characteristics in CFA	325
<i>Zhang,Jinling Lu,Yinghua Zhang,Hongxin Xu,Yong</i> <i>Zheng,Zhanqi Zhang,Bo Wang,Dengwei Yang,Jinsheng</i>	

Session 2PC: EMC Control (2)

Analysis of Shielding Effectiveness of Rectangular Cavity with Improved Aperture Model	329
<i>Wang, Liuping Gao, Yougang Shen, Yuanmao Ruan, Fangming</i>	
Analysis on Shielding Effectiveness of Aperture Arrays with Different Spacing	333
<i>Wang, Liuping Gao, Yougang Shen, Yuanmao Ruan, Fangming</i>	
A 40GHz Amplifier Design Using CPW	337
<i>Dong, Zhihong</i>	
Analysis of the Shielding Effectiveness of Rectangular Concrete Enclosure	341
<i>Zhao, Zhibin Cui, Xiang Li, Lin Gao, Changzheng</i>	
Analysis and Test of EM Shielding for Low-Frequency Magnetic Field	345
<i>Zhu, Yichao Gao, Cheng Shi, Lihua Zhou, Bihua</i>	
Experimental Investigation of Transient Grounding Resistance Characteristics on a Spokewise Grounding Electrode	350
<i>Chen, Jiaqing Zhou, Bihua He, Hongbing Meng, Xin Huang, Xiaofang</i>	
Analysis of the E-field Distribution for E-field Probes Calibration in Tissue-Simulating Liquid	354
<i>Yi, Min Li, Shufang Liu, Hongjie Hong, Weijun</i>	
A Novel Compact Defected Ground Structure with Cross-Finger Gap	358
<i>Xiao, Yongxuan Su, Donglin Liu, Shen</i>	
3 High-order Mode Transmission Line Model of Enclosure with Off-center Aperture	361
<i>Shi, Dan Shen, Yuanmao Gao, Yougang</i>	
Aerial and Buried Cables Lightning Protection with Assistance of Earth Connection	365
<i>Sokolov, Stanislav A</i>	

Session 3AA: Antenna & Propagation (1)

A Wide Band Coherent Ice Penetrating Radar Receiver and Related EMC Considerations	367
<i>Liu, Xiaojun Zhao, Bo Zhao, Mingming Fang, Guangyou</i>	
Using Smart Mobile Terminal Antennas to Achieve Optimal Wireless Network Performance and Security	371
<i>Scriven, Ian Lu, Junwei Ireland, David</i>	
Critical Distance of Far Field for Basic Radiation Element	375
<i>Sun, Jiangsheng Gao, Benqing</i>	
Analyzing and Calculating Isolation between Antennas on Airplane Wireless System	378

<i>Hou, Yanchun</i>	<i>Su, Donglin</i>	<i>Chen, Wenqing</i>	<i>Liao, Yi</i>	
The Application of Choke in Parabola Antennas				382
<i>Zhang, Xiaolei</i>	<i>Su, Donglin</i>	<i>Hou, Yanchun</i>		
Analysis and Optimization of the Frequency Selectivity for the Short-wave Radio Station Receiver System				386
<i>Liao, Yi</i>	<i>Su, Donglin</i>	<i>Chen, Wenqing</i>	<i>Zhang, Xiuqiang</i>	
Discussions on Reflection Coefficient's Obtaining Methods in RF Absorber's Simulation				390
<i>Chen, Song</i>	<i>Sha, Fei</i>			
Accuracy in Wideband Direction of Arrival System				394
<i>Hajiani, Parivash</i>	<i>Habibi, Hooman</i>	<i>Mazlumi, Farhad</i>		
<i>Hakkak, Mohammad</i>				
Analysis of Log-periodic Antenna Array on a Revolving Table				398
<i>Chen, Aixin</i>	<i>Zhang, Zhiyuan</i>	<i>Ju, Zilong</i>		
<i>Wang, Yazhou</i>	<i>Chen, Aihong</i>			
Selection of the Standard Antenna for the Validation of Antenna Test Range				401
<i>Liang, Min</i>	<i>Su, Donglin</i>	<i>Han, Yufeng</i>	<i>Zhou, Fan</i>	
Research of the Characteristics of Radio Wave Propagations around the High-Speed Railway				405
<i>Qu, Lu</i>	<i>Wen, Yinghong</i>	<i>Song, Weijia</i>		

Session 3AB: Modeling & Calculation (1)

Research on the Influence of Several Parameters on Lightning Radiation Field				409
<i>Zhang, Mingxia</i>	<i>Zhao, Zhibin</i>	<i>Chen, Jiahong</i>	<i>Cui, Xiang</i>	
A Modified Method to Determine the Position to Suspend ADSS Cable on High Voltage Transmission Tower				413
<i>Zhao, Zhibin</i>	<i>Lu, Tiebing</i>	<i>Cui, Xiang</i>	<i>Li, Lin</i>	
The Three-Dimensional Fast Algorithm of Solving the Electric Field Integral Equation				417
<i>Huang, Hongxia</i>	<i>Li, Lin</i>	<i>Gao, Changzheng</i>	<i>Zhao, Zhibin</i>	
Weighted Laguerre Polynomials and its Applications in Transient RCS Analysis				421
<i>Cai, Wenfeng</i>	<i>Liu, Xueguan</i>	<i>Guo, Huiping</i>	<i>Cao, Honglong</i>	
Calculation and Research of Electromagnetic Fields in Space Around Lightning Path with Finite Difference Time Domain Method				424
<i>Li, Qian</i>	<i>Zhao, Zhibin</i>	<i>Cui, iang</i>		
Implement of a Set of Microwave Imaging System				428
<i>Zhou, Xushen</i>	<i>Sheng, Weixing</i>	<i>Chen, Bin</i>	<i>Song, Na</i>	
Shielding Effectiveness of an Enclosure with a Dielectric-backed Aperture using Slotline Method				432

<i>Kim,Suhan Park,Dongchul Lee,Jaehyun</i>	
Analysis of the Field Distribution inside Dielectric Object Loaded in TEM Cell using Hybrid FEM-BEM Method	436
<i>Hu,Yusheng</i>	
Analysis of the Conducted Interfering Mechanism within SVC-based Substations	440
<i>Zhang,Li Lou,Jie Li,Qingmin Li,Qingquan</i>	
A Novel Method to Calculate Electric Field Distribution and Characteristic Impedance in ATEM Cell with Rectangular Metallic EUT	445
<i>Xian,Jinlong Shen,Xiannian</i>	

Session 3AC: Electromagnetic Biological Effect

Particularities of Polarization-Mode Dispersion in Optical Fiber with Wavelength Division Multiplexing during the Lightning Stroke	448
<i>Sokolov,Stanislav A.</i>	
Comparative Study of Numerically Computed Spatial Peak SAR Values in Uniformly Scaled SAM Head Models Exposed to Mobile Phone Radiation	451
<i>Wu,Bo</i>	
Effects of Electromagnetic Pulse on the Vimentin of Mice Testes	455
<i>Wang,Xiaowu Ding,Guirong Zhao,Tao</i>	
<i>Zhang, Ji Xie,Xuejun Zeng,Lihua Guo,Guozhen</i>	
Electromagnetic Wave Transmission in the Three-Layer-Model of Body	459
<i>He,Wei Li,Shuchen Fu,Xiaorui Fu,Kunpeng Shao,Shuai</i>	
Effect of EMP on Lipid Peroxidation of Human Gastric Cancer Cells MKN28	463
<i>Chen,Yongbin Guo,Guozhen</i>	
Effects of Exposure to EMP on the Morphology in the Main Organs of Rats	466
<i>Ma, Shirong Li,Kangchu Xu,Yuqiao Hui,Yanping</i>	
Effects of EMP Exposure on the Memory Function of Rat Pups	475
<i>Zhang,Li Wang,Jin Guo,Guozhen</i>	
Changes of Microwave Radiation on the Level of Trace Elements in Mice Bone Tissues	479
<i>Ren,Dongqing Zhao,Tao Yang,Wenqing Li,Xiaojuan</i>	
<i>Zeng,Guiying Zhang,Jie Li,Yurong</i>	

Session 3PA: Antenna & Propagation (2)

Mie Series Study on Electromagnetic Scattering of Metallic Sphere Covered by Double-negative Metamaterials	482
<i>Wang, Maoyan Xu, Jun Wu, Jian Li, Hailong</i>	
Recognition Method of Radar Signal Based on Rough Set and Support	486

Vector Machine	
<i>Chen, Ting Luo, Jingqing</i>	
A New Kind of Microstrip-Antenna with Two Parallel Coupling Apertures	491
<i>Zhao, Weihong Hu, Mingchun Zhang, Qiang</i>	
GPS Anti-Jamming Modeling and Simulation Analysis for Navigation System Based on Antenna Array	495
<i>Wang, Lijun Yang, Xiaoniu Zhao, Huichang</i>	
An Ultra-Wideband Indoor Radio Channel Model	499
<i>Wang, Yang Zhang, Qinyu Zhang, Naitong</i>	
Site-Specific Propagation Prediction for UWB Indoor Non-line-of-sight Environment	503
<i>Wang, Yang Zhang, Naitong</i>	
Fast Sample Technique in Antenna Time Domain Near Field Measurement	507
<i>Wang, Nan Xue, Zhenghui Yang, Shingming</i>	
<i>Liu, Ruixiang Xu, Xiaowen</i>	
Modeling and Characteristic of the Vertical Bonding-Wire Interconnection for Millimeter Wave	511
<i>An, dawei Lv, xin</i>	
Mirror Reflections in EMF Dosimetry	515
<i>Dlugosz, Tomasz Trzaska, Hubert</i>	
Energy Absorption Mechanism of Head in the Near Field of Dipole	519
<i>Kan, Runtian Liu, Xiaoyong</i>	
The Correction of Antenna Factor	524
<i>Li, Jing Zhou, Kesheng Wang, Weilong Li, Xiao</i>	
Design and Analysis of the Coaxial-fed Cavity-backed Annular Slot Antenna	528
<i>Wei, Wenxuan Chen, Aixin Jiang, Tiehua</i>	

Session 3PB: Modeling & Calculation (2)

Preconditioning Matrix for Fast Hierarchical Method in 3-D Capacitance Extraction of IC Interconnect	532
<i>Wen, Ding Wang, Gaofeng</i>	
Adaptive Frequency Selective Surface with Ring Slot Units	536
<i>Zhang, Chenggang Zhang, Qiang Hu, Mingchun</i>	
Frequency Selective Surface Absorber Loaded with Lumped-element	539
<i>Zhang, Chenggang Zhang, Qiang Hu, Mingchun</i>	
Modeling with NURBS Surfaces used for RCS Computation of Electrically Large Objects	543
<i>Zhao, Yan Xu, Le Shi, Xiaowei</i>	
Analytical Calculation of Impedance of Power/Ground Plane with	547

Circular Holes	
<i>Wang,Hanfeng Wang,Qiang</i>	
Analysis of Radiation Reduction of Coupled Microstrip Lines by Additional Via Fences	551
<i>Li,Shulan Liu,Yuan'an Tang,Bihua</i>	
Simulation Study on the Location of a DMB Receiving Antenna in a Portable Multifunction Terminal	554
<i>Han,Jaekwon Kim,Woo Seong Park,Hyun Ho</i>	
<i>Lee,Hyung Seok Park,Hark Byeong Lee,Jae Hyun</i>	
<i>Park,Dong Chul</i>	
Graphical Electromagnetic Computing Method Combined with IGES Files Import	558
<i>Fang,Xiang Su,Donglin Liu,Yan</i>	
Implementation of Standing-Traveling Wave Boundary Condition in Homogeneous Isotropic Lossy Media	562
<i>Zhou,Bihua Yu,Tongbin Shi,Lihua Gao,Cheng Guo,Fei</i>	
Analysis of Crosstalk between Snakelike Circuits in Proximity	565
<i>Yang,Biao Lv,Yinghua Zhang,Hongxin</i>	
A Method combining Boundary Integral Equation and Separation Method Applied to Plane Eddy Current Problems	568
<i>LarsOleFichte MarkusClemens</i>	
AUTHOR INDEX	1