2010 International Symposium on Antennas and Propagation
November 23-26 The Venetian Macao-Resort-Hotel - Macao, China

ISAP 2010 Advance Technical Program

23 Nov. 2010 (Tuesday)

Venue	Rm. Capri 1101	Rm. Capri 1102	Rm. Capri 1103
Time	SCA1	SCB1	SCC1
10:00 - 11:00	Eigenvalues and Eigenvectors in Array Antennas - Optimization of Array Antennas for High Performance by Prof. Nobuyoshi Kikuma Nagoya Institute of Technology, Japan	Design, Analysis and Practical Applications of RFID Antennas by Prof. Raj Mittra Penn State University, USA Prof. Andrey S. Andrenko YRP R&D Center, Fujitsu Laboratories LTD, Japan	The Physics and Mathematics of Multiantenna Systems and How to Improve Their Performances by Prof. Tapan K. Sarkar Syracuse University; Syracuse, New York, USA Prof. Magdalena Salazar-Palma Universidad Carlos III de Madrid, Spain
11:00 - 11:30	Tea Break		
11:30 - 12:00	Eigenvalues and Eigenvectors in Array Antennas - Optimization of Array Antennas for High Performance	Design, Analysis and Practical Applications of RFID Antennas	The Physics and Mathematics of Multiantenna Systems and How to Improve Their Performances

Time	SCA2	SCB2	SCC2
14:30 - 15:30	MIMO and Diversity Antenna Systems for Mobile Terminals and Small Base Stations by Prof. Hiroyuki Arai Yokohama National University, Japan	A Historical Perspective of the Method of Moments by Prof. Kenneth K. Mei City University of Hong Kong, China	Antenna Designs for Mobile Communications and Satellite Services by Dr. Hang WONG City University of Hong Kong, China
15:30 - 16:00	Tea Break		
16:00 - 17:00	MIMO and Diversity Antenna Systems for Mobile Terminals and Small Base Stations	A Historical Perspective of the Method of Moments	Antenna Designs for Mobile Communications and Satellite Services

18:30 – 21:30 | Welcome Reception @ Four Seasons Hotel Macao

	24 Nov. 2010 (Wednesday)
Venue	Meeting Rooms Sicily
Time	
08:40 - 09:15	Opening Ceremony
09:15 - 10:05	Keynote Speech by Prof. Raj Mittra
10:05 - 10:30	Tea Break
10:30 - 11:20	Keynote Speech by Prof. Weng Cho Chew and Prof. Leslie George Tham
11:20 - 12:10	Keynote Speech by Prof. Prof. Koichi Ito

24 Nov. 2010 (Wednesday)

Venue	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003	Rm. Capri 1101	Rm. Capri 1102	Rm. Capri 1103
Time	WA1		WB1	WC1		WD1
	Rohde & Schwarz Special Session		Wideband Antennas 1	Student Paper Competition		EMC/EMI Simulations & Measurements
13:30 - 13:50			20			18
13:50 - 14:10			111			34
14:10 - 14:30			120			97
14:30 - 14:50			155	26	141	140
14:50 - 15:10			293	27	146	233
				47	149	
Time	WA2		WB2	54	152	WD2
	Antennas with Metamaterials 1		Computational Electromagnetics 1	57	171	Mobile and Indoor Propagations 1
				66	210	
				67	297	
15:30 - 15:50	109		92	95	317	24
15:50 - 16:10	134		139	132	320	35
16:10 - 16:30	173		188	137	331	64
16:30 - 16:50	198		241			71
16:50 - 17:10	201		269			222
17:10 - 17:30	213					251

25 Nov. 2010 (Thursday)

Venue	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003	Rm. Capri 1101	Rm. Capri 1102	Rm. Capri 1103
Time	TA1	TB1	TC1	TD1	TE1	TF1
	Small Antennas 1	Millimeter Wave and Sub-Millimeter Wave Antennas 1	Antenna Measurements 1	Remote Sensing	High-Frequency Techniques and Time Domain Techniques	MIMO Radio Channels & Mobile Radio Communication Systems 1
08:30 - 08:50	61	323	91	19	110	128
08:50 - 09:10	69	105	179	33	177	145
09:10 - 09:30	70	115	273	113	131	162
09:30 - 09:50	75	122	318	221	256	186
09:50 - 10:10	80	124	332	275		265

Time	TA2	TB2	TC2	TD2	TE2	TF2
	Adaptive and Smart Antennas	Dual Band Antennas	Antenna Measurements 2	Remote Sensing and Other Propagations	Computational Electromagnetics 2	Satellite Communication Systems and Other Systems
10:30 - 10:50	41	126	38	60	192	207
10:50 - 11:10	46	203	104	76	193	209
11:10 - 11:30	119	262	116	73	202	291
11:30 - 11:50	170	285	215	268	239	44
11:50 - 12:10	176	303	248	281	290	52

25 Nov. 2010 (Thursday)

Venue	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003	Rm. Capri 1101	Rm. Capri 1102	Rm. Capri 1103
Time	TA3	TB3	TC3	TD3	TE3	TF3
	Small Antennas 2	Multi-Band Antennas	Millimeter Wave and Sub-Millimeter Wave Antennas 2	Mobile and Indoor Propagations 2	Other Electomagnetic Wave Theories	MIMO Radio Channels & Mobile Radio Communication Systems 2
13:30 - 13:50	98	142	235	72	59	272
13:50 - 14:10	103	159	135	87	88	277
14:10 - 14:30	121	180	138	178	89	298
14:30 - 14:50	130	246	167	183	189	309
14:50 - 15:10	11	23	324	242	196	216

Time	TA4	TB4	TC4	TD4	TE4	TF4
	Antenna Array 1	Wideband Antennas 2	Antennas with Metamaterials 2	Other Propagations	Mobile and Indoor Propagations and Millimeter and Optical Wave Propagations	EMC/EMI Simulations & Measurements and MIMO Radio Channels & Mobile Radio Communication Systems
15:30 - 15:50	187	58	238	79	278	289
15:50 - 16:10	195	136	258	158	284	74
16:10 - 16:30	260	153	261	197	286	77
16:30 - 16:50	231	200	283	236	311	85
16:50 - 17:10	229	321	333	243	263	123
17:10 - 17:30	322	244	335	274	185	

19:00 – 22:00 | Banquet @ Venetian-Resort-Hotel

26 Nov. 2010 (Friday)

Venue	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003	Rm. Capri 1101		
Time	FA1	FB1	FC1	FD1		
	Small Antennas 3	Adaptive and Smart Antennas and Other Antennas	Antenna Measurements 3	Other Systems 1		
08:30 - 08:50	276	208	300	56		
08:50 - 09:10	217	211	302	118		
09:10 - 09:30	220	240	17	212		
09:30 - 09:50	249	282	150	328		
09:50 - 10:10	259	42	43	329		

Time	FA2	FB2	FC2	FD2		
	Small Antennas 4	Antenna Array 2	Planar Antennas	RF/Microwave Filters		
10:30 - 10:50	182	160	163	214		
10:50 - 11:10	280	156	175	267		
11:10 - 11:30	305	184	194	325		
11:30 - 11:50	55	294	219	218		
11:50 - 12:10	316	308	228	232		

26 Nov. 2010 (Friday)

Venue	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003	Rm. Capri 1101		
Time	FA3	FB3	FC3	FD3		
	UWB Antennas	Antenna Array 3	Millimeter Wave and Sub-Millimeter Wave Antennas and Other Antennas	Biological Effects and Medical Applications and Other Systems		
13:30 - 13:50	101	31	279	147		
13:50 - 14:10	114	108	100	287		
14:10 - 14:30	172	165	143	12		
14:30 - 14:50	224	234	148	330		
14:50 - 15:10	313	288	40			

Time	FA4	FB4	FC4	FD4		
	Small Antennas and Other Antennas	Reconfigurable and Multiband Antennas	Other Antennas	RF/Microwave Components		
15:30 - 15:50	326	29	32	161		
15:50 - 16:10	336	51	37	301		
16:10 - 16:30	84	125	50	327		
16:30 - 16:50	93	133	157	106		
16:50 - 17:10	94	227	264	271		

24 Nov. 2010 (Wednesday) 13:30 - 15:10

WB1

Wideband Antennas 1

Rm. Capri 1003

1330 – 1350

20
A New Broadband Trapezoidal Flat Monopole Antenna
Behrouz Heydari, Alireza Islamdoost

Asian Elite Co., Iran

1350 – 1410

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Wang-Shaped Patch Antenna Excited by H-Plane Oriented Wideband Feed-Networks
Chi-Ho Wong[1], Kwok L. Chung[1], Wai-Yip Tam[1], Sarawuth Chaimool[2]

[1] Hong Kong Polytechnic University, Hong Kong, China
[2] King Mongkut's University of Technology North Bangkok, Thailand

1410 – 1430

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Wideband and Dual-band Stacked Square Microstrip Antennas with Shorting Plates and Slits
Takafumi Fujimoto

Nagasaki University, Japan

1430 – 1450

155
Broadband Quadrifilar Helical Antennas
David C. Ni[1], Peter Chung[2], Ray Chen[3], Ching-Wen Hsu[3]

[1] Direxion Technology
[2] King Communication Materials
[3] National Taiwan University of Science and Technology, Taiwan

1450 – 1510

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Bidirectional Antenna on Flambeau-Shape
Watcharaphon Naktong, Boonchai Kaewchan, Apirada Namsang, Amnoiy Ruengwaree

Rajamangala University of Technology Thanyaburi, Thailand

WD1

EMC/EMI Simulation & Measurements

Rm. Capri 1103

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The Effect of Via Spacing on the Signal Integrity Performance of PCB with Slotted Ground
Soonyong Lee, Wonbum Seo, Jaehoon Choi

Hanyang University, Korea

34
Magnetic Probe With Extended Ground Plane for EMC Measurement
Shun-Yun Lin[1], Chin-Yen Li[1], Shang-Kuei Yen[1], Pao-Hsia Cheng[2]

[1] Cheng Shiu University, Taiwan
[2] Powerful Technology Design Co., Ltd.

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Radiated Immunity Test System for Vehicles Using a Composited Dipole Antenna
Akihiko Komatsuzaki[1], Hiroyuki Arai[1], Toshiyasu Tanaka[2]

[1] Yokohama National University, Japan
[2] Microwave Factory Co., Ltd., Japan

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Scattering Analysis of a Formation of Ships Using Parallel Higher Order Method of Moments
Xun-Wang Zhao[1], Yu Zhang[1], Hong-Wei Zhang[1], Sio-Weng Ting[2], Hang Su[3], Chang-Hong Liang[1]

[1] Xidian University, China
[2] University of Macau, China
[3] Lanzhou University, China

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Evaluation of Anechoic Chamber for EMI over 1GHz by Pseudo Plane-Wave Spectrum
Michitaka Ameya[1], Satoru Kurokawa[1], Ikuo Watanabe[2], Mikito Yamaguchi[2], Ryoichi Hasumi[2]

[1] National Institute of Advanced Industrial Science and Technology, Japan
[2] Device Co. Ltd., Japan

24 Nov. 2010 (Wednesday)			15:30 – 17:30
	WA2	**WB2**	**WD2**
	Antennas with Metmaterials 1	**Computational Electromagnetics 1**	**Mobile and Indoor Propagations 1**
	Rm. Capri 1001 - 1002	Rm. Capri 1003	Rm. Capri 1103
1530 – 1550	**109** **Dual Frequency Band Operations of Composite Right/Left Handed Transmission Line and Inverted-F Antenna** Hirohisa Kitahara, Naobumi Michishita, Yoshihide Yamada National Defense Academy, Japan	**92** **The Multi-Scale Method Combined to the GEC Modeling for the Study of Pre-Fractal Structures with Incorporated PIN Diodes** Sonia Mili, Chiraz Larbi Aguili, Taoufik Aguili National Engineering School of Tunis, Tunisia	**24** **Pulse Shaping for Impulse Radio UWB** Robert Urban, Pavel Pechac Czech Technical University in Prague, Czech Republic
1550 – 1610	**134** **Circularly Polarized Microstrip Leaky Wave Antenna Using Composite Right/Left-Handed Transmission Line** Yoshiki Mitsuhata, Ryo Osagawa, Kazuhiro Kitatani, Yasuyuki Okamura Osaka University, Japan	**139** **Robustness and Stability of a Massively Parallel Out-of-Core Solver for Solving Pure MoM Problems with Million Level Unknowns** Yu Zhang[1], Xun-Wang Zhao[1], Sio-Weng Ting[2], Hang Su[3] [1] Xidian University, China [2] University of Macau, China [3] Lanzhou University, China	**35** **Vegetation Attenuation by a Single Tree for High Elevation Angles at 2.0 and 6.5 GHz** Petr Horak, Pavel Pechac Czech Technical University in Prague, Czech Republic
1610 – 1630	**173** **Dual Layer Minkowski Radiating Shape for Reflectarray Antenna Design** Amiruddeen Wahid, Mohamad Kamal Abdul Rahim, Farid Zubir, Sharifah Hafizah Syed Ariffin, Sharifah Kamilah Syed Yusof Universiti Teknologi Malaysia, Malaysia	**188** **Numerical Analysis of Electromagnetic Bandgap Structures of Arbitrary Shapes** Maurice Seay, Mitsuhiro Yokota University of Miyazaki, Japan	**64** **On Distance Characteristics Parameters Evaluated by a Two-Ray Ground Reflection Model** Taro Tamaki , Kazunori Uchida, Junichi Honda Fukuoka Institute of Technology, Japan
1630 – 1650	**198** **Mutual Coupling Reduction in Patch Antenna Arrays Using Corrugated Structure** Cheng Huang, Zeyu Zhao, Qin Feng, Xiangang Luo Chinese Academy of Sciences, China	**241** **Marching-on-in-Time Method with Equivalent Dipole Moment Method for Time Domain Electric Field Integral Equation** Jaroslav Lacik Brno University of Technology, Czech Republic	**71** **Outdoor/Indoor Propagation Experiment for Estimation of Interference Level Caused by Terrestrial Mobile Terminal in Satellite/Terrestrial Integrated Mobile Communication System** A. Miura, H. Watanabe, H. Tsuji, N. Hamamoto, Y. Fujino, R. Suzuki NICT, Japan
1650 - 1710	**201** **FDFD and FDTD Analysis of Photonic Crystals and Loss Effect on Propagation Modes** Amin Gul Hanif, Takuji Arima, Toru Uno Tokyo University of Agriculture and Technology, Japan	**269** **Investigations on Thermal Distribution and Average Power Handling Capability of Substrate-Integrated Waveguide (SIW)** Yumei Chang, Wenquan Che, Liming Gu, Li Li Nanjing University of Science & Technology, China	**222** **Coverage Prediction for ATSC interference form ISDB-T System** Sung Woong Choi, Heon Jin Hong Electronics and Telecommunications Research Institute, KOREA,
1710-1730	**213** **Effect of Substrate Thickness on the Radiation Characteristics of Inductor-loaded Patch Antenna** Hyun-Woo Cho, Tae-Young Kim, Boo-Gyoun Kim Soongsil University, Korea		**251** **Evaluation of Free Space Link Budget in UWB Impusle Radio** Pitak Keawbunsong, Sathaporn Promwong, Thawatchai Sereewattanapong, Suvepol Sittichivapak King Mongkut's Institute of Technology Ladkrabang, Thailand.

25 Nov. 2010 (Thursday)			08:30 - 10:10
	TA1 **Small Antennas 1**	**TB1** **Millimeter Wave and Sub-Millimeter Wave Antennas 1**	**TC1** **Antennas Measurements 1**
	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003
0830 – 0850	**61** **Small Planar Antennas for WLAN Applications** Mawarni Mohamed Yunus[1], Norbahiah Misran[2], Mohamad Tariqul Islam[3] [1] Universiti Teknikal Malaysia Melaka, Malasia [2] Universiti Kebangsaan Malaysia, Malaysia [3] Universiti Kebangsaan Malaysia, Malaysia	**323** **Compact Triple Band Antenna for the Aircraft Communications Application** Jun Ouyang[1], Feng Yang[1], Biao Li[2], Xianfa Tang[2] [1] University of Electronic Science and Technology of China, China [2] China Academy of Engineering and Physics, China	**91** **Calibration of Impedance Measurement of a Balanced Antenna Using the S-Parameter Method** Shohei Konya, Takayuki Sasamori, Teruo Tobana, Yoji Isota Akita Prefectural University, Japan
0850 – 0910	**69** **A Closely-Packed MIMO Antenna for USB Dongle Application at WLAN Band** Wenhui Huang, Minseok Han, Jaehoon Choi Hanyang University, Korea	**105** **An E-Band Partially-Corporate Feed Slot Array with Laminated Quasi Double-Layer Waveguide Structure and PMC Terminations** Miao Zhang, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan	**179** **Spatial Fading Emulation Technique – OTA Throughput Measurements of Multi Antenna Reception Terminals** Alessandro Scannavini, Lars J. Foged, Meryam Abou El Anouar, Nicolas Gross, John Estrada, Francois Chauvet Satimo
0910 – 0930	**70** **A Small Planar Inverted-F Antenna for Body-Centric Wireless Communications** Zhengyi Li[1], Kazuyuki Saito[1], Masaharu Takahashi[1], Koichi Ito[1], Yi Huang[2] [1] Chiba University, Japan [2] University of Liverpool, United Kingdom	**115** **Design of Circularly Polarized Patch Antennas with Coaxial Feed through a Silicon Chip** KimHuey Koh, Takuichi Hirano, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan	**273** **Antenna Effects in Ultra Wideband Impulse Radio Transmission** Sathaporn Promwong, Thawatchai Sereewattanapong King Mongkut's Institute of Technology Ladkrabang, Thailand
0930 – 0950	**75** **Electrically Small Antenna for a Handy Terminal** Tan Watanabe[1], Marie Tsurunaga[2], Yasushi Hamada[2], Takahiro Inada[2], Naobumi Michishita[1], Yoshihide Yamada[1] [1] National Defense Academy, Japan [2] Mazda Co., Ltd, Japan	**122** **Optimization of Microstrip-to-Slot Transition for Ultra-Wideband Bulk LTSA** Damri Radenamad, Akira Hirose The University of Tokyo, Japan	**318** **Estimation Method of EUT Reflection Coefficient in TRP Measurement Sysytem Using a Spheroidal Coupler** Tasuku Teshirogi, Takashi Kawamura, Aya Yamamoto, Toru Sakuma, Yasuhiko Nago Anritsu Corporation, Japan
0950 – 1010	**80** **A Compact Antenna in Notebook PCs for Digital Terrestrial Television Reception** Ning Guan, Hiroiku Tayama, Ryouhei Hosono, Hirotaka Furuya Fujikura Ltd., Japan	**124** **Bandwidth of Multi-Port Microstrip-to-Waveguide Transitions in Millimeter-Wave Band** Kunio Sakakibara[1], Daisuke Takagi[1], Kazuyuki Seo[2], Nobuyoshi Kikuma[1], Hiroshi Hirayama[1] [1] Nagoya Institute of Technology, Japan [2] Nippon Pillar Packing Co., Ltd., Japan	**332** **Electromagnetic Measurement Activities at CRC of OIT** Dau-Chyrh Chang Oriental Institute of Technology, Taiwan

	TD1 **Remote Sensing** Rm. Capri 1101	TE1 **High-Frequency Techniques and Time Domain Techniques** Rm. Capri 1102	TF1 **MIMO Radio Channels & Mobile Radio Communication Systems 1** Rm. Capri 1103
0830 – 0850	**19** **Modified Decomposition Technique for Polarimetric SAR Image Analysis** Toshifumi Moriyama, Hiroaki Matsushita Nagasaki University, Japan	**110** **Application of the Complex Source Point Method for Analyzing the Diffraction of an Electromagnetic Gaussian Beam by a Cylinder Using UTD Concepts** T. Lertwiriyaprapa[1], K. Phaebua[2], C. Phongcharoenpanich[2], M. Krairiksh[2] [1] King Mongkut's University of Technology North Bangkok, Thailand [2] King Mongkut's Institute of Technology Ladkrabang, Thailand	**128** **Effect of Spacing and Radiation Pattern of Antenna Elements on Capacity in Near-Field MIMO System** Dalin Zhang, Toshikazu Hori, Mitoshi Fujimoto University of Fukui, Japan
0850 – 0910	**33** **Optimization of STC for Collecting Terrain Information** Sang-Ik Lee, Byeong-Yong Park, Soon-Gyu Yi, Seong-Ook Park Korea Advanced Institute of Science and Technology, Korea	**131** **FDTD Analysis of PEC Wire in Contact with Surface Impedance Boundary Condition** Takuji Arima[1,2], Soichi Watanabe[1], Toru Uno[2] [1] National Institute of Information and Communications Technology, Japan [2] Tokyo University of Agriculture and Technology, Japan	**145** **Evaluation on Input Characteristics of Multi Antennas for Mobile Radio Terminal Close to Human Hands** Takumi Hiraoka[1], Kazuyuki Saito[1], Masaharu Takahashi[1], Koichi Ito[1], Yoshiaki Amano[2], Masayuki Nakano[2], Hiroyasu Ishikawa[2] [1] Chiba University, Japan [2] KDDI R&D Laboratories Inc., Japan
0910 – 0930	**113** **Extraction of Underwater Laver Cultivation Area by SAR Polarimetric Entropy** Eun Sung Won, Kazuo Ouchi National Defense Academy, Japan	**177** **Analysis of Electromagnetic Backscattering by Rotating Flat Blades** Ik-Hwan Choi, Ho Lim, Dong-Wook Seo, Ky-Ung Bae, Noh-Hoon Myung Korea Advanced Institute of Science and Technology, Korea	**162** **A Consideration of Channel Capacity of Near-Field MIMO Using Parasitic Elements** Gen Matsui, Hiroshi Hirayama, Nobuyoshi Kikuma, Kunio Sakakibara Nagoya Institute of Technology, Japan
0930 – 0950	**221** **Polarimetric SAR Observation in Non-Spherical Rain Drop Environments** Hiroaki Yasuma, Hajime Fukuchi Tokyo Metropolitan University, Japan	**256** **Improvements in the Marching-on-in-Degree Method for Time Domain Integral Equations** Zicong Mei[1], Yu Zhang[2], Tapan Sarkar[1] [1] Syracuse University, USA [2] Xidian University, China	**186** **Experimental Study on Blind MIMO Transmission by Using ICA** Kohei Sugai, Hiroyoshi Yamada, Kentaro Nishimori, Yoshio Yamaguchi Niigata University, Japan
0950 – 1010	**275** **Highly Integrated Uniplanar Rectenna Operation Without Reflecting Plate for 2.45 GHz Wireless Power Transmission** Fang Zhang, Jong-Chul Lee Kwangwoon University, Korea		**265** **Optimum Decision Rule for Fixed Relay Pairing Selection Application** John F. An, Lider Pan National Taiwan Ocean University, Taiwan

25 Nov. 2010 (Thursday)			10:30 - 12:10
	TA2 **Adaptive and Smart Antennas**	**TB2** **Dual Band Antennas**	**TC2** **Antenna Measurements 2**
	Rm. Capri 1001	Rm. Capri 1002	Rm. Capri 1003
1030 – 1050	**41** **Discrete Interference Suppression in Non-Homogeneous Clutter Using D3-STMB Hybrid STAP Algorithm** Xiaopeng Yang, Yongxu Liu, Teng Long Beijing Institute of Technology, China	**126** **Design of Dual-Band E-Shaped Patch Antennas by Using the Multi-Conductor Transmission Line Mode Theory** Keisuke Noguchi[1], Harish Rajagopalan[2], Yahya Rahmat-Samii[2] [1] Kanazawa Institute of Technology, Japan [2] University of California, Los Angeles, United States	**38** **Loss Factors in Parallel-Plate Slot-Array Antennas on a Copper-Clad Dielectric Substrate in the Millimeter-Wave Band** Yuanfeng She, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan
1050 – 1110	**46** **A Least Bit Error Adaptive Array for Multi-Level Modulations** Satoshi Denno, Daisuke Umehara, Masahiro Morikura Kyoto University, Japan	**203** **Dual Band Planar Fractal Dipole Antenna for RFID Application** Mohamad Kamal A Rahim, Nasrun Osman, Maisarah Abu, Sharifah Hafizah Syed Ariffin, Muhammad Ramlee Kamaruddin Universiti Teknologi Malaysia, Malaysia	**104** **Thru-Line (TL) Calibration Technique for On-Wafer Measurement** Takuichi Hirano, Kenichi Okada, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan
1110 – 1130	**119** **An Adaptive Array Using Pseudo-noise for Interference Suppression in ITS Communications** Hiroshi Matsuda, Mitoshi Fujimoto, Toshikazu Hori University of Fukui, Japan	**262** **A Compact Monopole Antenna for WLAN Operation** Wen-Shan Chen, Yu-Ming Huang and Po-Yuan Chang Southern Taiwan University, Taiwan	**116** **A Radiation Measurement System by Using Optical Feeding** Ryouhei Hosono, Ning Guan, Naoki Kimura Fujikura Ltd, Japan
1130 – 1150	**170** **DOA Estimation Using Adaptive Beamspace EM Algorithm** Masahiro Sato, Nobuyoshi Kikuma, Hiroshi Hirayama, Kunio Sakakibara Nagoya Institute of Technology, Japan	**285** **2-Port Dual Band PIFA with Improved Isolation** Andrey S. Andrenko Fujitsu Laboratories Ltd., Japan	**215** **Influence of Source Antenna Beamwidth on Far-Field Measurement Method Using Numerical Compact Range** Ryo Yamaguchi, Kazuhiro Komiya, Keizo Cho NTT Docomo, Inc., Japan
1150 – 1210	**176** **Array Configuration Conversion Method Using CSS Processing for DOA Estimation** Takuya Ohara, Nobuyoshi Kikuma, Hiroshi Hirayama, Kunio Sakakibara Nagoya Institute of Technology, Japan	**303** **Development of a Dual Band Antenna from Finite Ground Coplanar Wave Guide** Trishna Mandal, Gijo Augustin, K. J. Vinoy Indian Institute of Science, India	**248** **Gain Determination of Small UHF RFID Antenna Structures** Rainer Kronberger[1], Volker Wienstroer[1], Barbara Friedmann[2] [1] Cologne University of Applied Sciences, Germany [2] Noretec GmbH & Co. KG, Germany

	TD2 **Remote Sensing and Other Propagations** Rm. Capri 1101	TE2 **Computational Electromagnetics 2** Rm. Capri 1102	TF2 **Satellite Communication Systems and Other Systems** Rm. Capri 1103
1030 – 1050	**60** **Theoretical and Experimental Study on Statistics of Electromagnetic Fields above Concrete Random Rough Surface Model** J. Honda[1], K. Uchida[1], S. Yokota[1], T. Matsunaga[1], K.-Y. Yoon[2] [1] Fukuoka Institute of Technology, Japan [2] Keimyung University, Korea	**192** **Improvement on the Invalidation in NURBS MOM-PO Method** Kai Huang[1], Zhi-Li He[1], Xun-Wang Zhao[1], Chang-Hong Liang[1], Hang Su[2] [1] Xidian University, China [2] Lanzhou University, China	**207** **Antenna Array Feed of Minimum Power Consumption by Adopting the Optimum Amplifier Selection** Takayuki Nakanishi, Kazunari Kihira, Tamotsu Nishino, Yoshihiko Konishi Mitsubishi Electric Corporation, Japan
1050 – 1110	**76** **Quantitative Evaluation in Terms of BER of the WBAN System at the ISM Band** Yudai Satoh[1], Isamu Kon[1], Takayuki Sasamori[1], Teruo Tobana[1], Youji Isota[1], Masaharu Takahashi[2], Toru Uno[3] [1] Akita Prefectural University, Japan [2] Chiba University, Japan [3] Tokyo University of Agriculture and Technology, Japan	**193** **Analysis of Complex Antennas Using Iterative Vector Fields with UTD Method** Zhi-Li He[1], Kai Huang[1], Xun-Wang Zhao[1], Chang-Hong Liang[1], Hang Su[2] [1] Xidian University, China [2] Lanzhou University, China	**209** **Investigation of a Low Profile Phased Array for Mobile Ku-Band Satcom Terminals** Teng Wah Ang[1], Ying Ying Huang[1], Kwok Kee Chan[2] [1] DSO National Laboratories, Singapore [2] Chan Technologies Inc., Canada
1110 – 1130	**73** **Design of a Resonant Microwave Absorber** Dong-Uk Sim[1], Jong-Hwa Kwon[1], Sang-Il Kwak[1], Hyung-Do Choi[1], Seong-Ook Park[2] [1] Electronics and Telecommunications Research Institute, Korea [2] Korea Advanced Institute of Science and Technology, Korea	**202** **Fast FDTD Analysis Using OFDM Pulse for Multi-Antenna Systems** Obara Mitsuharu, Naoki Honma Iwate university, Japan	**291** **A Multi-Purpose, Multi-Frequency Shuttlecock Antenna for CubeSats** Robert Lehmensiek Cape Peninsula University of Technology, South Africa
1130 – 1150	**268** **Equivalent Circuit Modelling of RF MEMS Series DC-Contact Switch and Actuated Voltage Analysis** Shijie Liu, Jie Zhang, Wenquan Che Nanjing University of Science & Technology, China	**239** **Spectral-Domain Formulation of Electromagnetic Scattering from Circular Cylinder Located near Periodically Corrugated Surface** Koki Watanabe Fukuoka Institute of Technology, Japan	**44** **Design of a Low Power UWB CMOS LNA for UWB System** Yohan Jang, Nackgyun Sung, Jaehoon Choi Hanyang University, Korea
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	TA3 **Small Antennas 2** Rm. Capri 1001	TB3 **Multi-Band Antennas** Rm. Capri 1002	TC3 **Millimeter Wave and Sub-Millimeter Wave Antennas 2** Rm. Capri 1003
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1350 – 1410	**103** **A Card-Type RFID Antenna with a T-Type Matching Circuit for Bandwidth Enhancement** Keisuke Noguchi[1], Tetsuo Moroya[2], Motoo Mizusawa[1], Shin-ichi Betsudan[1], Shigeru Makino[1], Takurou Sasaki[3] [1] Kanazawa Institute of Technology, Japan [2] Kanazawa Technical College, Japan [3] Mitsubishi Electric Corporation, Japan	**159** **Design and Simulation of a Slotted Diamond-Shaped Patch Antenna with Modified Ground Plane** Ismahayati Adam[1], Ping Jack Soh[2], Nur Baya Mohd Hashim[1], Mohd Fareq Abdul Malek[1], Guy A. E. Vandenbosch[2] [1] Universiti Malaysia Perlis, Malaysia [2] Universiteit Leuven, Belgium	**135** **Design of a 45-Degree Linearly-polarized Hollow-Waveguide Slot Two-dimensional Array Antenna with a Full-Corporate-Feed Circuit in the Lower Layer** Takashi Tomura, Yohei Miura, Miao Zhang, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan
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1430 – 1450	**130** **Significance of Ground Plane Size and Height in Small PIFA** Hattan F. AbuTarboush[1], Rajagopal Nilavalan[1], Thomas Peter[1], S. W. Cheung[2] [1] Brunel University, United Kingdom [2] The Hong Kong University, Hong Kong	**246** **A Novel Antenna Design for WLAN/WIMAX Dual-Mode Notebook** Tseng Eway[1], Lin Albert[2], Chiou Kelvin[2], Hsiao Allen[2] [1] National Cheng Kung University, Taiwan [2] Advanced-connectek Inc, Taiwan	**167** **Measured Performance of Microstrip-Line-Fed Broadband Waveguide Aperture Antenna** Shintaro Yano, Kunio Sakakibara, Nobuyoshi Kikuma, Hiroshi Hirayama Nagoya Institute of Thechnology, Japan
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	TD3 **Mobile and Indoor Propagations 2** Rm. Capri 1101	TE3 **Other Electomagnetic Wave Theories** Rm. Capri 1102	TF3 **MIMO Radio Channels & Mobile Radio Communication Systems 2** Rm. Capri 1103
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1350 – 1410	**87** **Hearing Aid Compatibility Improvement for Mobile Phones.** Sangha Lee[1], Minsu Kim[1], Hyungchul Kim[1] ,Austin Kim[2], Jhon Lee[2], Douglas Kim[2], Jungho Park[2], Youngoo Yang[1] [1] Sungkyunkwan University, Korea [2] Samsung Electronics, Korea	**88** **Transmission Area through the Small Aperture Backed by Lossy Cavity** Jong-hwan Lee[1], Hyuk-woo Son[1], Ji-whan Ko[2], Young-ki Cho[1] [1] Kyungpook National University, Korea [2] Kumoh National Institute of Technology	**277** **MIMO Sensor - Effectiveness of Distributed MIMO Antenna Configuration** Kentaro Nishimori[1], Yuta Koide[1], Naoki Honma[2], Daiki Kuwahara[1], Hiroyoshi Yamada[1], Hideo Makino[1] [1] Niigata University, Japan [2] Iwate University, Japan
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187 **Dual Circularly Polarized Concentric Array Radial Line Slot Antenna Fed by Rotating Modes from Front and Back Sides for Satellite Application** Hideki Ueda[1], Jiro Hirokawa[1], Makoto Ando[1], Shuichi Koreeda[2], Osamu Amano[2] [1] Tokyo Institute of Technology, Japan [2] NEC/Toshiba Space Systems, Ltd., Japan	**58** **Estimating Antenna Bandwidth Using the Bandwidth Potential and Q Value Techniques** Jussi Rahola Optenni Ltd., Finland	**238** **Pattern Synthesis of a Waveguide Slot Array Antenna for a Fixed Wireless Access System** Teppei Tanabe, Miao Zhang, Jiro Hirokawa, Makoto Ando Tokyo Institute of Technology, Japan
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195 **Analysis of a Large Scale Low-Profile Narrow-Wall Slotted Waveguide Array by Parallel MoM Using Higher Order Basis Functions under MPI Circumstance** Hong-Wei Zhang[1], Xun-Wang Zhao[1], Yu Zhang[1], Chang-Hong Liang[1], Hang Su[2] [1] Xidian University, China [2] Lanzhou University, China	**136** **Bandwidth Enhancement of Two-element Diversity Antenna with Hybrid Coupler** Masato Komatsu, Hiroyuki Arai Yokohama National University, Japan	**258** **Design of a Broadband and High Gain Antenna with an Inhomogeneous and Uni-Period Structure for Ku-band Applications** Jui-Hung Chen, Chun-Yih Wu, Ta-Chun Pu, Hung-Hsuan Lin Industrial Technology Research Institute, Taiwan
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260 **Optimization of Radiation Pattern for Narrow-wall Slotted Waveguide Arrays Using HOBBIES** Weixin Zhao[1], Daniel García-Doñoro[2], Yu Zhang[3], Xunwang Zhao[3], Tapan Sarkar[1] [1] Syracuse University, USA [2] University Carlos III of Madrid, 2Spain [3] Xidian University, China	**153** **Frequency Characteristic Analysis of the Efficiency of a MIMO Array Antenna with a Matching Circuit** Atsuhiro Kagaya, Kenichi Kagoshima, Shigeki Obote Ibaraki University, Japan	**261** **Multi-band Dipole Antenna Incorporated with Single-Band Square-Patch AMC** M. Abu, M.K.A. Rahim, F. Ismail, S.H. S. Ariffin, S.K.S. Yusof and M. R. Kamarudin University Teknologi Malaysia, Malaysia
1630 – 1650		
231 **A Cross Polarization Suppressed Sequential Array for a Primary Radiator of a Parabolic Antenna** Kazuki Ikeda[1], Keigo Sato[1], Ken-ichi Kagoshima[1], Shigeki Obote[1], Atsushi Tomiki[2], Tomoaki Yoda[2] [1] Ibaraki University, Japan [2] Institute of Space and Astronautical Science, Japan	**200** **Impedance Characteristics of an Antenna Apertured in Metal Housing Wall of Electronic Equipment** Fukuro Koshiji, Kohji Koshiji Tokyo University of Science, Japan	**283** **Comparative Study of Different Shape of Periodic Patch Electromagnetic Band Gap Structure for Planar Antenna Application** O. Ayop, M.K.A Rahim, M.R Kamarudin, S.H.S Arifin, S.K.S Yusof Universiti Teknologi Malaysia, Malaysia
1650 – 1710		
229 **Proposal and Preliminary Study of a Partially Driven Array Antenna Using Transmission Line Coupling** Hiroyuki Hosono, Kenji Saegusa, Tadashi Takano Nihon University, Japan	**321** **Design of E-Patch Conformal Antenna on Conical Surface through Space Mapping Optimization** Xuan Luo[1], Feng Yang[1], Jun Ouyang1, Haijing Zhou[2] [1] University of Electronic Science and Technology of China, China [2] Institute of Applied Physics and Computational Mathematics, China	**333** **A Leaky-Wave Antenna Using a Composite Right/Left Handed Transmission Line** Tommy Wong, Chi Hou Chan, Quan Xue City University of Hong Kong, China
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322 **A Hybrid Method of PEC-TDS and CBF for Electromagnetic Radiation from Array** Jie Yang[1], Feng Yang[1], Jun Ouyang[1], Biao Li[2], Xianfa Tang[2] [1] University of Electronic Science and Technology of China, China [2] Academy of Engineering and Physics, China	**244** **Experimental Confocal Imaging for Breast Cancer Detection Using Bow-Tie Antenna Array** Shinichi Kubota[1], Xia Xiao[2], Nobuo Sasaki[1], Akihiro Toya[1], Takahiro Kouzaki[1], Maiko Hanada[1], Takamaro Kikkawa[1] [1] Hiroshima University, Japan [2] Tianjin University, China	**335** **SAR Reduction on a Portable Device Using an Intelligent Metamaterial** Hsin-Lung Su[1], Yi-Jen Wang2, Ken-Huang Lin[2], Chin-Yih Wu[3], Hung-Hsuan Lin[3] [1] National Pingtung Institute of Commerce, Taiwan [2] National Sun Yat-San University, Taiwan [3] Industrial Technology Research Institute, Taiwan

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TD4	**TE4**	**TF4**
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79 **RCS Characteristics of the Electromagnetic Gradient Surfaces** Manjoong Ko, Yohan Lim, Youngjoong Yoon Yonsei University, Korea	**278** **Calculation of the Field Distribution in a Railway Tunnel in Presence of Train Using Integrative Modelling Technique** Shi Pu, Jun-Hong Wang, Yu-Jian Li Beijing Jiaotong University, China	**289** **Analytical Prediction of Shielding Effectiveness of Rectangular Enclosures with Rectangular Apertures under Normal Incidence** Weiye Zhong[1], Zhongxiang Shen[2] [1] Shanghai Astronomical Observatory, China [2] Nanyang Technological University, Singapore
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158 **Ground-to-Air Propagation in a Dense Jungle** Mauro Assis Fluminense Federal University, Brazil	**284** **Considerations on Indoor Propagation Concerning to Wideband Wireless LAN System** Yuto Nakatsu, Hirokazu Takeno, Tomotsugu Hasegawa, Manabu Omiya Hokkaido University, Japan	**74** **Channel Selective RF Receiver with Spectrum Sensing System** Kyoung-Joo Lee[1], Hee-Jong Lee[2], Jun Lee[2], Jongsik Lim[2], Young-Sik Kim[1] ,Sang-Min Han[2] [1] Korea University, Korea [2] Soonchunhyang University, Korea
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197 **Design and Development of Fork Waveguide Output Multiplexers** Ayesha Kosar Khan, Rabia Nazir, Noor M. Sheikh University of Engineering and Technology Lahore, Pakistan	**286** **Radio Wave Propagations through Floors in the Adjacent of a High-Speed Indoor Wireless Local Area Network Office Environment** Hirokazu Takeno, Yuto Nakatsu, Tomotsugu Hasegawa, Manabu Omiya Hokkaido University, Japan	**77** **Performance Evaluation of Primary-Secondary Transmission in Actual Indoor Environments** Tomoki Murakami, Riichi Kudo, Takeo Ichikawa, Masato Mizoguchi NTT Corporation, Japan
1630 – 1650		
236 **Characteristic Evaluation of Dual Polarized 4x4 MIMO through Propagation Measurement** Yuki Hirota, Shinobu Nanba, Yoji Kishi KDDI R&D Laboratories Inc., Japan	**311** **Estimation of the Electromagnetic Fields Distribution due to Mobile Radio in a Typical Aircraft Cabin Using Large Scale FDTD Analysis** S. Hiraiwa[1], T. Hikage[1], T. Nojima[1], S. Futatsumori[2], A. Kohmura[2], N. Yonemoto[2] [1] Hokkaido University, Japan [2] Electronic Navigation Research Institute, Japan	**85** **BER Performance of Nonregenerative MIMO Relaying System with Phase Control** Atsuki Mizuno, Daisuke Uchida, Hiroyuki Arai Yokohama National University, Japan
1650 – 1710		
243 **Rain Attenuation Statistics and Yearly Variability of Ka and Ku Band Satellite Signals Obtained for Twenty Years in Japan** Yasuyuki Maekawa Osaka Electro-Communication University, Japan	**263** **Monte Carlo Modelling of Optical Radiation Propagation in Stochastic Scattering Media** Boris Kargin Novosibirsk state university, Russian Federation	**123** **Proposal of De-Noise and Forward Relay Transmission Scheme under Interference Condition** Kosuke Kinami[1], Naoki Honma[1], Kentaro Nishimori[2] [1] Iwate University [2] Niigata University, Japan
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274 **Phase Distortion Due to the Antennas in UWB-IR** Pongsan Klaiudom, Thawatchai Sereewattanapong, Mochai Chamchoy, Sathaporn Promwong King Mongkut's Institute of Technology Ladkrabang, Thailand	**185** **Numerical Examination of EM Wave Shadowing by Human Bodies Between Transmitter and Receiver** Mitsuhiro Yokota[1], Tatsuya Ikegami[1], Yoshichika Ohta[2], Teruya Fujii[2] [1] University of Miyazaki, Japan [2] Softbank Mobile Corp., Japan	

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FA1
Small Antennas 3

Rm. Capri 1001

FB1
Adaptive and Smart Antennas and Other Antennas

Rm. Capri 1002

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Sohei Watanabe[1], Yasuo Iwamoto[2], Hiroshi Fujikawa[2], Hisashi Morishita[1]

[1] National Defense Academy, Japan
[2] SMK Corporation, Japan

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Reconfigurable Beam Steering 3D Antenna for Intelligent Antenna System
Sang jun Ha[1], Chang won Jung[1], Yongjin Kim[2]

[1] Seoul National University of Technology, Korea
[2] Inha Technical College, Korea

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A Miniatured UHF RFID Tag Antenna with Double Loop Structure
Kittima Lertsakwimarn[1], Chuwong Phongcharoenpanich[1], Kraison Aunchaleevarapan[2]

[1] King Mongkut's Institute of Technology Ladkrabang, Thailand
[2] Electrical and Electronic Products Testing Center, Thailand

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Muhammad Faizal Ismail, Mohamad Kamal A. Rahim, Syarifah Hafizah Syed Ariffin, Syarifah Kamilah Syed Yusuf, M. Ramlee Kamarudin

Universiti Tekonologi Malaysia, Malaysia

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Investigations of Miniaturized Meander Line Tag Antenna for UHF RFID System
Tajchai Pumpoung, Chuwong Phongcharoenpanich, Sompol Kosulvit

King Mongkut's Institute of Technology Ladkrabang, Thailand

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Relationship between SLL and Steerable Angle of PSO-Derived Circular Antenna Array
Nik Noordini Nik Abd Malik, Mazlina Esa, Syarifah Kamilah Syed Yusof, Shipun Anuar Hamzah

Universiti Teknologi Malaysia, Malaysia

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Embedded Slot Antenna with V-Slot DGS
M. Esa, M. S. Awang, N. N. N. A. Malik, N. M. A. Latiff, R. Arsat, and N. A. Samsuri

Universiti Teknologi Malaysia, Malaysia

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Initial Weights for Improving Convergence Characteristics in Mobile Reception of the MMSE Adaptive Array for OFDM Transmission
Hitoshi Kojima, Nobuyoshi Kikuma, Hiroshi Hirayama, Kunio Sakakibara

Nagoya Institute of Technology, Japan

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Effect of Side Mirror as Reflector for Vehicle RFID Tag Antenna
Dae-hwan Park, Kyeong-sik Min

Korea Maritime University, Korea

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Fabrication and Measurement of T-DMB/GPS Mobil Antenna for Vehicular Application
Joong Han Yoon[1], Jin Woo Lee[2], Ji Young Park[2], Seung Jae Lee[2]

[1] Silla University, Korea
[2] HCT Co. Ltd, Korea

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FC1

Antennas Measurements 3

Rm. Capri 1003

FD1

Other Systems 1

Rm. Capri 1101

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Elliptical Disk Monopole Antenna with Built-in Diode for PIM-Measurement Facility Assessment
Kenji Irie[1], Nobuhiro Kuga[1], Keizo Cho[2]

[1] Yokohama National University, Japan
[2] NTT Docomo, Inc., Japan

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Throughput Effects of the LTE DL due to LTE UE
HoKyung Son

Electronics and Telecommunications Research Institute, Korea

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Evaluation of the Performance of a Multi-Band Antenna for On-Board Applications
Vijayashree T. Bhat, Vedaprabhu B, K. J. Vinoy

Indian Institute of Science, India

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Improvement of DOA Estimation Accuracy of UWB Signal by Using Sub-Band Processing
Shohei Ohaka, Mitoshi Fujimoto, Toshikazu Hori

University of Fukui, Japan

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Design of a 2.3 GHz Band Mobile-WiMAX MIMO Antenna Using Split Ring Resonator
Uisheon Kim, Youngki Lee, Soonyong Lee, Jaehoon Choi

Hanyang University, Korea

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On Chip Transformer Design for CMOS Power Amplifiers
Hyeonseok Hwang, Moonsuk Jung, Byeonghak Jo, Gyuseok Kim, Sugyeong Kim, Hyun Paek, Yoosam Na

Samsung Electro-Mechanics, Korea

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Barium Strontium Titanate (BST) Array Antenna Covered with Hexagonal Split Ring Resonator (HSRR) Superstrate for High Gain and High Directive Antenna
Fwen Hoon Wee, Mohd Fareq Abd Malek

Universiti Malaysia Perlis, Malaysia

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Doherty Power Amplifier Integrating a Novel Adaptive Biasing Network
Shichang Chen, Quan Xue

City University of Hong Kong, China

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Experimental Study of Partially Driven Array Antennas with a Reflector
Tadashi Takano[1], Takehiro Imura[2], Midori Okumura[3]

[1] Nihon University, Japan
[2] University of Tokyo, Japan
[3] Tokai University, Japan

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Adaptive Closed-Loop Phase Source
Chengcheng Tang, Quan Xue

City University of Hong Kong, Hong Kong

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Reconfigurable Beam Steering Using Dipole and Loop Combined Antenna
Sangjun Ha[1], Yongjin Kim[2], Chang Won Jung[1]

[1] Seoul National University of Technology, Korea
[2] Inha Technical College, Korea

1050 – 1110

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Small Circularly Polarized E-Shaped Virtually Shorted Patch Antenna
Kwok Kan So, Kung Bo Ng, Hang Wong, Kwai Man Luk, Chi Hou Chan, Quan Xue

City University of Hong Kong, China

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Ultra Low Profile Inverted L Antenna for 2.45 GHz RFID Reader
Mitsuo Taguchi, Tetsuya Yamashita

Nagasaki University, Japan

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Reducing the SAR Values of Mobile Terminal Antennas
Juho Poutanen, Pertti Vainikainen

Aalto University School of Science and Technology, Finland

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Aperture-Coupled Differentially-Fed Dielectric Resonator Antenna
Cheng-Xiang Hao[1], Bin Li[1], Kwok Wa Leung[2], Xin-Qing Sheng[1]

[1] Beijing Institute of Technology, China
[2] City University of Hong Kong, Hong Kong

FB2
Antenna Array 2

Rm. Capri 1101

1030 – 1050

160
Study of Rectangular Waveguide Broad-Wall Compound Slot Equivalent Circuit Model
Ignacio Montesinos-Ortego[1],2, Miao Zhang[2], Manuel Sierra-Pérez[1], Jiro Hirokawa[2], Makoto Ando[2]

[1] Universidad Politécnica de Madrid , Spain
[2] Tokyo Institute of Technology, Japan

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Radiation Characteristics of a Spiral GAA and a Loop GAA
Yasushi Iitsuka, Junji Yamauchi, Hisamatsu Nakano

Hosei University, Japan

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An Experimental Study on an Accurate UWB Radar Imaging Method for a Target with Unknown Motion Using a Small Number of Antennas
Yuji Matsuki, Takuya Sakamoto, Toru Sato

Kyoto University, Japan

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Feasibility of Dual-Polarization Operation in a Slot Array by Multi-Layer Full-Corporate Waveguide Feeds
Miao Zhang, Jiro Hirokawa, Makoto Ando

Tokyo Institute of Technology, Japan

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Analysis Design of Broad-Beam MSA Array Using Cavity BackSlot-Coupling
Thana Puklibmoung, Piyaporn Krachodnok, Rangsan Wongsan

Suranaree University of Technology, Thailand

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FC2
Planar Antennas

Rm. Capri 1003

FD2
RF/Microwave Filters

Rm. Capri 1101

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Mai A. R. Osman, M. Kamal A. Rahim

University Technology Malaysia, Malaysia

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Characteristics of Dual-Band Microstrip Filter with Modified E-Shape Resonator
Nattaset Mhudtongon, Kittisak Phaebua, Chuwong Phongcharoenpanich

King Mongkut's Institute of Technology Ladkrabang, Thailand

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Circularly Polarized Square Microstrip Antenna Fed by Proximity Coupling
Junho Choi[1], Sang-Min Han[2], Seongmin Pyo[1], Young-Sik Kim[1]

[1] Korea University, Korea
[2] Soonchunhyang University, Korea

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Novel Tri-Band Microstrip Bandpass Filter Using Crossed Open Stubs with Different Lengths
Wenjie Feng[1,2], Wenquan Che[1], Quan Xue[2]

[1] Nanjing University of Science and Technology, China
[2] City University of Hong Kong, China

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Dual-Band Bench Feed Textile Antenna
Nurul Husna Mohd Rais1, Mohd Fareq Abdul Malek1, Ping Jack Soh1,2, Guy A. E
. Vandenbosch2

1Universiti Malaysia Perlis, 2Katholieke Universiteit Leuven, 1Malaysia, 2Belgium

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Design of Dual-Band Bandpass Filter with Controllable Bandwidths
Xiu Yin Zhang[1], Yuan Chun Li[2], Quan Xue[2], Chi Hou Chan[2]

[1] South China University of Technology, China
[2] City University of Hong Kong, Hong Kong

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[1] University of Fukui, Japan
[2] NTT Docomo, Inc., Japan

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[1] University Kebangsaan Malaysia, Malaysia
[2] University of Hong Kong, China
[3] National Defence Academy, Japan

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[1] Universiti Kebangsaan Malaysia, Malaysia
[2] Universiti Tun Hussein Onn Malaysia, Malaysia

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[1] Brunel University, United Kingdom
[2] University of Hong Kong, Hong Kong

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[1] Tohoku University, Japan
[2] Sendai National College of Technology, Japan

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[1] Southeast University, China
[2] University College London, United Kingdom

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[1] Soonchunhyang University, Korea
[2] Samsung Tales Ltd., Korea

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[1] Suranaree University of Technology, Thailand
[2] King Mongkut's Institute of Technology Ladkrabang, Thailand

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[1] Suranaree University of Technology, Thailand
[2] King Mongkut's Institute of Technology Ladkrabang, Thailand

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