

2015 IEEE International Conference on Computational Electromagnetics

(ICCEM 2015)

**Hong Kong
2-5 February 2015**



**IEEE Catalog Number: CFP1599Y-POD
ISBN: 978-1-4799-6282-2**

TABLE OF CONTENTS

KEYNOTE SPEAKER 1: COMPUTATIONAL ELECTROMAGNETICS: PAST, PRESENT, AND FUTURE.....	1
<i>Chew, Weng Cho</i>	
KEYNOTE SPEAKER 2: COMBINING COMPUTATIONAL ELECTROMAGNETICS WITH SIGNAL PROCESSING ALGORITHMS TO ENHANCE THE PERFORMANCE OF IMAGING DEVICES AND ANTENNAS.....	3
<i>Mitra, Raj</i>	
THE RANDOM AUXILIARY SOURCES METHOD: A SIMPLE, FAST, AND EFFICIENT ELECTROMAGNETIC SCATTERING COMPUTATIONS APPROACH	5
<i>Moharram, Mohamed A. ; Kishk, Ahmed A.</i>	
CHARACTERISTIC MODES — AN INTUITIVE APPROACH FOR ANTENNA DESIGN	8
<i>Manteuffel, D.</i>	
HOFEM: A HIGHER ORDER FINITE ELEMENT METHOD ELECTROMAGNETIC SIMULATOR	10
<i>Garcia-Donoro, Daniel ; Martinez-Fernandez, Ignacio ; Garcia-Castillo, Luis E. ; Salazar-Palma, Magdalena</i>	
ELECTROMAGNETIC MODELING AND SIMULATION.....	13
<i>Sevgi, Levent</i>	
ELECTROMAGNETIC SPACE, TIME AND SPACE-TIME PROCESSING FOR MMW AND THZ TECHNOLOGY	16
<i>Caloz, C.</i>	
COMPUTATIONAL MODELS FOR BANDWIDTH ENHANCEMENT OF ELECTROMAGNETIC BANDGAP (EBG) RESONATOR ANTENNAS AND THEIR LIMITATIONS	19
<i>Zeb, B.A. ; Esselle, K.P. ; Hashmi, R.M.</i>	
NUMERICAL TECHNIQUES FOR EVALUATING ELECTROMAGNETIC FIELD PROPAGATORS.....	22
<i>Abbas, H.T. ; Shin, J. ; Nevels, R.D.</i>	
A SUMMARY OF THE MAJOR GLOBAL 3-D FDTD MODELING CAPABILITIES TO-DATE	24
<i>Simpson, J.J.</i>	
HIERARCHICAL AND SINGULAR BASES FOR FINITE METHODS	26
<i>Graglia, R.D. ; Peterson, A.F. ; Petrini, P. ; Matekovits, L.</i>	
SOLUTION OF HELMHOLTZ EQUATION STARTING WITH THE FREQUENCY INDEPENDENT LAPLACE'S EQUATION	30
<i>Sarkar, T.K. ; Palma, M.Salazar</i>	
LOW-PROFILE BROADBAND ANTENNAS USING METAMATERIAL-MUSHROOM STRUCTURES (INVITED).....	33
<i>Liu, Wei ; Chen, Zhi Ning ; Qing, Xianming</i>	
A FAST AND EFFICIENT METHOD FOR DESIGN OF CIRCUIT ANALOG ABSORBERS CONSISTING OF RESISTIVE SQUARE LOOP ARRAYS	35
<i>Che, Wenquan ; Ye, Han ; Xiong, Ying ; Chang, Yumei ; Christopoulos, Christos</i>	
QUASICONFORMAL MAPS IN TRANSFORMATION OPTICS AND THEIR ELECTROSTATIC ANALOGS	38
<i>Liu, Fu ; Wei, Pengjiang ; Chang, Z. ; Hu, Gengkai ; Li, Jensen</i>	
FULL WAVE ANALYSIS OF MILLIMETER WAVE QUASI-PERIODICAL STRUCTURE FOR ANTENNA APPLICATIONS BY METHOD OF MOMENTS AND ITS CONJUGATE GRADIENT SOLUTION ON GPU/CPU PLATFORM.....	41
<i>Song, Zhe ; Zhang, Yan ; Mu, Xing ; Zhou, Hou-Xing ; Hong, Wei</i>	
SOME EFFICIENT METHODS FOR THE ELECTROMAGNETIC SIMULATION OF PERIODIC STRUCTURES	43
<i>Hong, Wei ; Xu, Feng ; Lv, Zhiqing ; An, Xiang ; Li, Weidong ; Song, Zhe ; Yan, Li ; Zhou, Houxin</i>	
METAMATERIAL-INSPIRED WIDEBAND LOW-PROFILE CIRCULARLY POLARIZED ANTENNA	45
<i>Wu, Zhao ; Liu, Haixia ; Shi, Yan ; Li, Long</i>	
THREE DIMENSIONAL ELECTROMAGNETIC INVISIBILITY CLOAK WITH ARBITRARY SHAPES	47
<i>Tang, Wei ; Shi, Yan ; Li, Long</i>	

DISPERSION ANALYSIS OF A FISHNET METAMATERIAL BASED ON THE ROTATED TLM METHOD	50
<i>Xiong, Ying ; Russer, Johannes A. ; Che, Wenquan ; Shen, Guangxu ; Russer, Peter</i>	
FAST ANALYSIS OF ELECTRICALLY LARGE PLASMONIC ARRAYS WITH APERIODIC SPIRAL ORDER	53
<i>Zubair, M. ; Francavilla, M.A. ; Righero, M. ; Vecchi, G. ; Negro, L.Dal</i>	
ULTRA-WIDE BANDSTOP FREQUENCY SELECTIVE STRUCTURE USING A CASCADED ARRAY OF VERTICALLY STACKED PARALLEL STRIP LINES	56
<i>Qasim, Ali ; Shen, Zhongxiang</i>	
ANTENNA DESIGN CONSIDERATIONS FOR FAR FIELD AND NEAR FIELD WIRELESS BODY-CENTRIC SYSTEMS	59
<i>Moradi, E. ; Koski, K. ; Hasani, M. ; Rahmat-Samii, Y. ; Ukkonen, L.</i>	
ANTENNAS DESIGN FOR IMPLANTABLE MEDICAL DEVICES	61
<i>Xiao, S.Q. ; Li, R.Q.</i>	
MODELING AND DESIGN OF WIRELESS DATA TELEMETRY AND POWER TRANSFER FOR BIOMEDICAL IMPLANTS	64
<i>Agarwal, Kush ; Jegadeesan, Rangarajan ; Guo, Yong-Xin ; Thakor, Nitish V.</i>	
2GHZ NEAR-FIELD IN-HEAD PATH-LOSS MODEL FOR STROKE DETECTION	67
<i>Peng, Hong-Li ; Tang, Zheng ; Zong, Bai-Qing</i>	
MRI-BASED ELECTRICAL PROPERTY MAPPING FOR HUMAN BODY	73
<i>Motovilova, Elizaveta ; Su, Jiasheng ; Huang, Shao Ying</i>	
A PRINTED ANTENNA ARRAY FED BY BALANCED SCHIFFMAN SHIFTER USED FOR UWB LOCATION SYSTEM	76
<i>Cui, Yuanshan ; Yang, Deqiang ; Zeng, Huiling ; Zou, Meng ; Pan, Jin</i>	
ADAPTIVE BEAMFORMING FOR ARBITRARY ARRAY BY PARTICLE SWARM OPTIMIZATION	79
<i>Cui, Wei ; Lu, Yilong</i>	
TYPES AND COMPARISON OF LOW COST RADAR BEAMFORMING ARRAYS	87
<i>Xing, Shan ; Lu, Yilong</i>	
A PARALLEL OUT-OF-CORE ALGORITHM FOR THE TIME-DOMAIN ADAPTIVE INTEGRAL METHOD	89
<i>Kaur, Guneet ; Yilmaz, Ali E.</i>	
ANALYSIS OF CONFORMAL STRIP FEED TRIANGULAR DIELECTRIC RESONATOR ANTENNA USING FDTD METHOD	92
<i>Gupta, Anshul ; Gangwar, Ravi Kumar</i>	
FDTD SIMULATION OF ELF SURFACE RESPONSES FOR UNDERGROUND RESOURCE DETECTION	95
<i>Wang, Yi ; Cao, Qunsheng</i>	
NYSTRÖM METHOD SOLUTION FOR TIME-DOMAIN ELECTRIC FIELD INTEGRAL EQUATIONS	98
<i>Yin, G.Z. ; Zhang, J. ; Chen, W.J. ; Tong, M.S.</i>	
AN EXPLICIT MOT-TDVIE SCHEME FOR ANALYZING ELECTROMAGNETIC FIELD INTERACTIONS ON NONLINEAR SCATTERERS	101
<i>Ulku, H.Arda ; Sayed, Sadeed Bin ; Bagci, Hakan</i>	
DESIGN OF A PNEUMATICALLY CONTROLLED FREQUENCY SWITCHABLE PATCH ANTENNA	107
<i>Wu, Billy ; Okoniewski, Michal ; Hayden, Chris</i>	
COMPACT DIPOLE ANTENNA WITH MULTIPLE RADIATION PATTERN RECONFIGURATIONS	112
<i>Juan, Y. ; Che, Wenquan ; Yang, Wanchen ; Chen, ZhiNing</i>	
DESIGN FOR MULTIBAND RELAY ANTENNA WITH PARASITIC MONOPOLES	115
<i>Kim, Sung-min ; Min, Kyeong-sik ; Gang, Seong-yong</i>	
PARASITIC ANTENNA WITH INTERDIGITAL STRUCTURE FOR TV BROADCAST ENERGY HARVESTING	118
<i>Zhang, Minjing ; Liu, Xueguan ; Guo, Huiping ; Yang, Xinmi ; Xie, Danpeng</i>	
MICROWAVE IMAGING WITH RANDOM SPARSE ARRAY AND COMPRESSED SENSING FOR TARGET DETECTION	124
<i>Huang, Ling ; Lu, Yilong</i>	
SAR IMAGING WITH TIME-DOMAIN FULL-WAVE SCATTERING CALCULATIONS	126
<i>Feng, Yupei ; Li, Dongying ; Zhang, Min ; Yu, Wenxian</i>	

EIGENANALYSIS OF PHOTONIC STRUCTURES BASED ON FINITE ELEMENT WITH EFFICIENT SUPPRESSION OF SPURIOUS MODES	129
<i>Zekios, C. ; Allilomes, P. ; Kyriacou, G.</i>	
EIGENANALYSIS OF OPEN-RADIATING MICROWAVE STRUCTURES WITH EFFICIENT SUPPRESSION OF SPURIOUS MODES.....	132
<i>Zekios, C. ; Allilomes, P. ; Kyriacou, G.</i>	
ACCURACY ENHANCEMENT OF THE EQUIVALENCE PRINCIPLE ALGORITHM BASED ON THE MESHLESS SPHERICAL SURFACE.....	135
<i>Fu, Xin ; Jiang, Lijun ; Ma, Zuhui</i>	
A KERNEL-INDEPENDENT WIDEBAND NESTED EQUIVALENT SOURCE APPROXIMATION.....	138
<i>Li, M. ; Chen, R.S. ; Francavilla, M.A. ; Vecchi, G.</i>	
A DOMAIN DECOMPOSITION METHOD FOR ELECTROMAGNETIC RADIATION OF LARGE-SCALE ARRAYS	141
<i>Gu, P.F. ; Su, T. ; Fan, Z.H. ; Chen, R.S.</i>	
FAST WIDEBAND SCATTERING ANALYSIS BASED ON TAYLOR EXPANSION AND HIGHER ORDER HIERARCHICAL VECTOR BASIS FUNCTIONS	144
<i>Zhang, H.H. ; Ding, D.Z. ; Fan, Z.H. ; Chen, R.S.</i>	
AN EFFICIENT NUMERICAL METHOD FOR SIMPLIFIED PLASMA LIMITER SIMULATION	147
<i>Qian, Cheng ; Ding, Dazhi ; Chen, Rushan</i>	
A REVIEW ON NUMERICAL CALIBRATION AND DE-EMBEDDING TECHNIQUES IN FULL-WAVE ALGORITHMS	150
<i>Zhu, Lei ; Sun, Sheng</i>	
DISCUSSION OF CONVERSION THEORY BETWEEN MIXED-MODE S-PARAMETERS AND T-PARAMETERS FOR DIFFERENTIAL CIRCUIT WITH AND WITHOUT COMMON-MODE SUPPRESSION.....	153
<i>Yang, Jie ; Choi, Wai-Wa ; Tam, Kam-Weng</i>	
EQUIVALENT CIRCUIT MODELS OF A LOSSY MIM MULTIPLE TEETH-SHAPE FILTER	156
<i>Li, Dongying ; Li, Er-Ping ; Zhang, Min ; Yu, Wenxian</i>	
MODE-MATCHING ANALYSIS FOR DOUBLE-LAYERED SUBSTRATE INTEGRATED AND RECTANGULAR WAVEGUIDE FILTER TECHNOLOGY	158
<i>Schorer, J. ; Bornemann, J.</i>	
BROADBAND DUAL POLARIZED END-LAUNCHED COAXIAL TRANSITION FOR DIELECTRIC-FILLED SQUARE WAVEGUIDE	161
<i>Chan, Kwok Kee</i>	
ELECTROSTATIC MODE-MATCHING SOLUTION FOR CTEM CELL	164
<i>Kim, Hyunsoo ; Eom, Hyo J.</i>	
TUNABILITY ANALYSIS OF A MINIATURIZED PATCH ANTENNA WITH SELF-BIASED MAGNETIC FILM	166
<i>Zhang, X.W. ; Shi, J. ; Zhang, J. ; Tong, M.S.</i>	
A HYBRID UNCONDITIONALLY/CONDITIONALLY STABLE PARALLEL SPECTRAL-ELEMENT TIME-DOMAIN ALGORITHM FOR MULTI-SCALE COMPUTATION	169
<i>Xu, Hao ; Chen, Rushan</i>	
A NON-CONFORMAL DOMAIN DECOMPOSITION ALGORITHM OF FE-BI-MLFMA FOR 3-D ELECTROMAGNETIC SCATTERING/RADIATION PROBLEMS.....	172
<i>Gao, Hong-Wei ; Yang, Ming-Lin ; Guo, Gao-Huizi ; Sheng, Xin-Qing</i>	
SURFACE INTEGRAL EQUATION BASED DISCONTINUOUS GALERKIN METHOD FOR IMPEDANCE SURFACE OBJECTS.....	175
<i>Jiang, Ming ; Hu, Jun ; Zhao, Ran ; Nie, Zaiping</i>	
DOMAIN DECOMPOSITION METHOD FOR SCATTERING FROM MULTIPLE BODIES OF REVOLUTION.....	178
<i>Li, Yuke ; Hu, Jun ; Nie, Zaiping</i>	
ANALYSIS OF ELECTROMAGNETIC SCATTERING FROM COMBINATION TARGET OF BOR AND ARBITRARY STRUCTURE USING NON-CONFORMAL IE-DDM.....	184
<i>Tian, Mi ; Wei, Xiang ; Hu, Jun ; Nie, Zaiping</i>	
ANALYSIS OF SUBSTRATE INTEGRATED WAVEGUIDE STRUCTURES USING CONTOUR INTEGRAL EQUATION	187
<i>Zhao, Huapeng ; Shen, Zhongxiang ; Jin, Cheng ; Li, Er-Ping</i>	
A CONCISE AND PRACTICAL DOMAIN DECOMPOSITION METHOD USING PHASE EXTRACTED BASIS FUNCTIONS	190
<i>Han, Kui ; Nie, Zaiping</i>	

A NEW SAMPLING ALGORITHM USED IN MULTILEVEL UV FACTORIZATION METHOD FOR SCATTERING FROM RANDOM ROUGH SURFACE.....	192
<i>Yu, Zherui ; Wang, Haogang ; Shi, Jiancheng ; He, Lingfang</i>	
APPLICATION OF GTM METHOD COMBINED WITH LOCAL-PO ALGORITHM.....	195
<i>Xiang, Shang ; Zhu, Canping ; Fang, Jinpeng ; Xiao, Gaobiao ; Mao, Junfa</i>	
THE FAST SOLVER FOR CALCULATING THE HIGH FREQUENCY SCATTERED FIELD FROM THE FOCK CURRENT ON THE SURFACE OF THE 3-D CONVEX SCATTERER.....	197
<i>Wu, Yu Mao ; Chew, Weng Cho ; Jiang, Li Jun</i>	
RANGE PROFILE ANALYSIS OF COMPLEX TARGETS BASED ON RAY CLUSTERING	200
<i>He, Yang ; Zhu, Guo-Qiang ; He, Si-Yuan ; Zhang, Yun-Hua</i>	
SURFACE-RAY TRACING BASED ON THE PROPERTY OF GEODESIC ON ARBITRARY NURBS SURFACES.....	203
<i>Fu, Song ; Zhang, Yun-Hua ; He, Si-Yuan ; Zhu, Guo-Qiang</i>	
PRACTICAL SHADOWING TEST FOR PO INTEGRAL ON TRIMMED NURBS SURFACES	206
<i>Yan, Jun ; Hu, Jun ; Nie, Zaiping</i>	
EFFICIENT ANALYSIS OF PLASMONIC DISCONTINUITIES	209
<i>Said, Afaf M.A. ; Obayya, S.S.</i>	
RIGOROUS NUMERICAL STUDY OF SYMMETRY BREAKING IN A PAIR OF NONLINEAR CYLINDERS.....	212
<i>Yuan, Lijun</i>	
COMPACT 2D STENCILS FOR INHOMOGENEOUS HELMHOLTZ EQUATION BASED ON METHOD OF CONNECTED LOCAL FIELDS	215
<i>Chang, Hung-Wen ; Mu, Sin-Yuan</i>	
ANALYZING PHOTONIC CRYSTAL HETEROSTRUCTURE MODE-GAP CAVITIES BY DIRICHLET-TO-NEUMANN MAPS	218
<i>Hu, Zhen</i>	
VERTICAL MODE EXPANSION METHOD FOR SCATTERING OF LIGHT BY CYLINDRICAL OBJECTS OF ARBITRARY CROSS SECTIONS	221
<i>Shi, Hualiang</i>	
ACCURATE ANALYSIS OF A RIB WAVEGUIDE BY PSEUDOSPECTRAL MODAL METHOD	224
<i>Song, Dawei</i>	
LIGHT EXTRACTION MODELING FROM ORGANIC LIGHT-EMITTING DEVICES WITH MICROLENS ARRAYS	227
<i>Yeh, Wen-Lan ; Chiou, Yin-Peng</i>	
ON A WIDEBAND CIRCULARLY POLARIZED DIELECTRIC RESONATOR ANTENNA USING A HIGHER-ORDER MODE	230
<i>Fang, Xiao Sheng ; Ng, Ka Ki ; Leung, Kwok Wa</i>	
SINGLE-FEED FOUR-ARM CURL ANTENNA FOR CIRCULARLY POLARIZED RADIATION	232
<i>Ta, Son Xuat ; Park, Ikmo</i>	
GAIN ENHANCED OMNIDIRECTIONAL RECTANGULAR DIELECTRIC RESONATOR ANTENNA	235
<i>Feng, Li Ying ; Leung, Kwok Wa</i>	
EFFECTIVE MAGNETIC LOOP ARRAY ANTENNA WITH ENHANCED BANDWIDTH	237
<i>Hou, Q.W.</i>	
GENERATION OF OAM MILLIMETER WAVES USING TRAVELING-WAVE CIRCULAR SLOT ANTENNA BASED ON RING RESONANT CAVITY	239
<i>Zheng, Shilie ; Hui, Xiaonan ; Jin, Xiaofeng ; Chi, Hao ; Zhang, Xianming</i>	
AN ITERATIVE SOURCE RECONSTRUCTION BASED METHOD FOR RADIATED EMISSIONS PREDICTION FROM PCBs.....	241
<i>Xiang, Fang-Pin ; Wei, Xing-Chang ; Li, Er-Ping</i>	
SINGULARITY STUDY OF INDUCED CABLE RESPONSE IRRADIATED BY PLANE-WAVE	244
<i>Zhang, Min ; Zeng, Tianmin ; Su, Fei</i>	
FAST PREDICTION FOR CONDUCTED EMI IN FLYBACK CONVERTERS.....	247
<i>Liu, Jianwei ; Wang, Yi ; Jiang, Dan ; Cao, Qunsheng</i>	
THE EFFICIENT PREDICTION TECHNIQUE OF SAR BASED ON A MODIFIED FDTD METHOD	253
<i>Wang, Jian ; Yin, Wenyan ; Chu, Zhufei</i>	
FAST ANALYSIS OF EM SCATTERING BY JOINT USE OF THE MLFMA AND THE FGG-FG-FFT	256
<i>Kong, Wei-Bin ; Zhou, Hou-Xing ; Chen, Shu-Wen ; Hong, Wei</i>	

SIMULATION OF SCATTERING BY A ROTATING HYPERSONIC OBJECT WITH PLASMA SHEATH	258
<i>Qian, J.W. ; Xia, M.Y.</i>	
SAR IMAGING SIMULATION OF SEA SURFACE WITH BREAKING WAVE AT LOW GRAZING ANGLES.....	261
<i>Zhang, M. ; Luo, G. ; Wei, P.B. ; Zhang, D.M.</i>	
APPLICATIONS OF SLIDING SCATTERING CENTERS IN FEATURE EXTRACTION	264
<i>Qu, Quan-You ; Guo, Kun-Yi ; Sheng, Xin-Qing</i>	
THE JOINT INFLUENCES OF WIND FETCH AND WATER DEPTH ON DOPPLER SPECTRUM OF DYNAMIC NONLINEAR OCEAN SURFACES.....	267
<i>Nie, Ding ; Zhang, Min ; Li, Ning</i>	
ACCURATE SOLUTION OF VOLUME INTEGRAL EQUATIONS FOR ELECTROMAGNETIC SCATTERING BY LOSSY CONDUCTORS	270
<i>Shi, J. ; Zhang, X.W. ; Zhang, J. ; Tong, M.S.</i>	
WIDEBAND DIELECTRIC RESONATOR TERAHERTZ REFLECTARRAY	273
<i>Yi, Huan ; Qu, Shi-Wei ; Chan, Chi Hou</i>	
A MINIATURIZED DIFFERENTIALLY FED IMPLANTABLE HILBERT CURVE FRACTAL ANTENNA AT MICS BAND	275
<i>Liu, Hui ; Liu, Xiong-Ying</i>	
COMPACT DIFFERENTIAL-FED ANTENNA WITH FILTERING RESPONSE.....	278
<i>Duan, Wen ; Zhang, Xiu Yin ; Pan, Yong-Mei</i>	
FREQUENCY TUNING OF THE OMNIDIRECTIONAL CIRCULARLY POLARIZED DIELECTRIC RESONATOR ANTENNA USING PARASITIC PATCH	281
<i>Pan, Yongmei</i>	
WIDEBAND TWO-LAYER TRANSPARENT CYLINDRICAL DIELECTRIC RESONATOR ANTENNA USED AS A LIGHT COVER.....	286
<i>Sun, Yuxiang ; Fang, Xiaosheng ; Leung, Kwok Wa</i>	
ON THE CHOICE OF BASIS FUNCTIONS FOR THE MESHLESS RADIAL POINT INTERPOLATION METHOD WITH SMALL LOCAL SUPPORT DOMAINS.....	288
<i>Shaterian, Zahra ; Kaufmann, Thomas ; Fumeaux, Christophe</i>	
INTEGRAL EQUATION DOMAIN DECOMPOSITION METHOD FOR SCATTERING FROM THIN COATING OBJECTS.....	291
<i>Zhao, Ran ; Hu, Jun ; Jiang, Ming ; Nie, Zai-ping</i>	
VOLUME INTEGRAL EQUATION COMBINED WITH ODDM FOR ANALYSIS OF EM SCATTERING FROM INHOMOGENEOUS ANISOTROPIE NONMAGNETIC DIELECTRIC OBJECTS.....	294
<i>Chen, Shu-Wen ; Zhou, Hou-Xing ; Kong, Wei-Bin ; Hong, Wei</i>	
A DOMAIN DECOMPOSITION FRAMEWORK FOR THE SOLUTION OF MULTI-SCALE PROBLEMS USING INTEGRAL EQUATION FORMULATIONS	297
<i>Bautista, M.A.Echeverri ; Vipiana, F. ; Francavilla, M.A. ; Vecchi, G.</i>	
OCTREE BASED BACKWARD SBR-PO METHOD FOR ELECTROMAGNETIC SCATTERING OF ELECTRICALLY LARGE TARGET	303
<i>Guo, Li-Xin ; Fan, Tian-Qi</i>	
A NEW EFFICIENT HYBRID SBR/MOM TECHNIQUE FOR SCATTERING ANALYSIS OF COMPLEX LARGE STRUCTURES	306
<i>Mei, Xiaowei ; Zhang, Yong ; Lin, Hai</i>	
ML-TDS ANALYSIS OF SCATTERING FROM HYPERSONIC VEHICLES COVERED WITH PLASMA SHEATH.....	309
<i>Niu, Xue ; Nie, Zaiping ; Que, Xiaofeng ; He, Shiquan</i>	
A LARGE-SCALE NUMERICAL SIMULATION OF INDOOR RADIO WAVE PROPAGATION FOR A WIRELESS LAN SYSTEM	312
<i>Otani, Hajime ; Yamaguchi, Shoichi ; Yonezawa, Satoshi ; Omiya, Manabu</i>	
ENHANCING THE EFFICIENCY OF MLFMA-PO HYBRID METHOD FOR ANALYZING ELECTRICALLY LARGE OBJECTS	315
<i>Zhang, Yong ; Lin, Hai</i>	
FDTD ANALYSIS OF HF HEATING EFFECT ON LOCAL IONOSPHERE.....	318
<i>Zhou, Ye ; Wang, Yi ; Cao, Qunsheng</i>	
EXTENSION OF THE UNCONDITIONALLY-STABLE FOUR-STAGES SPLIT-STEP FDTD METHOD TO DEBYE DISPERSIVE MEDIA	321
<i>Kong, Yong-Dan ; Chu, Qing-Xin</i>	
OPTIMIZED HIGH-ORDER FINITE-DIFFERENCE TIME-DOMAIN (2, 4) METHOD.....	324
<i>Zhu, Min ; Zhao, Lei ; Cao, Qunsheng</i>	

TRANSIENT NON-CONFORMAL DOMAIN DECOMPOSITION USING THE LAGUERRE-FDTD METHOD	327
<i>Yi, Ming ; Swaminathan, Madhavan</i>	
FAST SOLUTION OF TIME DOMAIN MAXWELL'S EQUATIONS USING LARGE TIME STEPS.....	330
<i>Makwana, N.N. ; Chatterjee, Avijit</i>	
AUTOMATIC H-REFINEMENT THROUGH A-POSTERIORI ERROR ESTIMATION AND DISCONTINUOUS GALERKIN	333
<i>Vasquez, Jorge A.Tobon ; Francavilla, Alessandro ; Vipiana, Francesca ; Vecchi, Giuseppe ; Peng, Zhen ; Lee, Jin-Fa</i>	
IMPLICIT H TYPE FINITE-ELEMENT ERROR ESTIMATOR FOR THE VECTOR HELMHOLTZ EQUATION	335
<i>Losch, Markus ; Farle, Ortwin ; Baltes, Rolf ; Dyczij-Edlinger, Romanus</i>	
3D TO 2D SURFACE MESH PARAMETERIZATION FOR UNSTRUCTURED TRANSMISSION LINE METHOD SIMULATIONS	338
<i>Nasser, Hayan ; Greedy, Steve ; Benson, Trevor ; Vukovic, Ana ; Sewell, Phillip</i>	
A REDUCED ORDER MODEL FOR ELECTROMAGNETIC SCATTERING USING MULTILEVEL KRYLOV SUBSPACE SPLITTING.....	341
<i>Kumar, N. ; Vinoy, K.J. ; Gopalakrishnan, S.</i>	
A LOW-FREQUENCY STABLE FINITE-ELEMENT FORMULATION FOR MODAL WAVEGUIDE ANALYSIS.....	344
<i>Baltes, Rolf ; Farle, Ortwin ; Dyczij-Edlinger, Romanus ; Ahmar, Joseph Al</i>	
DISPERSION IN THE 2D UNSTRUCTURED TRANSMISSION LINE MODELLING (UTLM) METHOD.....	347
<i>Khashan, Lamia ; Vukovic, Ana ; Sewell, Phillip ; Benson, Trevor M.</i>	
VECTORIAL SOLUTION TO DOUBLE CURL EQUATION WITH GENERALIZED COULOMB GAUGE FOR MAGNETO STATIC PROBLEMS	350
<i>Li, Yan Lin ; Sun, Sheng ; Dai, Qi L. ; Chew, Weng Cho</i>	
MILLIMETER-WAVE SPIRAL MICROSTRIP-BASED LEAKY-WAVE ANTENNA FOR CIRCULARLY POLARIZED RADIATION.....	353
<i>Bai, Xue ; Qu, Shi-Wei ; Chan, Chi Hou ; Ng, Kung Bo</i>	
A NOVEL STACKED INVERTED-F ANTENNA FOR IMPLANTED BIO-DEVICES IN THE MICS BAND.....	355
<i>Wu, Zetao ; Liu, XiongYing ; Di, YunHui</i>	
DESIGN OF TERAHERTZ WAVEGUIDE-FED ANTIPODAL HYPERBOLIC-SINE TAPERED SLOT ANTENNA BASED ON SILICON MICROMACHINE.....	358
<i>Zhao, Peng-Fei ; Li, Qing ; Lu, Hong-Da ; Li, Bin ; Liu, Yong ; Lv, Xin</i>	
POLARIZATION TUNABLE DIELECTRIC RESONATOR ANTENNA WITH QUASI-LUMPED QUADRATURE COUPLER	361
<i>Zhang, Meng ; Li, Bin ; Liu, Yong ; Lv, Xin</i>	
PLANAR TWO-ELEMENT UWB MIMO ANTENNAS WITH HIGH ISOLATIONS	363
<i>Yang, Xue-Song ; Zhang, Lin ; Zhou, Li-Ling ; Wang, Rui-Qi ; Li, Xu-Jia</i>	
A NEW APPROACH BASED ON COMPRESSIVE SENSING FOR SOLVING MONOSTATIC SCATTERING FROM 3D CONDUCTING BODIES MODELED BY NURBS SURFACE.....	366
<i>Chai, Shui-Rong ; Guo, Li-Xin</i>	
A COMPARATIVE STUDY ON DIFFERENT SINGULARITY EXTRACTION TECHNIQUES OF EFIE.....	369
<i>Luo, Chunbei ; Zhang, Yong ; Lin, Hai</i>	
MODELING OF MAGNETIC FIELD INDUCED BY SHIP WAKE	374
<i>Zhu, X.J. ; Du, C.P. ; Xia, M.Y.</i>	
Author Index	