PIERS 2010 Xi'an

Progress In Electromagnetics Research Symposium

Program

March 22–26, 2010
Xi'an, CHINA

www.emacademy.org
www.piers.org

For more information on PIERS, please visit us online at www.emacademy.org or www.piers.org.

CONTENTS

TECHNICAL PROGRAM SUMMARY

Monday AM, March 22, 2010

Monday PM, March 22, 2010

Tuesday AM, March 23, 2010

Tuesday PM, March 23, 2010

Wednesday AM, March 24, 2010

Wednesday PM, March 24, 2010

Thursday AM, March 25, 2010

Thursday PM, March 25, 2010

Progress In Electromagnetics Research Symposium
March 22–26, 2010
Xi'an, CHINA

PIERS 2010 XI'AN ORGANIZATION

PIERS Founding Chair

J. A. Kong, MIT, USA

PIERS Chair

L. Tsang, University of Washington, USA

PIERS 2010 Xi'an General Chair

C. Jiang, Northwestern Polytechnical University, CHINA

PIERS 2010 Xi'an Organizing Committee Chair

J. Xu, Northwestern Polytechnical University, CHINA

PIERS 2010 Xi'an International Advisory Committee

S. Barmada
L. C. Botten
C.-H. Chan
W.-C. Chew
C-K. Chou
H.-T. Chuah
S.-T. Chun
N. Engheta
A. K. Fung
Z.-H. Gu
L. Gurel
T. M. Habashy
M. Hallikainen
Y. Hara
H.-C. Huang
A. Ishimaru
E. Jakeman
K. Kobayashi
L.-W. Li
I. V. Lindell
S.-G. Liu
K.-M. Luk
S. Mano
G. D. McNeal
K. K. Mei
Y. Miyazaki
P. Pampaloni
A. Priou
K. Senne
R. Shin
M. Tateiba
K. Yasumoto
W.-X. Zhang

PIERS 2010 Xi'an Technical Program Committee

S. J. Anderson
A. Baghai-Wadji
G. Berginc
W. M. Boerner
H. Braunisch
C.-T. Chan
H. W. Chang
H.-S. Chen
K.-S. Chen
T.-J. Cui
Y. Du
A. Elsherbeni
H. T. Ewe
H. C. Fernandes
S. He
W. Hong
Y.-Q. Jin
Q.-H. Liu
S. Lucyszyn
J. T. Lue
A. Massa
M. Moghaddam
Z.-P. Nie
Y. Okuno
M. Oristaglio
J. Pribetich
R. Ramer
L.-X. Ran
C. M. Rappaport
A. K. Sarychev
C. Seo
X.-Q. Sheng
Y. V. Shestopalov
J.-C. Shi
A. Sihvola
M.-S. Tong
S. Tjuatja
D. P. Tsai
J. Vrba
M. Y. Xia
G. Xie
T. S. Yeo
B.-I. Wu
C. J. Wu
X.-M. Zhang
J. Zhou

PIERS 2010 Xi'an Organizing Committee

G. Chen	H.-S. Chen	X. Gao	S. Gong
J. T. Huangfu	Q. Jiang	S. Lee	B. Li
P. Li	Y. Li	Z.-Y. Li	G. Wei
B. I. Wu	P.-L. Xie	S. Xie	L. Ye
X. M. Zhang	K. Zheng		

PIERS 2010 XI'AN SESSION ORGANIZERS

D.-C. Chang	H.-W. Chang	K.-S. Chen	W. C. Chew
C-K. Chou	X.-L. Ding	Y. Du	B. Elouadi
H. T. Ewe	D. Felbacq	G. Franceschetti	E. Gescheidtová
S. A. Gredeskul	B. Guizal	M. Han	G. Hu
R.-B. Hwang	K. Iwatsuki	G. V. Jandieri	L. K. Jian
J.-H. Jou	Y. S. Kivshar	K. Kobayashi	C. Kostov
R. Kubacki	Y.-C. Lan	J. F. László	J.-F. Lee
C.-F. Li	J. Li	Z. Li	P. Liu
Y. Lu	J. T. Lue	A. Michette	H. O. Moser
M. Oristaglio	P. Osmokrović	K. Ouchi	Z. Peng
I. M. Pinto	C.-W. Qiu	Y. V. Shestopalov	J. Shi
S. Tjuatja	M. S. Tong	D. P. Tsai	J. Vrba
S. D. Wall	G. Wang	H. Wang	C.-J. Wu
Z.-S. Wu	G. Xie	T.-J. Yang	W.-Y. Yin
Y. Yu	P. P. Yupapin	Q. Zeng	Z. Zeng
H. Zhang	X. Zhang	X. Zheng	

PIERS 2010 XI'AN EXHIBITOR

- ATK National Capital Region (www.magictoolsuite.com, www.lspsuite.com)
- Wavenology EM (www.waveadvance.com.cn)

PIERS 2010 XI'AN SPONSORS

- Northwestern Polytechnical University
- National Key Laboratory of Space Microwave Technology
- Zhejiang University
- The Electromagnetics Academy at Zhejiang University
- MIT Center for Electromagnetic Theory and Applications/Research Laboratory of Electronics
- The Electromagnetics Academy

SYMPOSIUM VENUE

The 2010 Progress in Electromagnetics Research Symposium will be held on March 22–26, 2010, at Jianguo Hotel Xi'an, China. During the symposium, the PIERS OFFICE will be located in Jianguo Hotel Xi'an.

REGISTRATION

The PIERS technical sessions will begin on Monday morning, March 22, 2010 at Jianguo Hotel Xi'an. You may register in the PIERS OFFICE on Sunday, from 13:00 to 18:00, or during the symposium from 8:00 through 17:00, March 22-25, 2010.

The on-site registration fee is US$580. The student registration fee is US$350 (a valid student ID is required). If you have pre-registered and paid, your name badge and symposium program will be ready for you to pick up at the registration desk during the symposium. Please wear your name badge throughout the meeting. Access to the coffee break, interactive areas, and technical sessions will be prohibited if a name badge is not visible.

SPECIAL EVENTS

Reception

On Sunday, March 21, 2010, from 18:00 to 20:00, symposium reception will take place at Jianguo Hotel Xi'an. For registered PIERS participants, the reception fee is free. For unregistered companions, the price is CNY 100 per person. Please make online reservation in advance at PIERS web site.

Symposium Banquet

On Wednesday evening, March 24, 2010, from 18:30 to 20:30, the symposium banquet is planned for PIERS participants and their guests. The banquet fee is CNY 300 per person. A limited number of banquet tickets will be sold on a first-come, first-served basis. Please make online reservation in advance and pay cash at PIERS check-in desk.

PIERS ONLINE

Information on PIERS 2010 Xi'an and future PIERS is posted at www.piers.org.

GUIDELINE FOR PRESENTER

Oral Presentations

- **Load and TEST presentation files in advance:**
  Presenting authors should upload and test presentation files in the PIERS OFFICE no later than 12 hours before the scheduled talk. Presenters are not allowed to detach the session computer and attach their own notebook/laptop to the LCD projector in session rooms.
- **Presentation files format:**
  PDFs and Powerpoint files are recommended. Movies or animations in MPEG, Windows Media, etc, should be tested in PIERS computer in PIERS OFFICE no later than half day before the session. Presentation files in USB disk, CD-ROM, DVD are acceptable by PIERS Computer.
- **Report to Session Chair:**
  Presenters are required to report to their session chairs at least 10 minutes prior to the start of their session.
- **20 mins time limit:**
  Each oral presentation, including questions and answers, should be less than 20 minutes.
- **DO NOT change presentation sequence:**
  Session Chair, please be present in the session room at least 15 minutes before the start of the session and must strictly observe the starting time and time limit of each talk and refrain from changing paper presentation sequence.

Presenters choosing to use overhead projectors with transparencies, please inform PIERS OFFICE to prepare in advance.

Poster Presentations

One panel (about 100(W) x 200(H) cm) will be available for each poster.

Poster Session 1 will be held from 9:00 to 16:00 on Tuesday, March 23, 2010, Poster Session 2 will be held from 9:00 to 16:00 on Wednesday, March 24, 2010, and Poster Session 3 will be held from 9:00 to 16:00 on Thursday, March 25, 2010. All presenters are required to mount their papers at the beginning of the session and remove them at the end of their sessions.

Presenters should indicate time slots of their presence on the panel and be present for interactive questions within the posted time slots. All presenters are suggested to be present during 10:00–10:20 and 15:00–15:20.

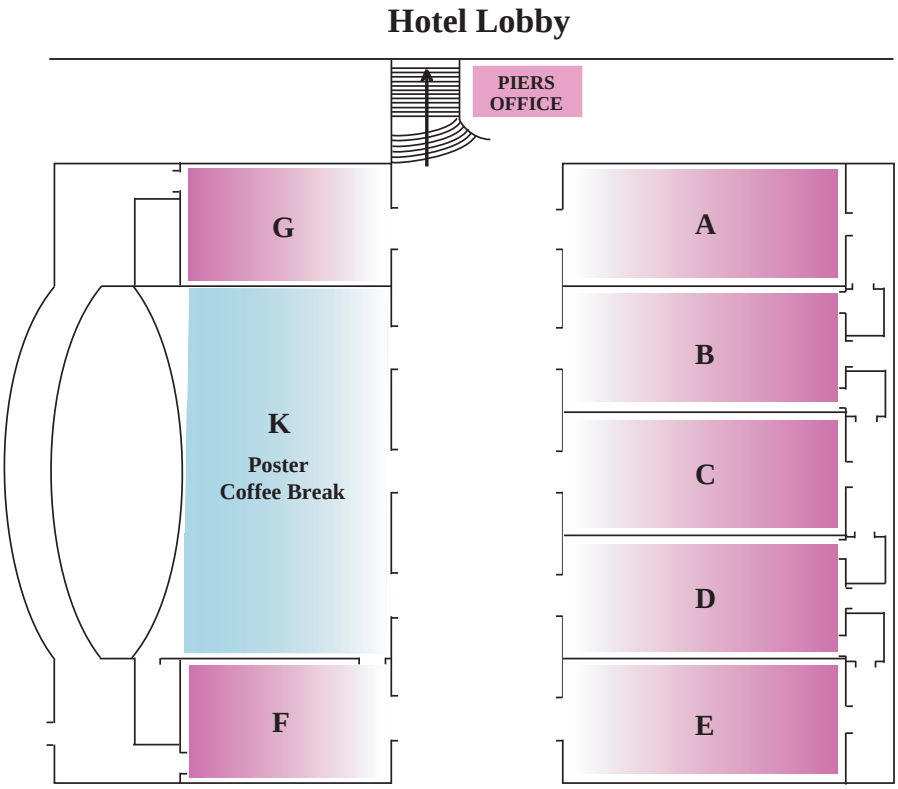
ACCOMMODATION

Participants are responsible for making their own housing arrangements. The PIERS Host Hotel is Jianguo Hotel Xi'an. Online Reservation is available. Please visit PIERS 2010 website for detailed information. The information below is provided for your convenience.

Jianguo Hotel

http://www.hotelxianjianguo.com/ Email: res@hotelxianjianguo.com
Address: 2 Hu Zhu Road, Xi'an, China, Fax: +86-29-83237180

MAP OF CONFERENCE SITE



Jianguo Hotel Xi'an
Address: 2 Hu Zhu Road, Xi'an, CHINA

GENERAL INFORMATION

LANGUAGE

The official language for the Symposium is English. However, in the public society, Chinese mandarin is commonly spoken.

CURRENCY AND CREDIT CARDS

Chinese currency is CNY with its monetary unit CNY (*Yuan*). The exchange rate is 1 USD for about 6.8 CNY. The credit cards and cash in US dollars are acceptable at the hotel registration desk in PIERS Host Hotel. This is also the case in most large shopping centers and other hotels.

TAX AND TIP

Tipping is by no means a traditional Chinese custom. Please help keep the good custom and do not tip a waiter/waitress or a taxi driver and other persons who provides regular service. Take back any change that is rightfully yours. All advertised prices include tax. Bargaining is quite common on buying merchandise especially from Street Markets.

TAXI

Usually, a taxi is available along the roadsides, while you wave for it. However, on main streets it is only available at taxi stops or in front of a hotel.

BUSINESS OPENING HOURS

- **Bank and Post Office**
  Opening hours: 9:00 – 17:00, from Monday to Sunday.
- **Government Office**
  Opening hours: 8:00 – 17:00, from Monday to Friday.
- **Stores**
  Opening hours: usually 10:00 to 21:00, but large shopping centers serve till 22:00, from Monday to Sunday.

ELECTRICITY

In China, the standard outlets provide AC of 220 V/50 Hz.

PIERS 2010 XI'AN TECHNICAL PROGRAM

Session 1A1
Advanced Interferometric SAR Techniques and Their Engineering and Geophysical Applications

Monday AM, March 22, 2010

Room A

Organized by Zhenhong Li, Xiao-Li Ding

Chaired by Zhenhong Li, Xiao-Li Ding

08:20 Subsidence Detection by PSInSAR Based on High Resolution TerraSAR-X Images
Guoxiang Liu (*Southwest Jiaotong University, China*); *Hongguo Jia* (*Southwest Jiaotong University, China*); *Rui Zhang* (*Southwest Jiaotong University, China*); *Minyi Cen* (*Southwest Jiaotong University, China*); *Tonggang Zhang* (*Southwest Jiaotong University, China*);

08:40 Deformation Rate Estimation with Small SAR Data Sets: Case Study for Shanghai Region
Lei Zhang (*The Hong Kong Polytechnic University, China*); *Xiao-Li Ding* (*The Hong Kong Polytechnic University, China*); *Zhong Lu* (*U. S. Geological Survey, USA*);

09:00 Datong Land Subsidence Monitoring with Short Baseline Subsets (SBAS) InSAR Techniques and MODIS Data
Chaoying Zhao (*Chang'an University, China*); *Qin Zhang* (*Chang'an University, China*); *Chengsheng Yang* (*Chang'an University, China*); *Jing Zhang* (*Chang'an University, China*);

09:20 D-InSAR and PS Technology Monitoring Tianjin Urban Subsidence
Tao Li (*Wuhan University, China*); *Tingchen Jiang* (*Wuhan University, China*); *Sichun Long* (*Wuhan University, China*); *Jingnan Liu* (*Wuhan University, China*); *Ye Xia* (*GeoForschungsZentrum Potsdam, Germany*);

09:40 InSAR Time Series with Atmospheric Estimation Model for Mapping City Subsidence in the Wuxi-Changzhou Region, Eastern China
Zhenhong Li (*University of Glasgow, UK*); *Jianqiang Wu* (*Geological Survey of Jiangsu Province, China*); *Xiaojun Yuan* (*Geological Survey of Jiangsu Province, China*); *Huogen Chen* (*Geological Survey of Jiangsu Province, China*); *Dengming Zhang* (*Geological Survey of Jiangsu Province, China*); *Jun Yu* (*Geological Survey of Jiangsu Province, China*); *Yulin Xu* (*Geological Survey of Jiangsu Province, China*); *Shuliang Wu* (*Geological Survey of Jiangsu Province, China*); *Wei Li* (*Geological Survey of Jiangsu Province, China*); *Yefei Zhu* (*Geological Survey of Jiangsu Province, China*);

10:00 **Coffee Break**

10:20 Multi-mode SAR Interferometry Processing Research and Implementation
Cunren Liang (*Peking University, China*); *Qiming Zeng* (*Peking University, China*); *Jianying Jia* (*Peking University, China*); *Xiao Zhou* (*Peking University, China*); *Jian Jiao* (*Peking University, China*); *Xi'ai Cui* (*Peking University, China*);

10:40 Mitigation of Atmospheric Water-vapour Effects on Spaceborne Interferometric SAR Imaging through the MM5 Numerical Model
Daniele Perissin (*Chinese University of Hong Kong, China*); *E. Pichelli* (*University of L'Aquila, Italy*); *R. Ferretti* (*University of L'Aquila, Italy*); *Fabio Rocca* (*Politechnic of Milan, Italy*); *N. Pierdicca* (*Sapienza University of Rome, Italy*);

11:00 MERIS Water Vapour Correction Model for WS InSAR
Zhenhong Li (*University of Glasgow, UK*); *Paolo Pasquali* (*Sarmap s.a., Cascine di Barico, Switzerland*); *Alessio Cantone* (*Sarmap s.a., Cascine di Barico, Switzerland*);

11:20 Determination of Fault Slip of 2008 Ms8.0 Wenchuan China Earthquake Using Coseismic Displacements by GPS and DInSAR
Jicang Wu (*Tongji University, China*); *Guoxiang Liu* (*Southwest Jiaotong University, China*); *Yongqi Chen* (*The Hong Kong Polytechnic University, China*); *Shouchao Hu* (*Tongji University, China*); *Guojie Meng* (*China Earthquake Administration, China*);

11:40 Postseismic Deformation Following the Yutian Earthquake, China, March 21, 2008
Yangmao Wen (*Wuhan University, China*); *Caijun Xu* (*Wuhan University, China*); *Zhenhong Li* (*University of Glasgow, UK*);

Session 1A2a
Fields Coupling and Integrated Design of Electromagnetics, Temperature and Structure for Antennas and Electronic Equipments

Monday AM, March 22, 2010

Room B

Chaired by Hongsheng Chen

08:00 Electromechanical Coupling Optimization Design of Large Reflector Antennas Include Feed (Sub Reflector) Support Structure
Peng Li (*Xidian University, China*); *Dongwu Yang* (*Xidian University, China*); *Fei Zheng* (*Xidian University, China*);

08:20 Updating Methods for Antenna Servomechanism Structures
Hong Bao (*Xidian University, China*); *Congsi Wang* (*Xidian University, China*); *Jun Cheng* (*Xidian University, China*);

08:40 Improved Coupling Matrix Extracting Method for Chebyshev Coaxial-cavity Filter
Hongbo Ma (*Ministry of Education, China*); *Daiwen Yang* (*Ministry of Education, China*); *Jinzhu Zhou* (*Ministry of Education, China*);

09:00 Analysis of Integrated Structure-electromagnetic Wave Basing on the Same Discrete Meshes
Li-Wei Song (*Xidian University, China*);

09:20 Subreflector Real-time Compensation for Main Reflector Deformation of Shaped Cassegrain Antenna
Wei Wang (*Xidian University, China*); *Guojun Leng* (*Xidian University, China*); *Huaping Li* (*Xidian University, China*);

09:40 Performance of Planar Slotted Waveguide Arrays with Surface Distortion
Li-Wei Song (*Xidian University, China*);

10:00 **Coffee Break**

Session 1A2b
Electromagnetic Modeling, Inversion, and Applications 1

Monday AM, March 22, 2010

Room B

Organized by Ganquan Xie, Michael Oristaglio, Jianhua Li

Chaired by Ganquan Xie, Tzon-Tzer Lu

10:20 Performance Enhancement of FDTD-PIC Beam-wave Simulations Using Multi-core Platforms
Andrew J. Woods (*ATK-Mission Systems Group, USA*); *Lars D. Ludeking* (*ATK-Mission Systems Group, USA*); *David L. Rhoades* (*ATK-Mission Systems Group, USA*);

10:40 Performance Enhancement of FDTD-PIC Plasma-wave Simulations Using GPU Processing
Lars D. Ludeking (*ATK-Mission Systems Group, USA*); *Andrew J. Woods* (*ATK-Mission Systems Group, USA*);

11:00 The Method of Fundamental Solutions for Helmholtz Equation
Tzon-Tzer Lu (*National Sun Yat-sen University, Taiwan*); *Zi-Cai Li* (*National Sun Yat-sen University, Taiwan*);

11:20 Analysis of Electromagnetic Transients by Corona in Transmission Lines: Proposal of an Alternative Frequency-dependent Model by Lumped Elements and State Equations Representation
Sérgio Kurokawa (*University of São Paulo State, Brazil*); *Eduardo Coelho Marques Da Costa* (*State University of Campinas, Brazil*); *Germano Ferreira Wedy* (*University of São Paulo State, Brazil*); *José Pissolato Filho* (*State University of Campinas, Brazil*); *Afonso José Do Prado* (*University of São Paulo State, Brazil*);

11:40 Analysis of Electromagnetic Transients in Transmission Lines by a Frequency-dependent Three-phase Modeling based on State-space Representation: Numerical and Analytical Solution
Sérgio Kurokawa (*University of São Paulo State, Brazil*); *Eduardo Coelho Marques Da Costa* (*State University of Campinas, Brazil*); *José Pissolato Filho* (*State University of Campinas, Brazil*); *Afonso José Do Prado* (*University of São Paulo State, Brazil*);

12:00 Ill-Conditioning of Finite Difference Equations for Singularly Perturbed Differential Equations
Zi-Cai Li (*National Sun Yat-sen University, Taiwan*); *Song Wang* (*The University of Western Australia, Australia*); *H. T. Huang* (*I-Shou University, Taiwan*); *Yimin Wei* (*Fudan University, China*);

Session 1A3
X-Ray Sources, X-Ray Optics and Applications of Focused X-Ray Probes

Monday AM, March 22, 2010
Room C
Organized by Alan Michette
Chaired by Slawka Pfauntsch

08:20 Focused X-ray Probes for Studies of Radiation-induced Cancers
Alan Michette (*King's College London, UK*);

08:40 X-ray Microbeams for Radiobiological Studies: Current Status and Future Challenges
Giuseppe Schettino (*Queen's University Belfast, UK*); *Melvyn Folkard* (*University of Oxford, UK*); *Boris Vojnovic* (*University of Oxford, UK*); *Alan Michette* (*King's College London, UK*); *K. M. Prise* (*Queen's University Belfast, UK*);

09:00 Design of Narrowband Multilayer for Cr K_{α} X-rays
Hui Jiang (*King's College London, UK*); *Alan Michette* (*King's College London, UK*); *Slawka Pfauntsch* (*King's College London, UK*); *D. Hart* (*King's College London, UK*); *M. Shand* (*King's College London, UK*);

09:20 A W/B4 C Transmission Multilayer as an Achromatic Phase Shifter for XUV Polarization Measurements
Franz Schäfers (*BESSY GmbH, Germany*); *Andreas Gaupp* (*BESSY GmbH, Germany*); *Michael A. MacDonald* (*STFC Daresbury Laboratory, UK*);

10:00 **Coffee Break**

10:20 Progress in the X-Ray Free-Electron Laser Research — Tutorial Review
Toshiyuki Shiozawa (*Chubu University, Japan*);

10:40 Generation of X-rays Based on Quantum Coherence
Yuri Rostovtsev (*University of North Texas, USA*);

11:00 Nanoscale Imaging and Diffraction with Ultrafast XUV Radiation
R. T. Chapman (*University of Southampton, UK*); *Ben E. Mills* (*University of Southampton, UK*); *C. F. Chau* (*University of Southampton, UK*); *J. G. Frey* (*University of Southampton, UK*); *W. S. Brocklesby* (*University of Southampton, UK*);

Session 1A4a
Electromagnetic Theory

Monday AM, March 22, 2010
Room D
Chaired by Ari Henrik Sihvola, Zi-Hua Weng

08:00 Relaxation and Resonance as Dispersion Mechanisms in Mixtures
Ari Henrik Sihvola (*Helsinki University of Technology, Finland*); *Jiaran Qi* (*Helsinki University of Technology, Finland*);

08:20 Energies in Electromagnetic Field and Gravitational Field
Zi-Hua Weng (*Xiamen University, China*);

08:40 Electromagnetic Sources and Observers in Motion I — Evidence Supporting the EM Propagation Medium for the Transmission of Light
S. E. Wright (*ECASS Technologies Ltd., UK*);

09:00 Electromagnetic Sources and Observers in Motion II — Einstein's Ether-less Relativity Versus Lorentz's Medium Based Theory
S. E. Wright (*ECASS Technologies Ltd., UK*);

09:20 On 3D Cherenkov Wave Calculation from Split-quaternion Space
Geert C. Dijkhuis (*Convectron N. V., The Netherlands*);

09:40 On the $\boldsymbol{A}$, $\boldsymbol{B}$, $\boldsymbol{C}$ Numbers and Their Application in the Theory of Circular Waveguide with Azimuthally Magnetized Ferrite
Mariana Nikolova Georgieva-Grosse (*Meterstrasse 4, Germany*); *Georgi Nikolov Georgiev* (*University of Veliko Tirnovo "St. St. Cyril and Methodius", Bulgaria*);

10:00 **Coffee Break**

Session 1A4b
Electromagnetic Detectors of Gravitational Waves

Monday AM, March 22, 2010

Room D

Organized by Innocenzo M. Pinto

Chaired by A. Mike Cruise, Ari Henrik Sihvola

10:20 Very High Frequency Gravitational Wave Detectors
A. Mike Cruise (*University of Birmingham, UK*);

10:40 Detection of High-frequency Gravitational Waves by a Coupling Electromagnetic Resonance System
Fang-Yu Li (*Chongqing University, China*); *Nan Yang* (*Chongqing University, China*);

11:00 Cosmic Deceleration Parameter $q(Z)$ Dependence upon Gravitons? Implications for DM Models, DE, and the Search for Gravitons as Measured via E and M Interactions in Detectors
Andrew Walcott Beckwith (*American Institute of Beamed Energy Propulsion, USA*);

Session 1P1
Remote Sensing, GPR, and SAR

Monday PM, March 22, 2010

Room A

Chaired by Shigehisa Nakamura, Renbiao Wu

13:20 A Comparison of Genetic Algorithm and Differential Evolution Methods for the Estimation of Low Atmospheric Refractivity Profiles from Radar Sea Clutter
Bo Wang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Zhenwei Zhao* (*China Research Institute of Radio-wave Propagation, China*); *Hong-Guang Wang* (*China Research Institute of Radio-wave Propagation, China*);

13:40 Underground Diseases Identification of Airport Runway Using GPR
Xuejing Song (*Civil Aviation University of China, China*); *Renbiao Wu* (*Civil Aviation University of China, China*); *Jiaxue Liu* (*Civil Aviation University of China, China*);

14:00 Satellite Thermal Monitoring of Arctic Ice Front in Relation to Dynamics of a Polar Orbital Ocean Circulation
Shigehisa Nakamura (*Kyoto University, Japan*);

14:20 Satellite Thermal Monitoring of Ocean Water Front Formation after an Intruding Bering Sea Water into the Arctic Sea
Shigehisa Nakamura (*Kyoto University, Japan*);

14:40 Satellite Thermal Monitoring of Ocean Front Evolution in Relation to Ocean Climate in the North Atlantic, Pacific and Arctic Sea
Shigehisa Nakamura (*Kyoto University, Japan*);

15:00 **Coffee Break**

15:20 Evaluation of the Local Standard Deviation Method for SNR Estimation on Remotely Sensed Optical Imagery
Xinhong Wang (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Bo Zhu* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingling Ma* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingli Tang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Chuanrong Li* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*);

15:40 Cross-calibration of HJ-1B/CCD with Terra/MODIS
Lingling Ma (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lei Xu* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Xinhong Wang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingli Tang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Chuanrong Li* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*);

16:00 A Comparison of LSD Method and SSDC Method for Estimating SNRs of Imaging Spectrometer Data
Bo Zhu (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Xinhong Wang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingling Ma* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Lingli Tang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Chuanrong Li* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*);

16:20 Possible Abnormal Phenomenon of the Atmospheric Water Vapor before Hengchun Earthquake
Yuntao Ma (*Northeastern University, China*); *Yiyang Zhao* (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*);

16:40 The Time-space Relationship between Strain, Temperature and Acoustic Emission of Loaded Rock
Yingwei Shi (*Northeastern University, China*); *Qun He* (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*);

Session 1P2
Electromagnetic Modeling, Inversion, and Applications 2

Monday PM, March 22, 2010

Room B

Organized by Ganquan Xie, Michael Oristaglio, Jianhua Li

Chaired by Ganquan Xie, Chow-Son Chen

13:20 Modelling the Effect of a Defect on Crosstalk Signals under the Weak Coupling Assumption
Maud Franchet (*CEA LIST, France*); *Marc Olivas Carrion* (*CEA LIST, France*); *Nicolas Ravot* (*CEA LIST, France*); *Laurent Sommervogel* (*CEA LIST, France*);

13:40 A Theoretical Study of Transition Probabilities for Rare Gas Atoms in an Alternating Electric Field
Elena Vladimirovna Koryukina (*Tomsk State University, Russia*);

14:00 Influence of Carbon Coatings on the Breakdown Threshold for an S-band Pillbox Output Window
Fang Zhu (*Institute of Electronics, Chinese Academy of Sciences, China*); *Zhaochuan Zhang* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Jirun Luo* (*Institute of Electronics, Chinese Academy of Science, China*);

14:20 Adaptive Finite Element Methods for Time-dependent and Time-harmonic Eddy Current Problems
Weiying Zheng (*Academy of Mathematics and System Sciences, Chinese Academy of Sciences, China*);

14:40 Resistance to Earth of Grounding Grids in Tow-layer Soil Structure Using FEM and GA
Pooya Hajebi (*Yazd University, Iran*); *Abbas Ali Heidari* (*Yazd University, Iran*); *Ahmad Mirzaei* (*Yazd University, Iran*);

15:00 **Coffee Break**

15:20 Analysis for the Stability of Hughes-type Coupled Cavity in an Extended-interaction Klystron
Jian Cui (*Institute of Electronics, Chinese Academy of Sciences, China*); *Jirun Luo* (*Institute of Electronics, Chinese Academy of Science, China*); *Min Zhu* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Wei Guo* (*Institute of Electronics, Chinese Academy of Sciences, China*);

15:40 Experimental Study on the Microwave Monitoring of Rock Stress and Fracture
Zhongyin Xu (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*); *Zhe Feng* (*Northeastern University, China*);

16:00 Time-domain Electromagnetic Surveying: 3D Modeling and Interpretation
Chow-Son Chen (*National Central University, Taiwan*); *Ganquan Xie* (*GL Geophysical Laboratory, USA*); *Jianhua Li* (*GL Geophysical Laboratory, USA*);

16:20 Analysis of Saturation Effects on the Operation of Magnetic-controlled Switcher Type FCL
Faramarz Faghihi (*Islamic Azad University South Tehran Branch, Iran*); *Homa Arab* (*Islamic Azad University South Tehran Branch, Iran*);

16:40 Modeling and Analysis of Magnetostatic Field Disturbed by an Elliptic Cavity
Xiaoqing Jin (*Northwestern University, USA*); *Qian Wang* (*Northwestern University, USA*); *Leon M. Keer* (*Northwestern University, USA*);

Session 1P3
Vectorial Properties and Physical Effects of Finite Light Beams and Their Applications in Optical Trapping and Manipulation

Monday PM, March 22, 2010

Room C

Organized by Chun-Fang Li

Chaired by Guohong Ma, Chun-Fang Li

13:00 Optically Coherent Manipulation of Spin Dynamics in CdTe Crystal at Room Temperature
Hong Ma (*Shanghai University, China*); *Zuanming Jin* (*Shanghai University, China*); *Guohong Ma* (*Shanghai University, China*); *Weiming Liu* (*National University of Singapore, Singapore*); *Sing Hai Tang* (*National University of Singapore, Singapore*);

13:20 Radiation Force of a Focused Stochastic Electromagnetic Beam
Chengliang Zhao (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

13:40 Radiation Forces for Cosine-Gaussian Beams on a Rayleigh Particle
Yunfeng Jiang (*Zhejiang University, China*); *Xuanhui Lu* (*Zhejiang University, China*);

14:00 Energy Flux Method for Goos-Hänchen Shift in Frustrated Total Internal Reflection and Its Applications
Xi Chen (*Shanghai University, China*); *Tao Duan* (*Xi'an Institute of Optics and Precision Mechanics of CAS, China*); *Chun-Fang Li* (*Shanghai University, China*);

14:20 Guided Modes in a Composite Left-handed Material Waveguide
Ying He (*Shanghai University, China*); *Yan-Fang Yang* (*Shanghai University, China*); *Chun-Fang Li* (*Shanghai University, China*);

14:40 Real-time Generation the Non-uniformly Polarized Beams with the Liquid Crystal Retarder
Yan-Fang Yang (*Shanghai University, China*); *Kai Xu* (*Shanghai University, China*); *Ying He* (*Shanghai University, China*); *Xiao-Hong Han* (*Shanghai University, China*); *Chun-Fang Li* (*Shanghai University, China*);

15:00 **Coffee Break**

15:20 The Electron Spin Polarization Degree Measured by Femtosecond Pump-probe Reflection Spectroscopy
Zuanming Jin (*Shanghai University, China*); *Hong Ma* (*Shanghai University, China*); *Guohong Ma* (*Shanghai University, China*); *Qibiao Zhu* (*Shanghai University, China*);

15:40 There Does Not Exist the Paradox about the Spin of Circularly Polarized Plane Wave
Chun-Fang Li (*Shanghai University, China*);

16:00 Self-trapping of Necklace-ring Vector Beam in Nonlocal Media
Ming Shen (*Shanghai University, China*); *Jielong Shi* (*Shanghai University, China*); *Chun-Fang Li* (*Shanghai University, China*);

16:20 Formation of the Optical Spatial Comb by the Reflections and Transmissions on the Surfaces of the Weakly Active Slab
Tao Duan (*Xi'an Institute of Optics and Precision Mechanics, Academia Sinica, China*); *Chun-Fang Li* (*Xi'an Institute of Optics and Precision Mechanics, Academia Sinica, China*);

16:40 The Representation of the Beams with $e^{il\phi}$ Phase Factor for Two Special Cases of the Characteristic Unit Vector
Yan Zhang (*Shanghai University, China*); *Wen-Jun Zhang* (*Shanghai University, China*); *Chun-Fang Li* (*Shanghai University, China*);

17:00 Electron Spin Dynamics in Bulk InP Crystal by Pump Probe Reflectivity Spectroscopy
Hong Ma (*Shanghai University, China*); *Zuanming Jin* (*Shanghai University, China*); *Dong Li* (*Shanghai University, China*); *Guohong Ma* (*Shanghai University, China*);

17:20 Giant Bistable Shifts in a One-dimensional Photonic Crystal Containing Indefinite Metamaterials
Wei Zhang (*Shanghai University, China*); *Yuan-Yuan Chen* (*Shanghai University, China*); *Jielong Shi* (*Shanghai University, China*);

Session 1P4
Metamaterial, Properties, and Applications

Monday PM, March 22, 2010

Room D

Organized by Yalin Lu

Chaired by Yalin Lu

13:20 Broaden the Bandwidth of Patch Antenna by Using Inhomogeneous Metamaterial Substrate
Lei Xing (*Northwestern Polytechnical University, China*); *Qian Xu* (*Northwestern Polytechnical University, China*); *Jing Li* (*Northwestern Polytechnical University, China*); *Zhixia Wei* (*Northwestern Polytechnical University, China*); *Jun Ding* (*Northwest Polytechnical University, China*); *Chen-Jiang Guo* (*Northwestern Polytechnical University, China*);

13:40 Dust Removal from Processing Plasmas by a Traveling Plasma Modulation
Yang-Fang Li (*Max-Planck-Institute for Extraterrestrial Physics, Germany*); *Hubertus Thomas* (*Max-Planck-Institute for Extraterrestrial Physics, Germany*); *G. E. Morfill* (*Max-Planck-Institute for Extraterrestrial Physics, Germany*);

14:00 Application of Periodic Structure on the Isolation and Suppression for Notebook Multi-antennas Coupling
Han-Nien Lin (*Feng-Chia University, Taiwan, R.O.C.*); *Ching-Hsien Lin* (*Feng-Chia University, Taiwan, R.O.C.*); *Chun-Chi Tang* (*Feng-Chia University, Taiwan, R.O.C.*); *Ming-Cheng Chang* (*Feng-Chia University, Taiwan, R.O.C.*);

14:20 Directivity Enhancement of Line Source by Parabolic Cylinder Made of Left-handed Metamaterials
Da-yong Zou (*Nanjing University, China*); *Rui-Xin Wu* (*Nanjing University, China*); *Min Liu* (*Nanjing University, China*); *Ping Chen* (*Nanjing University, China*);

14:40 Dynamical Green's Function Theory to Study the Optical Phenomena Related to Metamaterials
Weihua Wang (*Fudan University, China*); *Xueqin Huang* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

15:00 **Coffee Break**

15:20 Resonance and Anomalous High Transmission through Metallic Mesh Structures
Zhengyong Song (*Fudan University, China*); *Qiong He* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

15:40 Tight Binding Studies of the Coupling Effects in Metamaterials
Hao Xu (*Fudan University, China*); *Qiong He* (*Fudan University, China*); *Shiyi Xiao* (*Fudan University, China*); *Jiaming Hao* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

16:00 Tunable Metamaterial Ferrite Stepped Impedance Resonator (SIR)
Shokrollah Karimian (*The University of Manchester, UK*); *Mahmoud A. Abdalla* (*University of Cairo, Egypt*); *Zhirun Hu* (*University of Manchester, UK*);

16:20 ***a*-*b*** Plane Dielectric Discussion on Layered Multiferroic Oxides
Yalin Lu (*LORC, US Air Force Academy, USA*); *R. J. Knize* (*United Air Force Academy, USA*);

16:40 Realization of Negative Refraction via Overlapping Ferroelectric and Ferromagnetic Oxides
Yalin Lu (*United Air Force Academy, USA*); *R. J. Knize* (*United Air Force Academy, USA*);

17:00 Electromagnetic Tunneling in Nonconjugated Epsilon-negative and Mu-negative Metamaterial Pair
Yaqiong Ding (*Tongji University, China*); *Yunhui Li* (*Tongji University, China*); *Haitao Jiang* (*Tongji University, China*); *Hong Chen* (*Tongji University, China*);

Session 1P5a
Computational Electromagnetics

Monday PM, March 22, 2010

Room E

Chaired by Lars D. Ludeking

13:20 FDTD Study of a Novel Terahertz Emitter with Electrical Field Enhancement Using Surface Plasmon Resonance
Shuncong Zhong (*University of Liverpool, UK*); *Yaochun Shen* (*University of Liverpool, UK*); *Hao Shen* (*University of Liverpool, UK*); *Yi Huang* (*University of Liverpool, UK*);

13:40 PML-FDTD Method in Prolate Spheroidal Coordinates
Maoyu Zhang (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Tsinghua University, China*);

14:00 Investigation of UPML in the FDTD Analysis of Planar Microstrip Structures
Junjun Wu (*Northwestern Polytechnical University, China*); *Huiling Zhao* (*Northwestern Polytechnical University, China*); *Nakun Jing* (*Northwestern Polytechnical University, China*);

14:20 Application of Moving Coordinate FDTD Method on Electromagnetic Pulses Propagation
Yong Li (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

14:40 An Efficacious Computational Procedure to Solve Electromagnetic Transients on Transmission Lines Represented by State Equations
Eduardo Coelho Marques Da Costa (*State University of Campinas, Brazil*); *Sérgio Kurokawa* (*University of São Paulo State, Brazil*); *Afonso José Do Prado* (*University of São Paulo State, Brazil*); *José Pissolato Filho* (*State University of Campinas, Brazil*);

15:00 **Coffee Break**

Session 1P5b
Recent Progresses in Time Domain Electromagnetics

Monday PM, March 22, 2010

Room E

Organized by Qingsheng Zeng

Chaired by Qingsheng Zeng

15:20 Transient Analysis of Ultra Wideband (UWB) Pulse Propagation in Dispersive Media
Qingsheng Zeng (*Communications Research Center Canada, Government of Canada, Canada*); *Gilles Y. Delisle* (*Technology Integration Center, Technopôle Defense and Security, Canada*);

15:40 Characterization of Pulse Distortion and Performance Analysis for Indoor Ultra Wideband (UWB) Communication Systems Using a Time Domain Multipath Model
Qingsheng Zeng (*Communications Research Center Canada, Government of Canada, Canada*); *Gilles Y. Delisle* (*Technology Integration Center, Technopôle Defense and Security, Canada*);

16:00 Characterization of Time Domain Surface Impedances of a Lossy Dielectric Half Space
Qingsheng Zeng (*Communications Research Center Canada, Government of Canada, Canada*); *Gilles Y. Delisle* (*Technology Integration Center, Technopôle Defense and Security, Canada*);

16:20 Transient Electromagnetic Topology and Its Validation
Haiyan Xie (*Tsinghua University, China*); *Jianguo Wang* (*Tsinghua University, China*); *Dongyang Sun* (*Institute of Nuclear Technology, China*); *Ruyu Fan* (*Tsinghua University, China*); *Yinong Liu* (*Tsinghua University, China*);

16:40 Neural Network Techniques for Efficient Modeling of Microwave Circuits
Qijun Zhang (*Carleton University, Canada*); *Lei Zhang* (*Carleton University, Canada*); *Humayun Kabir* (*Carleton University, Canada*);

17:00 Parametric Time-domain Neural Network Models for Microwave Modeling
Qijun Zhang (*Carleton University, Canada*);

Session 1P6a
Extended/Unconventional Electromagnetic Theory, EHD (Electro-hydrodynamics)/EMHD (Electro-magneto-hydrodynamics), and Electro-biology

Monday PM, March 22, 2010

Room F

Organized by Eva Gescheidtová

Chaired by Radek Kubásek

13:00 Processing of MR Slices of Human Liver for Volumetry
Jan Mikulka (*Brno University of Technology, Czech Republic*); *Eva Gescheidtová* (*Brno University of Technology, Czech Republic*); *Karel Bartušek* (*Institute of Scientific Instruments, Academy of Sciences of Czech Republic, Czech Republic*);

13:20 Detection of Magnetization of 6 Hz, 10 μT Magnetic Field Applied Water Using PT-MI Sensor
Kaneo Mohri (*Nagoya Industrial Science Research Institute (NISRI), Japan*); *M. Fukushima* (*TRI, Foundation for Biomedical Research and Innovation, Japan*); *Yoshiyuki Mohri* (*Meijo University, Japan*); *Yuko Mohri* (*Meijo University, Japan*);

13:40 An Optimized Universal Adaptive ARC Filter Block
Martin Friedl (*Brno University of Technology, Czech Republic*); *Lubomír Frohlich* (*Brno University of Technology, Czech Republic*); *Jiří Sedláček* (*Brno University of Technology, Czech Republic*);

14:00 Processing of MR Slices of Temporomandibular Disc for 3D Visualization
Jan Mikulka (*Brno University of Technology, Czech Republic*); *Eva Gescheidtová* (*Brno University of Technology, Czech Republic*); *Karel Bartušek* (*Institute of Scientific Instruments, Academy of Sciences of Czech Republic, Czech Republic*); *Zdenek Smékal* (*Brno University of Technology, Czech Republic*);

14:20 Modeling of Saturation Characteristic of an Aspiration Condenser
Zdeněk Roubal (*Brno University of Technology, Czech Republic*); *Miloslav Steinbauer* (*Brno University of Technology, Czech Republic*); *Zoltán Szabó* (*University of Technology Brno, Czech Republic*);

14:40 Integrated Programming and Application of Genetic Algorithm and Conjugate Gradient Method
Wei Xie (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*);

15:00 **Coffee Break**

Session 1P6b
Education of Electromagnetic Theory

Monday PM, March 22, 2010

Room F

Organized by Xianmin Zhang

Chaired by Xianmin Zhang

15:20 Student Projects of Extended Study in Introductory Electromagnetics
Yang Du (*Zhejiang University, China*); *Xianmin Zhang* (*Zhejiang University, China*); *Shilie Zheng* (*Zhejiang University, China*); *Xianfeng Ye* (*Zhejiang University, China*); *Kangsheng Chen* (*Zhejiang University, China*);

15:40 Discussion on Teaching Electromagnetic Field and Wave Course
Xianfeng Ye (*Zhejiang University, China*); *Xianmin Zhang* (*Zhejiang University, China*); *Shilie Zheng* (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*);

16:00 Perspective of Electromagnetics Education
Xianmin Zhang (*Zhejiang University, China*); *Shilie Zheng* (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*); *Xianfeng Ye* (*Zhejiang University, China*); *Kangsheng Chen* (*Zhejiang University, China*);

16:20 Architecture Reform and Teaching Content Optimization of Electromagnetic Field and Wave Course
Shilie Zheng (*Zhejiang University, China*); *Xianmin Zhang* (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*); *Kangsheng Chen* (*Zhejiang University, China*);

16:40 Vivid Teaching Methods in Undergraduate Electromagnetics Education
Hongsheng Chen (*Zhejiang University, China*);

Session 1P7
Electromagnetic Wave Applications in Material Processing and Characterization

Monday PM, March 22, 2010

Room G

Organized by Juh Tzeng Lue

Chaired by Ru-Shi Liu

13:20 Magnetization Dynamics in Hexagonal Multiferroic $HoMnO_3$ Single Crystals Probed by Wavelength-tunable Time-resolved Femtosecond Spectroscopy
H. C. Shih (*National Chiao Tung University, Taiwan*); *T. H. Lin* (*National Chiao Tung University, Taiwan*); *C. W. Luo* (*National Chiao Tung University, Taiwan*); *K. H. Wu* (*National Chiao Tung University, Taiwan*); *J.-Y. Lin* (*National Chiao Tung University, Taiwan*); *T. M. Uen* (*National Chiao Tung University, Taiwan*); *T. Kobayashi* (*National Chiao Tung University, Taiwan*); *Jenh-Yih Juang* (*National Chiao Tung University, Taiwan*);

13:40 Measurement of the Dielectric Constants of Zinc Metallic Nanoparticles at Various Frequencies
Yi-Chen Yeh (*National Tsing Hua University, Taiwan*); *Juh Tzeng Lue* (*National Tsing Hua University, Taiwan*);

14:00 A Study on the Complex Permittivity of Sheet-like Carbon Nanotubes Buckypaper in X Band with Cavity Perturbation Method
Hsin-Yuan Miao (*Tunghai University, Taiwan*); *T. Y. Hou* (*Tunghai University, Taiwan*); *R. B. Yang* (*Feng Chia University, Taiwan*);

14:20 Study on the Duality of Frequency Selective Surfaces with Rectangular Complementary Elements
Xin Ma (*Northwestern Polytechnical University, China*); *Guobin Wan* (*Northwestern Polytechnical University, China*); *Ning Ren* (*Northwestern Polytechnical University, China*);

14:40 Multiple Quantum Wires Photodetector
Shu-Fen Hu (*National Taiwan Normal University, Taiwan*); *Chang Hsueh Li* (*National Taiwan Normal University, Taiwan*); *Tsug-Han Li* (*National Taiwan Normal University, Taiwan*);

15:00 **Coffee Break**

15:20 Biosensing, Cytotoxicity and Cellular Uptake Studies of Surface Modified Gold Nanorods
Ru-Shi Liu (*National Taiwan University, Taiwan*); *Harshala J. Parab* (*National Taiwan University, Taiwan*); *Hao Ming Chen* (*National Taiwan University, Taiwan*); *Jing Hong Huang* (*Academia Sinica, Taiwan*); *Tsung-Ching Lai* (*Academia Sinica, Taiwan*); *Michael Hsiao* (*Academia Sinica, Taiwan*); *Chung-Hsuan Chen* (*Academia Sinica, Taiwan*); *Din Ping Tsai* (*National Taiwan University, Taiwan, R.O.C.*); *Yeu-Kuang Hwu* (*Academia Sinica, Taiwan*);

15:40 The Optical Properties of an Annular Periodic Multilayer Structure with Two Different Single-negative Materials
Mei-Soong Chen (*National Chiao Tung University, Taiwan*); *Chien-Jang Wu* (*National Taiwan Normal University, Taiwan*); *Tzong-Jer Yang* (*Chung-Hua University, Taiwan*);

16:00 Subwavelength Microwave Guiding by Periodically Corrugated Strip Line
Tzong-Jer Yang (*Chung-Hua University, Taiwan, R.O.C.*); *Jin-Jei Wu* (*Chung Hua University, Taiwan, R.O.C.*); *Dichi Tsai* (*Chung Hua University, Taiwan, R.O.C.*); *Hung Erh Lin* (*Chung Hua University, Taiwan, R.O.C.*);

Session 2A1
Scattering and Guiding Characteristics in Periodic Structures

Tuesday AM, March 23, 2010

Room A

Organized by Ruey-Bing Hwang

Chaired by Ruey-Bing Hwang

08:20 Observation of Geometric Resonance in a Corrugated Waveguide
Xiaoyu Cheng (*State University of New York at Buffalo, USA*); *R. Chakraborty* (*State University of New York at Buffalo, USA*); *S. Mishra* (*State University of New York at Buffalo, USA*); *Victor A. Pogrebnyak* (*State University of New York at Buffalo, USA*); *James J. Whalen* (*State University of New York at Buffalo, USA*);

08:40 Modal Expansion of Periodically Loaded Waveguides Extended to the Evanescent Frequency Domain
Yvonne Weitsch (*Technische Universität München, Germany*); *Thomas F. Eibert* (*Technische Univerität München, Germany*);

09:00 A Dual-band Branch-line-type Pphase Shifter Using Composite Right/Left Handed Transmission Lines
Cheng-Yuan Chin (*Chiao-Tung University, Taiwan*); *Jan-Dong Tseng* (*Chin-Yi University of Technology, Taiwan*);

09:20 Compact Coplanar-waveguide Band-rejection DGS Resonators
De-Liang Sun (*National University of Tainan, Taiwan*); *Chien-Jen Wang* (*National University of Tainan, Taiwan*); *Chia-Hsien Lin* (*National University of Tainan, Taiwan*); *Yi-Che Tsai* (*National Chiao-Tung University, Taiwan*);

10:00 **Coffee Break**

10:20 Spatial Beam Splitter Design Using Fishnet-type Periodic Structure
N. C. Hsu (*National Chiao-Tung University, Taiwan, R.O.C.*); *Cheng-Yuan Chin* (*National Chiao-Tung University, Taiwan, R.O.C.*); *Ruey-Bing Hwang* (*National Chiao-Tung University, Taiwan, R.O.C.*);

10:40 Electromagnetic Scattering and Guidance by Layered Cylindrical Arrays of Circular Rods
Vakhtang G. Jandieri (*Kumamoto University, Japan*); *Kiyotoshi Yasumoto* (*Kyushu University, Japan*);

11:00 Extraordinary Transmission of TE-polarized Waves through a Dielectric-coated Metallic Grating with Subwavelength Slits
Ruey-Bing Hwang (*National Chiao-Tung University, Taiwan, R.O.C.*);

11:20 Scattering of Electromagnetic Waves by Inhomogeneous Dielectric Gratings Loaded with Parallel Perfectly Conducting Strips
Tsuneki Yamasaki (*Nihon University, Japan*); *Ryosuke Ozaki* (*Nihon University, Japan*); *Takashi Hinata* (*Nihon University, Japan*);

Session 2A2a
Electromagnetic Seismic Fluid Geophysical and Geological Exploration

Tuesday AM, March 23, 2010

Room B

Organized by Ganquan Xie, Clement Kostov, Jianhua Li

Chaired by Ganquan Xie, Jianshu Luo

08:20 A New Boundary Zone Absorption Condition for EM Wavefield Propagation
Jianhua Li (*GL Geophysical Laboratory, USA*); *Ganquan Xie* (*GL Geophysical Laboratory, USA*); *Mingxia Li* (*Computational Institute of Chinese Academy, China*); *Tzon-Tzer Lu* (*National Sun Yat-sen University, Taiwan*); *Xianwei Zhou* (*University of Science and Technology, China*);

08:40 Thermal Infrared Spectrum Property of Loaded Rock
Zhe Feng (*Northeastern University, China*); *Shanjun Liu* (*Northeastern University, China*); *Lixin Wu* (*Northeastern University, China*); *Zhongyin Xu* (*Northeastern University, China*);

09:00 New Global and Local Magnetotelluric Field Modeling
Ganquan Xie (*GL Geophysical Laboratory, USA*); *Jianhua Li* (*GL Geophysical Laboratory, USA*); *Chow-Son Chen* (*National Central University, Taiwan*);

09:20 Investigation of Ionospheric Anomalies Prior to 2008 Wenchuan Earthquake Based on Statistic Analysis and Signal Detection
Jianyong Li (*China Earthquake Administration, China*); *Guojie Meng* (*China Earthquake Administration, China*); *Xuhui Shen* (*China Earthquake Administration, China*); *Min Wang* (*China Earthquake Administration, China*);

09:40 Sumudu Magnetic Field Solutions of Maxwell Equations
Fethi Bin Muhammad Belgacem (*Arab Open University, Kuwait*);

10:00 **Coffee Break**

Session 2A2b
Biomedical Electromagnetic Instruments and Electromagnetic Condense Materials and Imaging

Tuesday AM, March 23, 2010

Room B

Organized by Ganquan Xie

Chaired by Ganquan Xie, Jianshu Luo

10:20 Generalized Maximum Efficiency Theory on Multistage Inductive Coupling
Shun Bai (*The University of Melbourne, Australia*); *D. C. Ng* (*The University of Melbourne, Australia*); *E. Skafidas* (*The University of Melbourne, Australia*); *I. M. Y. Mareels* (*The University of Melbourne, Australia*);

10:40 The Computation of Coupling onto the Wires Enclosed in Cavity with the Apertures
Jianshu Luo (*National University of Defence Technology, China*); *Ji-Yuan Shi* (*National University of Defence Technology, China*); *Xufeng Zhang* (*National University of Defence Technology, China*);

11:00 3D GL EMFH Modeling and Inversion for Leakless Auto EMS in Steel Metal Casting and Biomedical EM Instruments Design
Jianhua Li (*GL Geophysical Laboratory, USA*); *Ganquan Xie* (*GL Geophysical Laboratory, USA*); *Lee Xie* (*GL Geophysical Laboratory, USA*); *Feng Xie* (*GL Geophysical Laboratory, USA*);

Session 2A3
Plasmonic Nanophotonics 1

Tuesday AM, March 23, 2010

Room C

Organized by Yung-Chiang Lan, Din Ping Tsai

Chaired by Yung-Chiang Lan

08:20 Imaging Mechanism of the Fractal Plasmonic Metamaterial Lens
Shiyi Xiao (*Fudan University, China*); *Xueqin Huang* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

08:40 Plasmonic Phase Transitions
Vasily V. Klimov (*Lebedev Physical Institute, Russia*); *Mikhail Yu. Pikhota* (*Lebedev Physical Institute, Russia*);

09:00 Strong Hybridization of Localized Surface Plasmons and Anisotropic Molecular Layers in Different Orientation: Quasi-static and Full-wave Analysis
Yuwen King (*Soochow University, China*); *Yaxian Ni* (*Soochow University, China*); *Lei Gao* (*Soochow University, China*);

09:20 Couplings of Localized Surface Plasmons in Nanoparticle Chains
Bin Xi (*Fudan University, China*); *Hao Xu* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

09:40 Long-range Surface Magnetoplasmon on Thin Plasmon Film with Voigt Configuration
Yung-Chiang Lan (*National Cheng Kung University, Taiwan, R.O.C.*);

10:00 **Coffee Break**

10:20 Standing-wave-like Surface Plasmon Polariton between Two Silver Nanorings
Sheng Chung Chen (*Far East University, Taiwan, R.O.C.*); *Jr. Chau Shiu* (*Far East University, Taiwan, R.O.C.*);

10:40 Beyond-limit Light Focusing in the Intermediate Zone
Kuan-Ren Chen (*National Cheng Kung University, Taiwan, R.O.C.*);

11:00 Plasmonic Effect of Nanoshell Dimer for Molecular Fluorescence
Mao-Kuen Kuo (*National Taiwan University, Taiwan, R.O.C.*); *Chi-San Chen* (*National Taiwan University, Taiwan, R.O.C.*); *Cheng-Yu Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Jiunn-Woei Liaw* (*Chang Gung University, Taiwan*);

11:20 Transmission through Metallic Array Slits with Perpendicular Cuts
Yan Zhang (*Capital Normal University, China*); *Yanhua Wang* (*Capital Normal University, China*); *Yingqi Wang* (*Capital Normal University, China*);

Session 2A4
Transformation Optics and Metamaterials

Tuesday AM, March 23, 2010

Room D

Organized by Brahim Guizal, Didier Felbacq

Chaired by Brahim Guizal, Didier Felbacq

08:20 Illusion and Cloaking Effects Created by Using Transformation Optics and Metamaterials
Yun Lai (*The Hong Kong University of Science and Technology, China*); *Jack Ng* (*The Hong Kong University of Science and Technology, China*); *Huanyang Chen* (*The Hong Kong University of Science and Technology, China*); *Dezhuan Han* (*The Hong Kong University of Science and Technology, China*); *Jun Jun Xiao* (*The Hong Kong University of Science and Technology, China*); *Z. Q. Zhang* (*The Hong Kong University of Science and Technology, China*); *Che Ting Chan* (*The Hong Kong University of Science and Technology, China*);

08:40 Negative Effective Parameters for Periodic Arrays of Dielectric Circular Cylinders
Ruey-Lin Chern (*National Taiwan University, Taiwan, R.O.C.*); *Y. T. Chen* (*National Taiwan University, Taiwan, R.O.C.*);

09:00 Full-parameter Realization of the Invisibility Cloak Based on Transmission-line Metamaterials
Xiao Liu (*Institute of Electronics, Chinese Academy of Sciences, China*); *Chao Li* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Kan Yao* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Xiankun Meng* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Fang Li* (*Institute of Electronics, Chinese Academy of Sciences, China*);

09:20 Homogenization of Metallic Metamaterials and Electrostatic Resonances
Brahim Guizal (*University of Montpellier 2, France*); *Didier Felbacq* (*University of Montpellier 2, France*); *Frédéric Zolla* (*Institut Fresnel, France*);

09:40 Subwavelength Imaging: Where Do Evanescent Waves Come from?
C. Ciraci (*University of Montpellier 2, France*); *Didier Felbacq* (*University of Montpellier 2, France*); *Brahim Guizal* (*University of Montpellier 2, France*);

10:00 **Coffee Break**

10:20 Superlenses and Optical Remote Scattering
André Nicolet (*Aix-Marseille Université, France*); *Frédéric Zolla* (*Aix-Marseille Université, France*);

10:40 Homogenization of 3D-dielectric Photonic Crystals and Artificial Magnetism
Guy Bouchitte (*Universite de Toulon, France*); *Cristophe Bourel* (*Universite de Toulon, France*); *Didier Felbacq* (*University of Montpellier 2, France*);

11:00 How to Modify the Optical Properties of Fibres in Twisting Them
Frédéric Zolla (*Aix-Marseille Université, France*); *André Nicolet* (*Aix-Marseille Université, France*); *Ould Agha* (*Aix-Marseille Université, France*); *Didier Felbacq* (*University of Montpellier II, France*);

11:20 Chaos and Stability in a Photonic Billiard
Didier Felbacq (*University of Montpellier II, France*); *J. Bellessa* (*Université Claude Bernard, France*); *B. Gil* (*University of Montpellier II, France*);

Session 2A5
Advances in Numerical Techniques 1

Tuesday AM, March 23, 2010

Room E

Organized by Mei Song Tong, Weng Cho Chew

Chaired by Mei Song Tong, Weng Cho Chew

08:20 Iterative Method for Differential Phase Shift Computation in the Azimuthally Magnetized Circular Ferrite Waveguide
Georgi Nikolov Georgiev (*University of Veliko Tirnovo "St. St. Cyril and Methodius", Bulgaria*); *Mariana Nikolova Georgieva-Grosse* (*Meterstrasse 4, Germany*);

08:40 Light Propagation in a Disordered Waveguide System: Average Power
Akira Komiyama (*Osaka Electro-Communication University, Japan*);

09:00 Comparison of Classical Precondition Techniques for Iterative Solution of Edge-based Finite Element Equations
Xue Wei Ping (*Southeast University, China*); *Wenming Yu* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

09:20 Fully Probe-Corrected Inverse Equivalent Current Methods with Multilevel Fast Multipole Acceleration and Higher-order Current Expansion
Thomas F. Eibert (*Technische Univerität München, Germany*); *E. Kaliyaperumal* (*Technische Univerität München, Germany*); *C. H. Schmidt* (*Technische Univerität München, Germany*); *Ismatullah* (*Technische Univerität München, Germany*);

09:40 Fast Evaluation to Electromagnetic Scattering of Conducting Surfaces Using an Efficient Stationary Phase Method
Jun Zhang (*Southeast University, China*); *Wenming Yu* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

10:00 **Coffee Break**

10:20 Further Comparison between Macro Basis Functions and Krylov Subspace Iterative Methods
Christophe Craeye (*Universite Catholique de Louvain, Belgium*);

10:40 Applications of Periodic FMM for Maxwell's Equations in Optics
Y. Kurami (*Kyoto University, Japan*); *T. Hatano* (*Tohoku University, Japan*); *Teruya Ishihara* (*Tohoku University, Japan*); *Naoshi Nishimura* (*Kyoto University, Japan*);

11:00 A New Idea for the Synthesis of Non-uniform Linear Arrays with Shaped Power Patterns
Yanhui Liu (*University of Electronic Science and Technology of China, China*); *Zaiping Nie* (*University of Electronic Science and Technology of China, China*); *Qing Huo Liu* (*Duke University, USA*);

11:20 Fast Multipole Acceleration for Nyström Discretization of Surface Integral Equations
Mei Song Tong (*University of Illinois at Urbana-Champaign, USA*); *W. C. Chew* (*University of Illinois at Urbana-Champaign, USA*);

11:40 Novel Hybrid Transfer Matrix FDTD Method for Modeling the Optical Properties of Periodic Structures
Alexei Deinega (*Russian Research Centre, Kurchatov Institute, Russia*); *Sergey Belousov* (*Russian Research Centre, Kurchatov Institute, Russia*); *Ilya Valuev* (*Joint Institute for High Temperatures of RAS, Russia*);

Session 2A6
Microstrip and Printed Antennas, Phase Array Antennas 1

Tuesday AM, March 23, 2010

Room F

Organized by Dua-Chyrh Chang

Chaired by Ho-Hsuan Chang, Wen-Jiao Liao

08:00 Planar Antenna with a Grounded Inverted L-shaped Strip for WUSB Application
Wen-Shan Chen (*Southern Taiwan University, Taiwan, R.O.C.*); *Bau-Yi Lee* (*Southern Taiwan University, Taiwan, R.O.C.*); *Ching-Hung Chen* (*Southern Taiwan University, Taiwan*);

08:20 A Novel Printed Antenna for PDA Phone
Wen-Shan Chen (*Southern Taiwan University, Taiwan, R.O.C.*); *Bau-Yi Lee* (*Southern Taiwan University, Taiwan, R.O.C.*);

08:40 The Ambiguity Problem of a LCMV-based Space-time Cascade 2D Array
Ho-Hsuan Chang (*I-Shou University, Taiwan*); *Tsung-Cheng Wu* (*I-Shou University, Taiwan*); *Shih-Chiang Lin* (*I-Shou University, Taiwan*);

09:00 A Franklin Array Antenna for Wireless Charging Applications
Shih-Hsiung Chang (*National Taiwan University of Science and Technology, Taiwan*); *Wen-Jiao Liao* (*National Taiwan University of Science and Technology, Taiwan*); *Kuo-Wei Peng* (*National Taiwan University of Science and Technology, Taiwan*); *Chih-Yao Hsieh* (*National Taiwan University of Science and Technology, Taiwan*);

09:20 A Miniatured WLAN/Wi-MAX Chip Antenna for Mobile Phone Applications
Long-Kun Li (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Wen-Jiao Liao* (*National Taiwan University of Science and Technology, Taiwan*); *Shao-En Hsu* (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*);

09:40 A Beam Switching Planar Yagi-patch Array for Automotive Applications
Shao-En Hsu (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Wen-Jiao Liao* (*National Taiwan University of Science and Technology, Taiwan*); *Wei-Han Lee* (*National Taiwan University of Science and Technology, Taiwan*); *Shih-Hsiung Chang* (*National Taiwan University of Science and Technology, Taiwan*);

10:00 **Coffee Break**

10:20 Dual-band Dual-polarized Hybrid Antenna Array
Li-Na Zhang (*Shanghai University, China*); *Shun-Shi Zhong* (*Shanghai University, China*); *Xianling Liang* (*Shanghai Jiao Tong University, China*);

10:40 An Outdoor Bistatic Scattering Assessment Using Array Antennas
Chih-Yao Hsieh (*National Taiwan University of Science and Technology, Taiwan*); *Wen-Jiao Liao* (*National Taiwan University of Science and Technology, Taiwan*); *Long-Kun Li* (*National Taiwan University of Science and Technology, Taiwan*);

11:00 Microstrip Antenna Subarray for Circularly-polarized Synthetic Aperture Radar
Merna Baharuddin (*Chiba University, Japan*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University, Japan*); *Hiroaki Kuze* (*Chiba University, Japan*);

11:20 Design of a Printed Antenna Array for Cost-effective ATE to Reduce the Radiated EMI Yield Loss
Cheng-Nan Hu (*Oriental Institute of Technology, Taiwan, R.O.C.*); *Hsuang-Chung Ko* (*King Yuan Electronics Co. Ltd., Taiwan, R.O.C.*); *Deng-Yao Chang* (*King Yuan Electronics Co. Ltd., Taiwan, R.O.C.*);

11:40 Wang-shaped Patch Antenna with a Simple Feed Network
Chi H. Wong (*The Hong Kong Polytechnic University, China*); *Kwok L. Chung* (*The Hong Kong Polytechnic University, China*);

Session 2A7
RF Safety Issues

Tuesday AM, March 23, 2010

Room G

Organized by Chung-Kwang Chou

Chaired by Chung-Kwang Chou

08:20 Biological Model in Electromagnetic Exposure Safety
Sergey Yu. Perov (*RAMS Institute of Occupational Health, Russian Federation*); *Quirino Balzano* (*University of Maryland, USA*); *Niels Kuster* (*Foundation for Research on Information Technologies in Society, Switzerland*);

08:40 Considerations on the Limitations of RF Bioresearch
Quirino Balzano (*University of Maryland, USA*); *Asher R. Sheppard* (*Asher Sheppard Consulting, USA*); *Mays L. Swicord* (*Motorola Inc., USA*);

09:00 Novel Technologies and Functions of Mobile Phones: A Challenge to Current SAR Measurement Protocols?
Tongning Wu (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*); *Xiaojun Lin* (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*); *Jun Yang* (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*); *Chen Zhao* (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*); *Chen Zhang* (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*); *Qing Shao* (*Telecommunication Metrology Center of Ministry of Industry and Information Technology, China*);

09:20 Human Exposure Assessment for Wireless Power Transmission System
J. H. Oh (*Chungnam National University, South Korea*); *Taehong Kim* (*Chungnam National University, South Korea*); *J. H. Yoo* (*Chungnam National University, South Korea*); *Jeong-Ki Pack* (*Chungnam National University, Korea*); *Yang Moon Yoon* (*Korea Radio Promotion Agency, South Korea*); *Moon Young Choi* (*Korea Radio Promotion Agency, South Korea*); *Sang Yun Lee* (*Korea Radio Promotion Agency, South Korea*);

09:40 A Comparison of Ansoft HFSS and CST Microwave Studio Simulation Software for Multi-channel Coil Design and SAR Estimation at 7 T MRI
Mikhail Kozlov (*Max Planck Institute for Human Cognitive and Brain Sciences, Germany*); *R. Turner* (*Max Planck Institute for Human Cognitive and Brain Sciences, Germany*);

10:00 **Coffee Break**

10:20 Test Methods and Standards for Magnetic Resonance (MR) Safety and Compatibility of Medical Devices
Gregor Schaefers (*MR:comp GmbH, Germany*);

10:40 Meta-analysis: Genotoxicity in Mammalian Cells Exposed to Radiofrequency Radiation
Vijayalaxmi (*University of Texas Health Science Center, USA*);

11:00 Established Adverse Health Effects versus Possible Biological Effects of RF Exposure
Chung-Kwang Chou (*Motorola Inc., USA*);

Session 2AP
Poster Session 1

Tuesday AM, March 23, 2010
9:00 AM - 4:00 PM
Room K

1 Development of Wave Absorbing Coating Optimization Software
Jianzhou Li (*Northwestern Polytechnical University, China*); *Changying Wu* (*Northwestern Polytechnical University, China*); *Gao Wei* (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*);

2 Rotational Vector Addition Theorem and Its Effect on T-matrix
M. S. Khajeahsani (*Shiraz University, Iran*); *Farzad Mohajeri* (*Shiraz University, Iran*);

3 Why Cannot We Put a Metal in a Microwave Oven?
Leila Mashhadi (*Amirkabir University of Technology, Iran*); *Gholamreza Shayeganrad* (*Islamic Azad University, Karaj Branch, Iran*);

4 Optical Analogue of Borrmann Effect in Photonic Crystals
Maria Bogdanova (*Kintech Lab, Russia*); *S. Eiderman* (*Kintech Lab, Russia*); *Yurii E. Lozovik* (*Institute of Spectroscopy of the Russian Academy of Sciences, Russia*);

5 The Nonlinear Absorption of a Strong Electromagnetic Wave by Confined Electrons in Rectangular Quantum Wires
Nguyen Quang Bau (*Hanoi University of Science, Vietnam National University, Vietnam*); *Hoang Dinh Trien* (*Hanoi University of Science, Vietnam National University, Vietnam*);

6 Lattice Spectroscopy in Near Field
Pin Han (*National Chung Hsing University, Taiwan*);

7 Theory of the Acoustomagnetoelectric Effect in a Superlattice
Nguyen Quang Bau (*Hanoi University of Science, Vietnam National University, Vietnam*); *Nguyen Van Hieu* (*Hanoi University of Science, Vietnam National University, Vietnam*);

8 Influence of the Output Electrical Parameters on Multistage Depressed Collector Characteristics in a Coupled Cavity TWT
Yinghui Zhang (*Institute of Electronics, Chinese Academy of Sciences, China*); *Jirun Luo* (*Institute of Electronics, Chinese Academy of Science, China*); *Wei Guo* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Min Zhu* (*Institute of Electronics, Chinese Academy of Sciences, China*);

9 Numerical Study on Readout Characteristics of Near-field Optical Disk
Shingo Iwata (*Kansai University, Japan*); *Toshiaki Kitamura* (*Kansai University, Japan*);

12 Getting Excitation Characteristic Curves of PTs with Linear Interpolation Method
Zheng Wang Du (*Shenli Oil Field Power Company, China*); *Hengxu Ha* (*Shandong University of Technology, China*); *Lei Zhai* (*Hebei University of Technology, China*); *Hai-Quan Zhou* (*Shandong University of Technology, China*); *Song-Bo Gou* (*Shenli Oil Field Power Company, China*); *Chong-Shan Zhong* (*Shenli Oil Field Power Company, China*);

13 A New Approach to Periodical Structure Analysis
Radim Kadlec (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

14 A Numerical Simulation Study of the Effect of Array Shape on the Performance of Antennas
Danoosh Davoodi (*Sadjad Institute of Higher Education, Iran*); *Shahin Sharifzad* (*Sadjad Institute of Higher Education, Iran*);

15 Analysis of Electromagnetic Field Affected by Liquid in Water Area Magnetotelluric Exploration
Ling-Hua Xu (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Jian-Rong Xu* (*East China Bureau of Noneferometal Geological Exploration, China*); *Zhen-Wei Guo* (*Central South University, China*); *Ya Sun* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*);

16 The Study of Field Source Static Shift in Frequency Domain Controlled-source Electromagnetic Sounding with Long Wire Source
Ya Sun (*Central South University, China*); *Zhanxiang He* (*BGP, China*); *Jian-Xin Liu* (*Central South University, China*);

17 The Physical Modeling Experiments Analysis of the Exploration Depth of Conventional Electric Survey
Jie Li (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*); *Zhen-Wei Guo* (*Central South University, China*);

18 Cole-Cole Model Based on the Frequency-domain IP Method of Forward Modeling
Wei Zhang (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Zhen-Wei Guo* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*);

19 Electric Field around a Metal Disk within a Microwave Resonator: Electrostatic Approximation
Gholamreza Shayeganrad (*Islamic Azad University, Karaj Branch, Iran*); *Leila Mashhadi* (*Amirkabir University of Technology, Iran*);

20 Study on Compact UWB Filter Composed of Defected Parallel Plates and Meander Line
Haruhiko Takeuchi (*Kansai University, Japan*); *Toshiaki Kitamura* (*Kansai University, Japan*); *Yasushi Horii* (*Kansai University, Japan*);

21 FDTD Analysis of Light-beam Scattering from DWDD Disk with Control Layer
Yuya Matsunami (*Kansai University, Japan*); *Toshiaki Kitamura* (*Kansai University, Japan*);

22 Study on Stepped Impedance Comb-line Filter with Defected Ground Structure
Noriaki Tatsumi (*Kansai University, Japan*); *Toshiaki Kitamura* (*Kansai University, Japan*); *Yasushi Horii* (*Kansai University, Japan*);

23 Generalized Coherent States for Quantized Electromagnetic Fields in Time-varying Linear Media
Jeong Ryeol Choi (*Kyungpook National University, Republic of Korea*); *Mustapha Maamache* (*Université Ferhat Abbas de Sétif, Algeria*);

24 An Alternative Explanation for the Fraunhofer Sun Lines
Sara Liyuba Vesely (*I.T.B., C.N.R., Italy*); *Alessandro Alberto Vesely* (*Via L. Anelli 13, Italy*);

25 Finite-element Analysis of Complex Axisymmetric Invisibility Cloaks
Yong-Bo Zhai (*Southeast University, China*); *Xue Wei Ping* (*Southeast University, China*); *Wei Xiang Jiang* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

26 Simulations of an Electromagnetic Microsystem Used in Biomedical Applications
Tom Creutzburg (*Leibniz Universität Hannover, Germany*); *H. H. Gatzen* (*Leibniz Universität Hannover, Germany*);

27 Characterization of Eddy-current Probe with Tilted Coil Using Multiphysics Finite Element Method
Cheng-Chi Tai (*National Cheng Kung University, Taiwan*); *Yen-Lin Pan* (*National Cheng Kung University, Taiwan*);

28 Using Fictitious Currents for Calculating Electric Fields Produced by Capacitor Dielectrics
Romain Ravaud (*Universite du Maine, France*); *Guy Lemarquand* (*Universite du Maine, France*);

29 Numerical Modeling of Light Sources with R-FEM Method in CFX Environment
Jan Mikulka (*Brno University of Technology, Czech Republic*); *Tomáš Kříž* (*Brno University of Technology, Czech Republic*); *Eva Kroutilova* (*Brno University of Techonology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*);

30 Two-dimensional Magnetotelluric Regularization Inversion Jointed with TE- and TM-mode Data
Jian-Xin Liu (*Central South University, China*); *Ling-Hua Xu* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*); *Ya Sun* (*Central South University, China*); *Zhen-Wei Guo* (*Central South University, China*);

31 Three-dimensional Magnetotelluric Forward Modeling for Static-shifted Model
Xiao-Zhong Tong (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Ya Sun* (*Central South University, China*); *Zhen-Wei Guo* (*Central South University, China*);

32 A Practical Scheme for 3D Geoelectrical Forward Modeling with Finite-infinite Element Coupling Method
Jing-Tian Tang (*Central South University, China*); *Jin-Zhe Gong* (*Central South University, China*);

33 MPI-based Parallel FDTD for EM Scattering from Coated Complex Targets
Xiao-Fei Qi (*Xidian University, China*); *Li-Xin Guo* (*Xidian University, China*); *Hao Zeng* (*Xidian University, China*);

34 Galerkin's Method Using the Annular Patch Segments to Solve a Round Disk Capacitor
Kyung-Soo Kim (*Kyungpook National University, South Korea*); *Che-Young Kim* (*Kyungpook National University, South Korea*);

35 Determination of Eigenvalues of Closed Lossless Waveguides Using the Least Squares Optimization Technique
Oguzhan Demiryurek (*Gungoren Endustri Meslek Lisesi, Turkey*); *Namik Yener* (*Kocaeli University, Turkey*);

36 The Study of Numerical Simulation on Dual-frequency IP Method with FEM
Jiayong Lin (*Central South University, China*); *Maobin Ding* (*Central South University, China*); *Jing-Tian Tang* (*Central South University, China*); *Hong Yan* (*The Third Institute of Geology and Mineral Exploration of Qinghai Province, China*);

37 An Improved Algorithm of Orthogonal Vector Spectral Estimation Method
Dengshan Huang (*Northwestern Polytechnical University, China*); *Xingzhao Liu* (*Northwestern Polytechnical University, China*); *Jie Ren* (*Northwestern Polytechnical University, China*);

38 Parallel GPU Implementation of K-way Tree Classification Based on Semi-Greedy Structure Applied to Multisource Remote Sensing Images
Yanglang Zhang (*National Taipei University of Technology, Taiwan*);

39 Rigorous Computation of Large Radiation Problems by Means of an Iterative Approach
Carlos Delgado (*Universidad de Alcalá, Spain*); *Manuel Felipe Catedra* (*Universidad de Alcala, Spain*); *Ivan Gonzalez* (*Universidad de Alcala, Spain*); *Josefa Gómez* (*University of Alcala, Spain*); *Abdelhamid Tayebi* (*University of Alcala, Spain*);

40 Advantages of DOF's Continuous Matching in EIT Inverse Problem
Jarmila Dědková (*Brno University of Technology, Czech Republic*); *Radek Kubásek* (*Brno University of Technology, Czech Republic*); *K. Ostanina* (*UTEE, Czech Republic*);

43 A Calculation Method for Frequency Dependent Characteristic Impedance and Slow-wave Factor of Microwave Transmission Lines with a Perturbation
Jongsik Lim (*Soonchunhyang University, Republic of Korea*); *Jun Lee* (*Soonchunhyang University, Republic of Korea*); *Jaehoon Lee* (*Soonchunhyang University, Republic of Korea*); *Yongchae Jeong* (*Chonbuk National University, South Korea*); *Sang-Min Han* (*Soonchunhyang University, Korea*); *Dal Ahn* (*Soonchunhyang University, Korea*);

44 The Measurements of RF Dielectric Constant, Dielectric Loss Coefficient, and Conductor Loss Coefficient in PCB
Yun-Hsih Chou (*St. John's University, Taiwan*); *Ming-Jer Jeng* (*Chang Gung University, Taiwan, R.O.C.*); *Yang-Han Lee* (*Tamkang University, Taiwan*); *Yih-Guang Jan* (*Tamkang University, Taiwan*);

45 Highly Miniaturized On-chip Impedance Transformer Employing Coplanar Waveguide with Periodic Ground Structure on GaAs MMIC
Young-Bae Park (*Korea Maritime University, Korea*); *Bo-Ra Jung* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Jang-Hyeon Jeong* (*Korea Maritime University, Korea*); *Jeong-Gab Ju* (*Korea Maritime University, Korea*); *Young Yun* (*Korae Maritime University, Korea*);

46 Analysis of Characteristics of Coplanar Waveguide with Finite Ground-planes by the Method of Lines
Min Wang (*University of Electronic Science and Technology of China, China*); *Bo Gao* (*University of Electronic Science and Technology of China, China*); *Yu Tian* (*University of Electronic Science and Technology of China, China*); *Ling Tong* (*University of Electronic Science and Technology of China, China*);

47 A Study on Equivalent Circuit of Highly Isolated Coupled Microstrip Line Employing PGS on GaAs MMIC
Jang-Hyeon Jung (*Korea Maritime University, Korea*); *Bo-Ra Jung* (*Korea Maritime University, Korea*); *Young-Bae Park* (*Korea Maritime University, Korea*); *Jeong-Gab Ju* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Young Yun* (*Korae Maritime University, Korea*);

48 Design of Suppressing Crosstalk by Vias of Serpentine Guard Trace
Wen-Tzeng Huang (*Minghsin University of Science and Technology, Taiwan, R.O.C.*); *Chi-Hao Lu* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Ding-Bing Lin* (*National Taipei University of Technology, Taiwan, R.O.C.*);

49 Model and Performance Analysis of Coplanar Waveguide Based on Different Oxide Structure HR-Si Substrate
Xi Li (*East China Normal University, China*); *Yanling Shi* (*East China Normal University, China*); *Yanfang Ding* (*East China Normal University, China*);

50 A Band-notched Ultrawideband Filter Design with Genetic Algorithms
Ming-Huei Chen (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*); *Cheng-Yu Tasi* (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*); *Hao-Hui Chen* (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*);

51 Novel Rectangular Coupled Line Bandpass Filter
Souren Shamsinejad (*Iran University of Science and Technology (IUST), Iran*); *Shila Shamsadini* (*Azad University, Iran*); *Mohammad Soleimani* (*Iran University of Science and Technology, Iran*);

52 Optimization of Broadband Withdrawal Weighted SAW Filters
Ying Liu (*Zhejiang University of Technology, China*); *Yali Qin* (*Zhejiang University of Technology, China*); *Changming Xie* (*Zhejiang University of Technology, China*);

53 Design of Miniaturized Shorted End Coupled Line Section Using Parallel PI Capacitor Network
Young-Huang Chou (*Huafan University, Taiwan, R.O.C.*); *Yung-Chin Hung* (*Huafan University, Taiwan, R.O.C.*); *Hao-Hui Chen* (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*);

54 Analysis of the Magnetic Coupling Effect between Lump T-type Resonator Circuits
Young-Huang Chou (*Huafan University, Taiwan, R.O.C.*); *Ming-Sian Lin* (*HuaFan University, Taiwan, R.O.C.*); *Wen-Jhao Sie* (*HuaFan University, Taiwan, R.O.C.*); *Sin-Ning Chen* (*HuaFan University, Taiwan, R.O.C.*);

55 Microstrip Cross-coupled Interdigital Hairpin Diplexer
Hsin-Han Tung (*National United University, Taiwan*); *Chen-Kang Hsu* (*National United University, Taiwan*); *Cheng-Hsing Hsu* (*National United University, Taiwan*);

56 The Application of the Equal Area Law in Ferroresonance for Distribution Power System
Zheng Wang Du (*Shenli Oil Field Power Company, China*); *Hengxu Ha* (*Shandong University of Technology, China*); *Lei Zhai* (*Hebei University of Technology, China*); *Hai-Quan Zhou* (*Shandong University of Technology, China*); *Song-Bo Gou* (*Shenli Oil Field Power Company, China*); *Chong-Shan Zhong* (*Shenli Oil Field Power Company, China*);

57 Design and Analysis of Ultrawideband Dielectric Resonator Antenna
Zi-Bin Weng (*Xidian University, China*); *Tayeb A. Denidni* (*Université Laval, Canada*); *Yue Song* (*Xidian University, China*); *Yong-Chang Jiao* (*Xidian University, China*);

58 High Input Impedance Electronically Tunable Voltage-mode Multifunction Filter
Hua-Pin Chen (*Ming Chi University of Technology, Taiwan*); *Wei Chien* (*De Lin Institute of Technology, Taiwan, R.O.C.*); *Chi-Hsien Sun* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Ching Chiu* (*Tamkang University, Taiwan, R.O.C.*); *Yi Sun* (*Beijing Jiaotong University, China*);

59 The Loop Ring BSF Design and Its Application in BPF Stopband Enhancement
Min-Hua Ho (*National Changhua University of Education, Taiwan*); *Yi-Chiao Lin* (*National Changhua University of Education, Taiwan*);

60 Voltage-mode Highpass, Bandpass and Lowpass Filters Using a Single DVCC
Hua-Pin Chen (*Ming Chi University of Technology, Taiwan*); *Tsang-Yen Hsieh* (*Ming Chi University of Technology, Taiwan*);

61 Modified Approximation Types for Lossy Building Blocks
Martin Friedl (*Brno University of Technology, Czech Republic*); *Lubomír Fröhlich* (*Brno University of Technology, Czech Republic*); *Jiří Sedláček* (*Brno University of Technology, Czech Republic*);

62 Optimization of ARC Component Filter Sensitivity
Martin Friedl (*Brno University of Technology, Czech Republic*); *Jiří Sedláček* (*Brno University of Technology, Czech Republic*);

63 A Compact Microstrip Power Divider Using Periodic DGS and HIOS
Shimaa Ali Beeh Mohassieb (*Akhbar Elyom Academy, Egypt*); *Ibrahim M. Barseem* (*Akhbar Elyom Academy, Egypt*); *Esmat Abdel-Fattah Abdallah* (*Electronics Research Institute, Egypt*); *Hadia M. Elhenawy* (*Ain Shams University, Egypt*);

64 Mode Conversion at Via Discontinuities in Microwave Circuits
Wenxue Zhu (*University of Electronic Science and Technology of China, China*); *Yu Tian* (*University of Electronic Science and Technology of China, China*); *Tong Ling* (*University of Electronic Science and Technology of China, China*);

65 The Feasibility of Numerical Calculations of Vias Using the Matrix-Penciled Moment Method
Hailiang Li (*University of Electronic Science and Technology of China, China*); *Yu Tian* (*University of Electronic Science and Technology of China, China*); *Ling Tong* (*University of Electronic Science and Technology of China, China*);

66 Microstrip Bandstop Filter Using E-shaped Dual Mode Resonator
Xiao-Dong Huang (*Nanjing University of Posts and Telecommunications, China*); *Chong-Hu Cheng* (*Nanjing University of Posts and Telecommunications, China*);

67 Arbitrary Microwave Filters Using Waveguides Filled by Dielectric and Magnetic Layers
Mohammad Khalaj-Amirhosseini (*Iran University of Science and Technology, Iran*); *Habib Ghorbaninejad-Foumani* (*Iran University of Science and Technology, Iran*);

68 Waveguide Bandpass Filters Utilizing Only Dielectric Pieces
Mohammad Khalaj-Amirhosseini (*Iran University of Science and Technology, Iran*); *Habib Ghorbaninejad-Foumani* (*Iran University of Science and Technology, Iran*);

70 PIFA Antenna with Coupling Effect for Bandwidth Enhanced Design and Measurement
Kekun Chang (*National Taipei University of Technology, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

71 Meander Line Antenna for GPS Phone Operation
Kuo-Liang Wu (*National Taipei University of Technology, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

72 Antenna Measurement System for CTIA OTA Operation
Guan-Yu Chen (*National Taipei University of Technology, Taiwan*); *Kuo-Liang Wu* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

73 New Antenna Modelling Using Wavelets for Heavy Oil Thermal Recovering Methods
Moisés Dantas dos Santos (*Universidade Federal Rural do Semi-Árido, Brazil*); *Adriao Duarte Doria Neto* (*Universidade Federal do Rio Grande do Norte, Brazil*); *J. P. Silva* (*Universidade Federal Rural do Semi-Árido, Brazil*); *Wilson Da Mata* (*Universidade Federal do Rio Grande do Norte Campus Universitário, Brazil*);

74 Double-ridged Horn for 3D Antenna Measurement
Jui-Yi Yang (*Yuan Ze University, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Yung-Sheng Chen* (*Yuan Ze University, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

75 Research on the Radiation Characteristics of Cage Antenna of EMP Radiating-wave Simulator Based on Parallel Computing
Xiang-Qin Zhu (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

76 A Compact Microstrip Coupled-fed Planar Antenna for WLAN and WiMAX Applications
Hao-Hui Chen (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*); *Wen-Jen Tseng* (*Wha Yu Industrial Co., Ltd., Taiwan, R.O.C.*); *Wen-Kai Wu* (*Huafan University, Taiwan, R.O.C.*); *Ming-Huei Chen* (*National Kaohsiung First University of Science and Technology, Taiwan, R.O.C.*);

79 Support Vector Modeling of Manufacturing Tolerance Influencing Electrical Performance for Cavity Filters
Jinzhu Zhou (*Xidian University, China*); *Baoyan Duan* (*Xidian University, China*); *Hongbo Ma* (*Xidian University, China*); *Liang Li* (*Xidian University, China*); *Jin Huang* (*Xidian University, China*); *Daiwen Yang* (*Xidian University, China*);

80 A Planar Antenna Array with Separated Feed (PAASF) with Air Gap Technique
Mohd Tarmizi Ali (*Universiti Teknologi Malaysia, Malaysia*); *Tharek Bin Abd Rahman* (*Universiti Teknologi Malaysia, Malaysia*); *Muhammad Ramlee Bin Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Ronan Sauleau* (*University of Rennes 1, France*); *Mohd Nor Md Tan* (*Universiti Teknologi Malaysia, Malaysia*); *M. F. Jamlos* (*Universiti Teknologi Malaysia, Malaysia*);

81 Elements Reduction Using Unequal Spacing Technique for Linear Array Antenna
Mohd Nor Md Tan (*University Technology Mara (UiTM), Malaysia*); *Tharek Bin Abd Rahman* (*University Technology Malaysia (UTM), Malaysia*); *Sharul Kamal Abdul Rahim* (*University Technology Malaysia (UTM), Malaysia*); *Mohd Tarmizi Ali* (*University Technology Mara (UiTM), Malaysia*); *Mohd Faizal Jamlos* (*University Technology Malaysia (UTM), Malaysia*);

82 Reconfigurable Aperture Coupled Planar Antenna Array at 2.3 GHz
Mohd Faizal Jamlos (*University Technology Malaysia (UTM), Malaysia*); *Tharek Bin Abd Rahman* (*University Technology Malaysia (UTM), Malaysia*); *Muhammad Ramlee Bin Kamarudin* (*Universiti Teknologi Malaysia, Malaysia*); *Mohd Tarmizi Ali* (*University Technology Mara (UiTM), Malaysia*); *Mohd Nor Md Tan* (*University Technology Mara (UiTM), Malaysia*); *P. Saad* (*Universiti Teknologi Malaysia, Malaysia*);

83 Tunable All-dielectric Isotropic Near-zero-index Lens
Qian Zhao (*Tsinghua University, China*); *Fuli Zhang* (*Northwestern Polytechnical University, China*); *Lei Kang* (*Tsinghua University, China*); *Ji Zhou* (*Tsinghua University, China*); *Yonggang Meng* (*Tsinghua university, China*);

84 Comparison of Microwave Waveguide Applicators for Thermotherapy
Jaroslav Vorlicek (*Czech Technical University, Czech Republic*); *Jan Borovka* (*Czech Technical University, Czech Republic*); *Jan Vrba* (*Czech Technical University, Czech Republic*);

85 Compact Blue/Green Laser Sources for Projection Display
Kang Li (*University of Glamorgan, UK*); *N. J. Copner* (*University of Glamorgan, UK*); *C. B. E. Gawith* (*Covesion Ltd., UK*); *Ian G. Knight* (*Bookham Technology Plc, UK*); *Hans-Ulrich Pfeiffer* (*Bookham (Switzerland) AG, Switzerland*); *Bob Musk* (*Gooch & Housego, UK*);

86 Influence of the Ground Truth Parameters on Forest Polarimetric Scattering Versus Age
Pierre Borderies (*Office National d'Etudes et de Recherches Aerospatiales (ONEAR), France*); *Ludovic Villard* (*Office National d'Etudes et de Recherches Aerospatiales (ONERA), France*);

91 Nanostructures of Water Revealed in Recent Biophysical Experiments Are They Coherent Domains of Water Predicted by the Quantum Electromagnetic Field Theory (QEMFT)?
Livio Giuliani (*ISPESL, Italy*); *Enrico D'Emilia* (*ISPESL, Italy*);

Session 2P1
Scattering, Diffraction, and Inverse Scattering

Tuesday PM, March 23, 2010

Room A

Chaired by Yahya Kemal Baykal, Yangjian Cai

13:00 Off-axis Scattering Particle Holography: A Numerical Study
Xuecheng Wu (*Zhejiang University, China*); *Gérard Gréhan* (*Université de Rouen, France*); *Siegfried Meunier-Guttin-Cluzel* (*Avenue de l'Université, France*); *Ruiyang Qu* (*Zhejiang University, China*); *Minglun Gu* (*Zhejiang University, China*); *Jiaping Xu* (*Zhejiang University, China*); *Linghong Chen* (*Zhejiang University, China*); *Kunzan Qiu* (*Zhejiang University, China*); *Kefa Cen* (*Zhejiang University, China*);

13:20 Electromagnetic Imaging of Water Content in a Column of Soil Using LSM Method
Xiaoyun Zhang (*Aix-Marseille Universite, France*); *Hervé Tortel* (*Aix-Marseille Universite, France*); *S. Ruy* (*UMR, France*); *Amélie Litman* (*Institut Fresnel, France*);

13:40 A RCS Reduction Design of Object with Anisotropic Impedance Surface Using Genetic Algorithm
Jing-Jing Yao (*Wuhan University, China*); *Si-Yuan He* (*Wuhan University, China*); *Hai-Tao Chen* (*Wuhan University, China*); *Guo-Qiang Zhu* (*Wuhan University, China*);

14:00 Asymptotic Waveform Evaluation in Anisotropic Impedance Wedge's Scattering Problem Including the Diffraction of Surface Waves
Ji Li (*Wuhan University, China*); *Jing-Jing Yao* (*Wuhan University, China*); *Si-Yuan He* (*Wuhan University, China*); *Guo-Qiang Zhu* (*Wuhan University, China*);

14:20 Electromagnetic Scattering from Anisotropic Inhomogeneous Impedance Cylinder of Arbitrary Shape with Generalized Impedance Boundary Condition
Ding-Feng Yu (*Wuhan University, China*); *Ke Li* (*Shanghai Institute of Satellite Engineering, China*); *Jing-Jing Yao* (*Wuhan University, China*); *Guo-Qiang Zhu* (*Wuhan University, China*);

14:40 Scintillations in Weak Turbulence of Annular Beams Whose Individual Components Are Incoherent
Yahya Kemal Baykal (*Cankaya University, Turkey*); *Halil Tanyer Eyyuboglu* (*Cankaya University, Turkey*); *Yangjian Cai* (*Soochow University, China*);

15:00 **Coffee Break**

15:20 An Application of a Fixed Point Iteration Method to Object Reconstruction
Fermin S. Viloche Bazan (*Federal University of Santa Catarina, Brazil*); *Koung Hee Leem* (*Southern Illinois University, USA*); *George Pelekanos* (*Southern Illinois University, USA*);

15:40 Frequency Dependence of Image Reconstruction of Linear Sampling Method in Electromagnetic Inverse Scattering
Guanghua Li (*Sichuan University, China*); *Xiang Zhao* (*Sichuan University, China*); *Kama Huang* (*Sichuan University, China*);

16:00 Focusing Properties of a Twisted Gaussian Schell-model Beam in Turbulent Atmosphere
Shijun Zhu (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*);

16:20 Diffraction Properties of Partially Coherent Elegant High-order Beam
Fei Wang (*Soochow University, China*); *Yangjian Cai* (*Soochow University, China*); *Halil Tanyer Eyyuboğlu* (*Cankaya University, Turkey*); *Yahya Kemal Baykal* (*Cankaya University, Turkey*);

16:40 Improvements Algorithms to Compute the Radar Cross Section of Electrically Large Complex Targets Considering n-bounces
Lorena Lozano (*Universidad de Alcala, Spain*); *Ma Jesús Algar* (*Universidad de Alcala, Spain*); *Ivan Gonzalez* (*Universidad de Alcala, Spain*); *Manuel Felipe Catedra* (*Universidad de Alcala, Spain*);

17:00 Diffraction of Apertured Gaussian Beams
Xiaoling Ji (*Sichuan Normal University, China*);

17:20 Radar Cross Section of a Cavity in a Finite Elliptic Cylinder
Nilgün Altın (*Turkish Aerospace Industries, Inc., Turkey*); *Erdem Yazgan* (*Hacettepe University, Turkey*);

Session 2P2
Electromagnetic Wave in the Materials and Dispersion Simulation for Cloak Metamaterials and Photonic Crystals

Tuesday PM, March 23, 2010

Room B

Organized by Ganquan Xie, Tzong-Jer Yang, Chien-Jang Wu

Chaired by Chien-Jang Wu, Fan-Yi Lin

13:00 A Novel GL Double Layer Electromagnetic Cloaks in Broad Frequency Band and Reciprocal Law
Ganquan Xie (*GL Geophysical Laboratory, USA*); *Jianhua Li* (*GL Geophysical Laboratory, USA*); *Feng Xie* (*GL Geophysical Laboratory, USA*); *Lee Xie* (*GL Geophysical Laboratory, USA*);

13:20 High Transmission Y-shaped Waveguides in 2D Photonic Crystals with Square Lattice
Wu Yang (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China*); *Xiaoshuang Chen* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China*); *Xiaoyan Shi* (*Information Engineering University of PLA, China*); *Wei Lu* (*Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China*);

13:40 Exploration of Electromagnetic Interferences on GPS Reception in PDA Phone
Yao-Huang Kao (*Chung-Hua University, Taiwan*); *Hui Chun Yang* (*National Chiao Tung University, China*);

14:00 Surface Plasmon Resonance Electro-optic Light Modulator Based on Polymer Grating Coupler
Wen-Kai Kuo (*National Formosa University, Taiwan, R.O.C.*); *Meng-Ting Chen* (*National Formosa University, Taiwan, R.O.C.*);

14:20 Theoritical Analysis of Some Homogenized Metamaterials and Application of PML to Perform Cloaking and Back-scattering Invisibility
Pierre-Henri Cocquet (*ONERA, France*); *Vincent Mouysset* (*ONERA, France*); *Pierre-Alain Mazet* (*ONERA, France*);

14:40 Nonlinear Dynamics and Microwave Frequency Comb Generation in an Optical Pulse-injected Semiconductor Laser
Fanyi Lin (*National Tsing Hua University, Taiwan*); *Yu-Shan Juan* (*National Tsing Hua University, Taiwan*);

15:00 **Coffee Break**

15:20 Surface-wave Model of the Extraordinary Optical Transmission
Haitao Liu (*Nankai University, China*); *Philippe Lalanne* (*Université de Paris-Sud, France*);

15:40 An LCAO Description of Plasmonic Bands
Kazuaki Sakoda (*National Institute for Materials Science, Japan*);

16:00 Localization of Electromagnetic Energy in a Finite Region with Complementary Media
Chao Li (*Institute of Electronics, Chinese Academy of Sciences, China*); *Xiao Liu* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Fang Li* (*Institute of Electronics, Chinese Academy of Sciences, China*);

16:20 Angle- and Thickness-dependent Photonic Band Structure for a One-dimensional Superconducting Photonic Crystal
Chien-Jang Wu (*National Taiwan Normal University, Taiwan*); *Tzong-Jer Yang* (*Chung Hua University, Taiwan*);

16:40 Dual Band Antenna for HSDPA USB Dongle
Yao-Huang Kao (*Chung-Hua University, Taiwan*); *Jhih Liang Lu* (*Chung-Hua University, Taiwan*); *Hui Chun Yang* (*National Chiao Tung University, China*);

17:00 Numerical Investigation on Graphene-like Two-dimensional Microwave Photonic Crystals
Yunhui Li (*Tongji University, China*); *Yun Jiang* (*Tongji University, China*); *Haitao Jiang* (*Tongji University, China*); *Hong Chen* (*Tongji University, China*);

17:20 Numerical Analysis of Optical Birefringence and Confinement Loss of Square Lattice Photonic Crystal Fibers with Rectangular, Elliptical, Rhomboidal and Circular Air Holes
Yuan-Fong Chau (*Chin Yuan University, Taiwan*);

17:40 Design of a Compact and Super Broadband Volumetric Folded Dipole Antenna for Mobile Applications
Ali Houssein Harmouch (*American University of Science and Technology, Lebanon*); *Elias Nassar* (*Notre Dame University, Lebanon*);

Session 2P3a
Plasmonic Nanophotonics 2

Tuesday PM, March 23, 2010

Room C

Organized by Yung-Chiang Lan, Din Ping Tsai

Chaired by Yung-Chiang Lan

13:00 Nonlinear and Switchable Plasmonic Metamaterials: Part 1
Nikolay Zheludev (*University of Southampton, UK*); *A. Nikolaenko* (*University of Southampton, UK*); *K. F. MacDonald* (*University of Southampton, UK*); *Vasily Fedotov* (*University of Southampton, UK*); *Dan Hewak* (*University of Southampton, UK*); *G. Adamo* (*University of Southampton, UK*); *Z. Samson* (*University of Southampton, UK*); *E. Plum* (*University of Southampton, UK*); *Din Ping Tsai* (*National Taiwan University, Taiwan, R.O.C.*); *E. Difabrizio* (*The University of Magna Graecia, Italy*); *F. De Angelis* (*The University of Magna Graecia, Italy*);

13:20 Nonlinear and Switchable Plasmonic Metamaterials: Part 2
Nikolay Zheludev (*University of Southampton, UK*); *A. Nikolaenko* (*University of Southampton, UK*); *K. F. MacDonald* (*University of Southampton, UK*); *Vasily Fedotov* (*University of Southampton, UK*); *Dan Hewak* (*University of Southampton, UK*); *G. Adamo* (*University of Southampton, UK*); *Z. Samson* (*University of Southampton, UK*); *E. Plum* (*University of Southampton, UK*); *Din Ping Tsai* (*National Taiwan University, Taiwan, R.O.C.*); *E. Difabrizio* (*The University of Magna Graecia, Italy*); *F. De Angelis* (*The University of Magna Graecia, Italy*);

13:40 The Role of Magnetic Polaritons in Grating Structures
L. P. Wang (*Georgia Institute of Technology, USA*); *Zhuomin Zhang* (*Georgia Institute of Technology, USA*);

14:00 Localized Surface Plasmon Resonance (LSPR) Sensoric at the Single Particle Level
Andrea Csaki (*Institute for Photonic Technology (IPHT), Germany*); *Thomas Schneider* (*Institute for Photonic Technology (IPHT), Germany*); *Marie Löchner* (*Institute for Photonic Technology (IPHT), Germany*); *Andrea Steinbrück* (*Institute for Photonic Technology (IPHT), Germany*); *Wolfgang Fritzsche* (*Institute for Photonic Technology (IPHT), Germany*);

14:20 Localized Plasmonic Devices Based on Highly Ordered Anodic Porous Alumina
Hideki Masuda (*Tokyo Metropolitan University, Japan*); *Kazuyuki Nishio* (*Tokyo Metropolitan University, Japan*); *Toshiaki Kondo* (*Kanagawa Academy of Science and Technology, Japan*);

14:40 Spectral, Amplitude and Phase Sensitivity of a Plasmonic Gas Sensor in a Metallic Photonic Crystal Slab Geometry. Comparison of the Near and Far Field Phase Detection Strategies
L. Shi (*École Polytechnique de Montréal, Canada*); *A. V. Kabashin* (*École Polytechnique de Montréal, Canada*); *Maksim Skorobogatiy* (*École Polytechnique de Montréal, Canada*);

15:00 **Coffee Break**

Session 2P3b
Optics, Photonics and Nano-photonics

Tuesday PM, March 23, 2010

Room C

Chaired by Manfred Eich, Lei Gao

15:20 Self-field Theory-new Photonic Insights
Anthony H. J. Fleming (*Biophotonics Research Institute, Australia*);

15:40 Optical Characterization of Au-Ag Alloy Nanocylinder with Radial Dielectric Anisotropy Cylindrical Shell
Tao Pan (*Suzhou University of Science and Technology, China*); *Tao-Cheng Zang* (*Suzhou University of Science and Technology, China*); *Guo-Ding Xu* (*Suzhou University of Science and Technology, China*); *Lei Gao* (*Soochow University, China*);

16:00 GHz-Electrooptic Modulation in Silicon-organic Hybrid Nanophotonic Structures
Manfred Eich (*Hamburg University of Technology, Germany*); *Stefan Prorok* (*Hamburg University of Technology, Germany*); *Jan Hendrik Wülbern* (*Hamburg University of Technology, Germany*); *Jan Hampe* (*Hamburg University of Technology, Germany*); *Alexander Petrov* (*Hamburg University of Technology, Germany*); *Martin Jenett* (*Hamburg University of Technology, Germany*); *Arne F. Jacob* (*Hamburg University of Technology, Germany*); *Jingdong Luo* (*University of Washington, USA*); *Alex K. Y. Jen* (*University of Washington, USA*); *Andrea Di Falco* (*University of St Andrews, UK*); *Thomas F. Krauss* (*University of St. Andrews, UK*); *Jürgen Bruns* (*Technische Universität Berlin, Germany*);

16:20 Non-markovian Dynamics of Excitonic Polar-trion in Quantum Dots
Kuan-Ming Hung (*National Kaohsiung University of Applied Sciences, Taiwan*); *Wei-Jun Hong* (*National Kaohsiung University of Applied Sciences, Taiwan*);

16:40 Microstructured and Photonic Bandgap Fibers for Applications in the Resonant Bio- and Chemical Sensors
Maksim Skorobogatiy (*École Polytechnique de Montréal, Canada*);

17:00 Surface Plasmon Resonance-like Integrated Sensor at Terahertz Frequencies for Gaseous Analytes Using Porous Fibers Covered with a Thin Layer of Ferroelectric Plastic
A. Hassani (*École Polytechnique de Montréal, Canada*); *Maksim Skorobogatiy* (*École Polytechnique de Montréal, Canada*);

Session 2P4a
Electromagnetic Nondestructive Evaluation and Modeling

Tuesday PM, March 23, 2010

Room D

Organized by Zhiwei Zeng

Chaired by Zhiwei Zeng

13:00 Impact of Network Topology on the Matched-pulse-based Fault Detection
Layane Abboud (*SUPELEC, France*); *Andrea Cozza* (*SUPELEC, France*); *Lionel Pichon* (*LGEP-CNRS/SUPELEC, France*);

13:20 Efficient Finite Element Model for Simulating Eddy Current Testing of Aircraft Skin Structures
Zhiwei Zeng (*Xiamen University, China*);

13:40 Modelling and Validating Ferrite-core Probes for GMR-eddy Current Testing in Metallic Plates
Matteo Cacciola (*University Mediterranea of Reggio Calabria, Italy*); *G. Megali* (*University Mediterranea of Reggio Calabria, Italy*); *Diego Pellicanò* (*University Mediterranea of Reggio Calabria, Italy*); *Salvatore Calcagno* (*University Mediterranea of Reggio Calabria, Italy*); *M. Versaci* (*University Mediterranea of Reggio Calabria, Italy*); *Francesco Carlo Morabito* (*University Mediterranea of Reggio Calabria, Italy*);

14:00 A New Method for Performance Specification and Verification Using Gamma Distribution
Ameet V. Joshi (*Microline Technology Corporation, USA*);

14:20 Rotating Electromagnetic Field for Crack Detection in Railway Tracks
Matteo Cacciola (*University Mediterranea of Reggio Calabria, Italy*); *G. Megali* (*University Mediterranea of Reggio Calabria, Italy*); *Diego Pellicano* (*University Mediterranea of Reggio Calabria, Italy*); *Salvatore Calcagno* (*University Mediterranea of Reggio Calabria, Italy*); *M. Versaci* (*University Mediterranea of Reggio Calabria, Italy*); *Francesco Carlo Morabito* (*University Mediterranea of Reggio Calabria, Italy*);

15:40 Numerical Simulation of Electromagnetic Acoustic Testing Signals with Consideration of Electromagneto-mechanical Coupling Effect
Wenjing Wu (*Xi'an Jiaotong University, China*); *Cuixiang Pei* (*Xi'an Jiaotong University, China*); *Zhenmao Chen* (*Xi'an Jiaotong University, China*);

Session 2P4b
Advances in Microwave Imaging

Tuesday PM, March 23, 2010
Room D
Organized by Saibun Tjuatja, Kun-Shan Chen
Chaired by Saibun Tjuatja, Kun-Shan Chen

16:00 High Resolution, Wide Coverage Termite Imager
Nick W. D. Le Marshall (*University of NSW@ADFA, Australia*); *Gerard A. Rankin* (*EWA Australia, Australia*); *Andrew Z. Tirkel* (*Scientific Technology, Australia*);

16:20 A Study of Multifractal Dimensions for Classification of Multi-band Multi-polarized SAR Image
Hse Tzia Teng (*Multimedia University, Malaysia*); *Hong Tat Ewe* (*Universiti Tunku Abdul Rahman, Malaysia*); *Sin Leng Tan* (*Universiti Tunku Abdul Rahman, Malaysia*);

16:40 A GPU-based Fast Algorithm for Spaceborne SAR Image Simulation
Cheng-Yen Chiang (*National Central University, Taiwan*); *Kun-Shan Chen* (*National Central University, Taiwan*); *Chih-Tien Wang* (*National Central University, Taiwan*); *Tim Lee* (*National Central University, Taiwan*);

17:00 Compressive Inverse Synthetic Aperture Radar Imaging
Suman Kumar Gunnala (*The University of Texas at Arlington, USA*); *Saibun Tjuatja* (*The University of Texas at Arlington, USA*);

17:20 Impact of Scatterers Description as Components for Forest Electromagnetic Scattering Models
Pierre Borderies (*Office National d'Etudes et de Recherches Aerospatiales (ONEAR), France*); *Ludovic Villard* (*Office National d'Etudes et de Recherches Aerospatiales (ONERA), France*);

17:40 Implementation of Polarimetric Scattering Matrix Power Decomposition with Coherency Matrix Rotation Applied to ALOS-PAL-SAR Image Data Sets
Wolfgang-Martin Boerner (*University of Illinois at Chicago, USA*); *Yoshio Yamaguchi* (*Niigata University, Japan*); *Akinobu Sato* (*Niigata University, Japan*); *Ryoichi Sato* (*Niigata University, Japan*); *Hiroyoshi Yamada* (*Niigata University, Japan*); *Kun-Shan Chen* (*National Central University, Taiwan*);

Session 2P5
Advances in Numerical Techniques 2

Tuesday PM, March 23, 2010
Room E
Organized by Mei Song Tong, Weng Cho Chew
Chaired by Mei Song Tong, Weng Cho Chew

13:00 Semi-Analytical Mode Match Approach for Scattering Computation of Randomly Densely-distributed Conductive Targets
Hongxia Ye (*Fudan University, China*); *Ya-Qiu Jin* (*Fudan University, China*);

13:20 The Decomposition of the Angular Spectrum Domain in the Parallel Multilevel Fast Multipole Algorithm
Xingang Wang (*Shanghai University, China*); *Bin Cheng* (*Shanghai University, China*); *Hongxia Zhang* (*Aviation Industry Development Research Center of China, China*); *Weiqin Tong* (*Shanghai University, China*);

13:40 Lanczos Biconjugate A-Orthonormalization Methods for Surface Integral Equations in Electromagnetism
Bruno Carpentieri (*CRS4 Bioinformatics Laboratory, Italy*); *Yan-Fei Jing* (*University of Electronic Science and Technology of China, China*); *Tingzhu Huang* (*University of Electronic Science and Technology of China, China*);

14:00 Analysis of Polynomial and Geometric Conductivity Profiles in PML Layers: A Comparison
Manuel Benavides-Cruz (*Instituto Politecnico Nacional, Mexico*); *M. A. Alvarez-Cabanillas* (*Instituto Politécnico Nacional, México*); *M. Enciso-Aguilar* (*Instituto Politecnico Nacional, Mexico D.F.*); *Jorge Sosa-Pedroza* (*Instituto Politecnico Nacional, Mexico D.F.*);

14:20 Time-domain Analysis of Electromagnetic Scattering Problems by Numerical Inversion of the Laplace Transform
Shinichiro Ohnuki (*Nihon University, Japan*); *Yuya Kitaoka* (*Nihon University, Japan*); *Seiya Kishimoto* (*Nihon University, Japan*);

14:40 Interconnect and Packaging Analysis Based on the Dual Basis Expansion of Magnetic Current in the Method of Moments
Mei Song Tong (*University of Illinois at Urbana-Champaign, USA*); *Weng Cho Chew* (*University of Illinois at Urbana-Champaign, USA*); *Alina Deutsch* (*IBM, USA*); *Barry J. Rubin* (*IBM, USA*); *J. D. Morsey* (*IBM, USA*); *Lijun Jiang* (*IBM, USA*);

15:00 **Coffee Break**

15:20 Fast and Broadband Simulation of Large-scale Microstrip Structures
Yongpin Chen (*University of Hong Kong, China*); *Jie L. Xiong* (*University of Illinois at Urbana-Champaign, USA*); *Weng Cho Chew* (*University of Illinois at Urbana-Champaign, USA*);

15:40 The Voronoi-delaunay Dual Diagram and a Covolume Integration Scheme for Computational Electromagnetics in the Time Domain
Zhongqiang Xie (*Swansea University, UK*); *Oubay Hassan* (*Swansea University, UK*); *Kenneth Morgan* (*Swansea University, UK*);

16:00 A Multi-region Domain Decomposition Method for Analysis of Multiple Antennas Mounted on Complex Platform
Xiaochuan Wang (*The Ohio State University, USA*); *Jin-Fa Lee* (*The Ohio State University, USA*);

16:20 Reflection Coefficient of the Isotropic-Dispersion Finite-Difference Time-Domain (ID-FDTD) Method at Planar Dielectric Interfaces
Pingping Deng (*Inha Unvierstiy, South Korea*); *Il-Suek Koh* (*Inha Unvierstiy, South Korea*);

16:40 Analyzed of Yagi Antenna by the Theory of Maxwellian Circuits
Wenhui Shen (*Shanghai University, China*); *Yanzhong Ma* (*Shanghai University, China*); *Mingliang Wu* (*Shanghai University, China*); *K. K. Mei* (*University of California, USA*);

17:00 Modelling of Coil-loaded Wire Antenna Using Composite Multiple Domain Basis Functions
Albert A. Lysko (*Norwegian University of Science and Technology, Norway*);

17:20 A Method of Applying Single Higher Order Polynomial Basis Function over Multiple Domains
Albert A. Lysko (*Meraka Institute, CSIR, South Africa*);

17:40 Modelling a Wire Mesh Reflector by Grouping into Sub-meshes
Albert A. Lysko (*Norwegian University of Science and Technology, Norway*);

Session 2P6a
Microstrip and Printed Antennas, Phase Array Antennas 2

Tuesday PM, March 23, 2010

Room F

Organized by Dua-Chyrh Chang

Chaired by Wei He, Dua-Chyrh Chang

13:20 The Study on the Antenna Optimization
Junping Geng (*Shanghai Jiao Tong University, China*); *Ronghong Jin* (*Shanghai Jiaotong University, China*); *Xianling Liang* (*Shanghai Jiao Tong University, China*); *Hao Wu* (*Shanghai Jiao Tong University, China*); *Sheng Ye* (*Shanghai Jiao Tong University, China*); *Bangda Zhou* (*Shanghai Jiao Tong University, China*);

13:40 High Performance Antenna Array with Patch Antenna Elements
Dua-Chyrh Chang (*Oriental Institute of Technology, Taiwan*); *Bing-Hao Zeng* (*Oriental Institute of Technology, Taiwan*); *Ji-Chyun Liu* (*Ching Yun University, Taiwan*);

14:20 A Multiple Antenna System for RFID Access Control Management
Yinlong Huang (*The Third Research Institute of MPS, China*); *Wei He* (*The Third Research Institute of MPS, China*); *Weihua Sun* (*The Third Research Institute of MPS, China*); *Jiang Xu* (*The Third Research Institute of MPS, China*);

Session 2P6b
Mobile Antennas and Antenna with Metamaterials

Tuesday PM, March 23, 2010

Room F

Chaired by Shi-Chang (Steven) Gao

15:20 60 GHz Meta-material Wideband Antenna for FPGA Giga Bit Data Transmission
Ying Peng (*The University of Manchester, UK*); *Zhirun Hu* (*University of Manchester, UK*);

15:40 A Miniature Coupled Loop Antenna to be Embedded in a Mobile Phone for Penta-band Applications
Sheng-Yu Lin (*National Taiwan University of Science and Technology, Taiwan*); *Hsien-Wen Liu* (*National Taiwan University of Science and Technology, Taiwan*); *Chung-Hsun Weng* (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Chang-Fa Yang* (*National Taiwan University of Science and Technology, Taiwan*);

16:00 A Novel Design of Planar Spiral Antenna with Metamaterial
Nakun Jing (*Northwestern Polytechnical University, China*); *Huiling Zhao* (*Northwestern Polytechnical University, China*); *Lihao Huang* (*Northwestern Polytechnical University, China*);

16:20 Compact Multi-band Antenna for Global Navigation Satellite Systems
Shi-Chang (Steven) Gao (*University of Surrey, UK*); *Li Zheng* (*University of Surrey, UK*);

16:40 A Numerical Study of the Interaction between Handset Antennas and Human Head/Hand in GSM 900, DCS, PCS and UMTS Frequency Bands
Danoosh Davoodi (*Sadjad Institute of Higher Education, Iran*); *Shahin Sharifzad* (*Sadjad Institute of Higher Education, Iran*);

Session 2P7
Materials, Devices, Processes and Characterizations for Organic Electronics

Tuesday PM, March 23, 2010

Room G

Organized by Jwo-Huei Jou

Chaired by Wei-Fang Su, Jiun-Haw Lee

13:20 Chiral Nematic Liquid Crystal/Fe_3O_4 Nanoparticles Composites with Magnetically Controllable Characteristics of Selective Reflection
Wang Hu (*University of Science and Technology Beijing, China*); *Li Song* (*University of Science and Technology Beijing, China*); *Haiyan Zhao* (*University of Science and Technology Beijing, China*); *Hui Cao* (*University of Science and Technology Beijing, China*); *Zhou Yang* (*University of Science and Technology Beijing, China*); *Zihui Cheng* (*University of Science and Technology Beijing, China*); *Huai Yang* (*University of Science and Technology Beijing, China*); *Lin Guo* (*Beijing University of Aeronautics and Astronautics, China*);

13:40 High Performance Organic TFT and Nonvolatile Memory Using High-κ Dielectric Layers
Albert Chin (*Chiao-Tung University, Taiwan*); *M. F. Chang* (*Chiao-Tung University, Taiwan*); *P. T. Lee* (*Chiao-Tung University, Taiwan*); *C. H. Wu* (*Chung Hua University, Taiwan*);

14:00 Fabrication of Electrodes for Organic Field-effect Transistors through Spin-coating Technique with Incorporation of Surface Wettability Treatment
Yan-Han Chen (*National Chung Cheng University, Taiwan, R.O.C.*); *Jeng-Rong Ho* (*National Chung Cheng University, Taiwan, R.O.C.*); *Jungwei John Cheng* (*National Chung Cheng University, Taiwan, R.O.C.*);

14:20 Toward High Efficiency Polymer-nanoparticle Hybrid Solar Cell
Wei-Fang Su (*National Taiwan University, Taiwan*);

14:40 Side Chain Crystallization Effect on the Performance of Bulk Heterojunction Solar Cells
Wen-Yao Huang (*National Sun Yat-Sen University, Taiwan*); *S. G. Wang* (*National Sun Yat-Sen University, Taiwan*);

15:00 **Coffee Break**

15:20 Morphology Manipulation for Polymer Solar Cells
Fang-Chung Chen (*National Chiao Tung University, Taiwan*);

15:40 Modeling of Moisture Diffusion in Heterogeneous Epoxy Resin Containing Multiple Randomly Distributed Particles Using Hybrid Moisture Element Method
De-Shin Liu (*National Chung Cheng University, Taiwan, R.O.C.*); *Zhen-Wei Zhuang* (*National Chung Cheng University, Taiwan, R.O.C.*); *Ching-Yang Chen* (*RiTdisplay Corporation, Taiwan, R.O.C.*); *Cho-Liang Chung* (*I-Shou University, Taiwan, R.O.C.*);

16:00 Micro-contact Printing of Semiconductive, Dielectric and Conductive Polymers
Jungwei John Cheng (*National Chung Cheng University, Taiwan, R.O.C.*); *Jeng-Rong Ho* (*National Chung Cheng University, Taiwan, R.O.C.*); *Jia-De Jhu* (*National Chung Cheng University, Taiwan, R.O.C.*); *Chun-Yi Lee* (*National Chung Cheng University, Taiwan, R.O.C.*); *Chang-Pen Chen* (*Metal Industries Research & Development Centre, Taiwan, R.O.C.*); *Yeh-Min Lin* (*Metal Industries Research & Development Centre, Taiwan, R.O.C.*);

16:20 Nanoscale Imaging and Analysis of Organic Electronic Devices Using Cluster Ion Beam
Jing-Jong Shyue (*Research Center for Applied Sciences, Academia Sinica, Taiwan*); *Jwo-Huei Jou* (*National Tsing Hua University, Taiwan*); *Bang-Ying Yu* (*Research Center for Applied Sciences, Academia Sinica, Taiwan*); *Wei-Chun Lin* (*Research Center for Applied Sciences, Academia Sinica, Taiwan*); *Wei-Ben Wang* (*National Tsing Hua University, Taiwan*);

16:40 Organic Light-emitting Devices with Micro- and Nano-structures
Mao-Kuo Wei (*National Dong Hwa University, Taiwan, R.O.C.*); *Chii-Wann Lin* (*National Taiwan University, Taiwan, R.O.C.*); *Jiun-Haw Lee* (*National Taiwan University, Taiwan, R.O.C.*); *Hoang-Yan Lin* (*National Taiwan University, Taiwan, R.O.C.*);

17:00 Artificial Sunlight by Using Organic Light-emitting Diode
Jwo-Huei Jou (*National Tsing Hua University, Taiwan, R.O.C.*);

17:20 Microlens Array Diffuser Films Fabricated by Combination of Breath Figures and Replica Molding Methods
Chia Chen Hsu (*National Chung Cheng University, Taiwan, R.O.C.*); *Cheng Yi Wu* (*National Chung Cheng University, Taiwan, R.O.C.*); *Ting Hsuan Chiang* (*National Chung Cheng University, Taiwan, R.O.C.*);

Session 3A1
Microwave Innovative Techniques and Systems in Exploring Planetary Bodies

Wednesday AM, March 24, 2010

Room A

Organized by Giorgio Franceschetti, Stephen D. Wall

Chaired by Giorgio Franceschetti, Stephen D. Wall

08:20 Interpreting the Geology of Titan Using SAR Data from Cassini
Rosaly M. C. Lopes (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *E. R. Stofan* (*Proxemy Research, USA*); *C. A. Wood* (*Wheeling Jesuit University, USA*); *Stephen D. Wall* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *J. Radebaugh* (*Brigham Young University, USA*); *K. L. Mitchell* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Tom G. Farr* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *F. Paganelli* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *The Cassini RADAR Team* (*Jet Propulsion Laboratory, California Institute of Technology, USA*);

08:40 A Radar Eye on the Moon: Potentials and Limitations for Earth Imaging
M. Calamia (*Università di Firenze, Italy*); *Gianfranco Fornaro* (*Consiglio Nazionale delle Ricerche, Italy*); *Giorgio Franceschetti* (*Università di Napoli "Federico II", Italy*); *F. Lombardini* (*Università di Pisa, Italy*); *A. Mori* (*Università di Firenze, Italy*);

09:00 Modeling Radar-bright Regions on Titan Using FDTD Code
Philippe Paillou (*University of Bordeaux, France*); *M. Janssen* (*Jet Propulsion Laboratory, USA*); *A. Le Gall* (*Jet Propulsion Laboratory, USA*); *Tom G. Farr* (*Jet Propulsion Laboratory, USA*); *Stephen D. Wall* (*Jet Propulsion Laboratory, USA*); *Howard A. Zebker* (*Stanford University, USA*); *Lauren Wye* (*Stanford University, USA*);

09:20 Remote Sensing of Titan's Surface from the Huygens Probe and Cassini Orbiter
Ralph D. Lorenz (*Johns Hopkins University Applied Physics Laboratory, USA*);

10:00 **Coffee Break**

10:20 A Fractal Approach for Understanding Altimeter Data
Gabriella Bernardi (*University of Naples Federico II, Italy*); *Giorgio Franceschetti* (*University of Naples Federico II, Italy*); *Antonio Iodice* (*University of Naples Federico II, Italy*); *Daniele Riccio* (*University of Naples Federico II, Italy*);

10:40 A Review of the Use of Electromagnetic Radiation for Remote Sensing of Natural Surfaces
Stephen D. Wall (*Jet Propulsion Laboratory, California Institute of Technology, USA*);

11:00 Titan Surface Topography from Cassini SAR Data: An Amplitude Monopulse Comparison Method
Bryan W. Stiles (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Scott Hensley* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Yonggyu Gim* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *David M. Bates* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Randolph L. Kirk* (*United States Geological Survey, USA*); *Alex Hayes* (*California Institute of Technology, USA*); *Jani Radebaugh* (*Brigham Young University, USA*); *Ralph D. Lorenz* (*Johns Hopkins University, USA*); *Karl L. Mitchell* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Philip S. Callahan* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Howard A. Zebker* (*Stanford University, USA*); *William T. K. Johnson* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Stephen D. Wall* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Jonathan I. Lunine* (*University of Arizona, USA*); *Charles A. Wood* (*Wheeling Jesuit University, USA*); *Michael Janssen* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Frederic Pelletier* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Richard D. West* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Flora Paganelli* (*University of California, USA*); *Chandini Veeramacheneni* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *The Cassini RADAR Team* (*Jet Propulsion Laboratory, California Institute of Technology, USA*);

11:20 Pushing the Envelope with the Cassini RADAR
Richard D. West (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Bryan W. Stiles* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Lauren Wye* (*Stanford University, USA*); *Howard A. Zebker* (*Stanford University, USA*); *Y. Anderson* (*California Institute of Technology, USA*); *Philip S. Callahan* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *A. Le Gall* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Yonggyu Gim* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *G. Hamilton* (*California Institute of Technology, USA*); *Michael Janssen* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *William T. K. Johnson* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *K. Kelleher* (*California Institute of Technology, USA*); *Randolph L. Kirk* (*United States Geological Survey, USA*); *Ralph D. Lorenz* (*Johns Hopkins University, USA*); *Jonathan I. Lunine* (*University of Arizona, USA*); *Chandini Veeramacheneni* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *Stephen D. Wall* (*Jet Propulsion Laboratory, California Institute of Technology, USA*); *The Cassini RADAR Team* (*Jet Propulsion Laboratory, California Institute of Technology, USA*);

Session 3A2a
Rough Surface Scattering and Volume Scattering

Wednesday AM, March 24, 2010

Room B

Organized by Zhen-Sen Wu

Chaired by Zhen-Sen Wu

08:00 Study on Backscattering from Rough Sea Surface
Jia Zheng (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Yu-Shi Zhang* (*China Reserch Institute of Radiowave Propagation, China*);

08:20 Temporal Intensity Correlation Function of Speckle from Rough, Rotating Spheres
Geng Zhang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Mingjun Wang* (*Xidian University, China*);

08:40 Nonlinear Optics Controlled by Quantum Coherence
Yuri Rostovtsev (*University of North Texas, USA*);

09:00 Research on Characteristics for Optical Pulse Propagation in Fog Channel
Rong-Rong Wang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*);

09:20 Numerical Calculation of Scattering Matrix about Wafers and Impurity Particles above
Lei Gong (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*);

09:40 Vector Electromagnetic Scattering from Multilayer 2D Arbitrary Random Rough Surfaces for Remote Sensing of Soil Moisture
Xueyang Duan (*University of Michigan, USA*); *Mahta Moghaddam* (*University of Michigan, USA*);

10:00 **Coffee Break**

Session 3A2b
Scattering and Rough Surface Scattering

Wednesday AM, March 24, 2010

Room B

Chaired by Zhen-Sen Wu

10:20 Plane Wave Scattering by a Coated Thin Wire
A. Ike Mowete (*University of Lagos, Nigeria*); *Ade Ogunsola* (*University of Lagos, Nigeria*);

10:40 Fast Bistatic ISAR Imaging Simulations for 3D Scattering Center Analysis of Vehicles
Hermann Buddendick (*Universität Stuttgart, Germany*); *Thomas Eibert* (*Technische Univerität München, Germany*);

11:00 Transmission Characteristic of Sea Surface Scattered GPS Signal Trapped in Atmospheric Duct
Jin-Peng Zhang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Rong-Xu Hu* (*Xidian University, China*);

11:20 Composite Scattering between Plate and Sea Surface: The Theory and Verified Experiment
Jing-Jian Zhang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Xiao-Bing Wang* (*The 802nd Research Institute of Shanghai Academy of Spaceflight Technology, China*);

Session 3A3
Microwave/Terahertz Photonics Technologies and Their Applications

Wednesday AM, March 24, 2010

Room C

Organized by Katsumi Iwatsuki

Chaired by Katsumi Iwatsuki

08:00 Experimental Investigation on a Radio-on-free-space Optical System Suitable for Provision of Ubiquitous Wireless Services
Mitsuji Matsumoto (*Waseda University, Japan*); *Kamugisha Kazaura* (*Waseda University, Japan*); *Kazuhiko Wakamori* (*Waseda University, Japan*); *Takeshi Higashino* (*Osaka University, Japan*); *Katsutoshi Tsukamoto* (*Osaka University, Japan*); *Shozo Komaki* (*Osaka University, Japan*);

08:20 Stimulated Terahertz Emission from Optically Pumped Epitaxial Graphene-on-Si Heterostructures
Taiichi Otsuji (*Tohoku University, Japan*); *Hiromi Karasawa* (*Tohoku University, Japan*); *Tsuneyoshi Komori* (*Tohoku University, Japan*); *Takayuki Watanabe* (*Tohoku University, Japan*); *Maki Suemitsu* (*Tohoku University, Japan*); *Akira Satou* (*University of Aizu, Japan*); *Victor Ryzhii* (*University of Aizu, Japan*);

08:40 Terahertz Quantum Cascade Lasers and Their Possible Applications
Iwao Hosako (*National Institute of Information and Communications Technology, Japan*); *Norihiko Sekine* (*National Institute of Information and Communications Technology, Japan*); *Kaori Fukunaga* (*National Institute of Information and Communications Technology, Japan*);

09:00 Analysis of Optical Coupling for SOI Waveguides
Hirohito Yamada (*Tohoku University, Japan*);

09:20 High-speed and Precise Lightwave Modulation for High-speed Transmission Systems
Tetsuya Kawanishi (*National Institute of Information and Communications Technology (NICT), Japan*); *Takahide Sakamoto* (*National Institute of Information and Communications Technology (NICT), Japan*); *Akito Chiba* (*National Institute of Information and Communications Technology (NICT), Japan*); *Hiroyuki Toda* (*Doshisha University, Japan*);

09:40 Continuous-wave Terahertz Spectroscopy System Based on Photodiodes
Tadao Nagatsuma (*Osaka University, Japan*); *Akira Kaino* (*Osaka University, Japan*); *Shintaro Hisatake* (*Osaka University, Japan*); *Katsuhiro Ajito* (*NTT Corporation, Japan*); *Ho-Jin Song* (*NTT Corporation, Japan*); *Atsushi Wakatsuki* (*NTT Corporation, Japan*); *Yoshifumi Muramoto* (*NTT Corporation, Japan*); *Naoya Kukutsu* (*NTT Corporation, Japan*); *Yuichi Kado* (*NTT Corporation, Japan*);

10:00 **Coffee Break**

10:20 Image Observations and Analyses of RF Wave Propagations on the Basis of LEI Camera
Takahiro Shiozawa (*Kagawa National College of Technology, Japan*); *Atsushi Kanno* (*National Institute of Information and Communications Technology, Japan*); *Kiyotaka Sasagawa* (*Nara Institute of Science and Technology, Japan*); *Masahiro Tsuchiya* (*National Institute of Information and Communications Technology, Japan*);

10:40 Radio on LCX as Universal Radio Platform and Its Application
Takeshi Higashino (*Osaka University, Japan*); *Katustoshi Tsukamoto* (*Osaka University, Japan*); *Shozo Komaki* (*Osaka University, Japan*);

11:00 Close Proximity Wireless Communication Technologies Using Shortwaves, Microwaves, and Sub-terahertz Waves
Yuichi Kado (*NTT Corporation, Japan*); *Mitsuru Shinagawa* (*NTT Microsystem Integration Laboratories, Japan*); *Ho-Jin Song* (*NTT Corporation, Japan*); *Tadao Nagatsuma* (*Osaka University, Japan*);

11:20 Convergence of WDM Access and Ubiquitous Antenna Architecture for Broadband Wireless Services
Katsutoshi Tsukamoto (*Osaka University, Japan*); *Tatsuya Nishiumi* (*Osaka University, Japan*); *Takuya Yamagami* (*Osaka University, Japan*); *Takeshi Higashino* (*Osaka University, Japan*); *Shozo Komaki* (*Osaka University, Japan*); *Ryogo Kubo* (*NTT Access Network Service Systems Laboratories, Japan*); *Tomohiro Taniguchi* (*NTT Access Network Service Systems Laboratories, Japan*); *Junichi Kani* (*NTT Access Network Service Systems Laboratories, Japan*); *Naoto Yoshimoto* (*NTT Access Network Service Systems Laboratories, Japan*); *Hideaki Kimura* (*NTT Access Network Service Systems Laboratories, Japan*); *Katsumi Iwatsuki* (*NTT Service Integration Laboratories, Japan*);

Session 3A4
Wave Propagation and Wave Interaction with Media

Wednesday AM, March 24, 2010

Room D

Chaired by Rachid Talhi

08:20 On the Statistical Approach to Characterize a Ionospheric Radio-channel
Rachid Talhi (*University of Tours and CNRS, France*); *A. Lebrere* (*CNRS (National Center for Scientific Research), France*); *Cédric Blanchard* (*University of Granada, Spain*); *M. R. Tripathy* (*University of Delhi, India*);

08:40 Seasonal/Longitudinal Variations of Radiowave Scintillations Derived from the Topside Ionospheric Density Irregularities Observed by ROCSAT from 1999 to 2004
Y. H. Liu (*National Central University, Taiwan*); *Shin-Yi Su* (*National Central University, Taiwan*); *C. H. Liu* (*Academia Sinica, Taiwan*);

09:00 Comparison of Microwave Links Prediction Methods: Barnett-Vigants vs. ITU Models
Basile L. Agba (*Institut de Recherche d'Hydro-Québec, Canada*); *Robert Morin* (*Hydro-Québec, Canada*); *Germain Bergeron* (*Hydro-Québec, Canada*);

09:20 Tuneable Absorber Loading in the Reverberation Chamber by Using Active Frequency Selective Surfaces
Jung-Hwan Choi (*Korea Advanced Institute of Science and Technology, Korea*); *Seong-Ook Park* (*Korea Advanced Institute of Science and Technology, Korea*);

09:40 Pecularities of the Total Electron Content and Their Reflections in the Ionospheric Model
Olga A. Maltseva (*Rostov State University, Russia*); *T. Trinh Quang* (*Southern Federal University, Russia*);

10:00 **Coffee Break**

10:20 Research of the Effect of Electromagnetic Interference on Magnetic Sensors due to the Data Transmitting System of the Seismic Electromagnetic Satellite
Ye An (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Pinglian Wang* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Ping Liu* (*Dalian University of Technology, China*); *Yu-Rong Liu* (*Academy of Opto-Electronics, Chinese Academy of Sciences, China*); *Rui Yan* (*Institute of Engineering Mechanics, China Earthquake Administration, China*);

10:40 Dynamic Motions of Small Diamagnetic Particles Induced by Static Field in Microgravity Condition; Examination of Mass Dependence
Chiaki Uyeda (*Osaka University, Japan*); *Keiji Hisayoshi* (*Osaka University, Japan*); *Shun Kanou* (*Osaka University, Japan*);

11:00 Charge Continuity Equation in the Gravitational Field
Ying Weng (*Xiamen University, China*); *Zi-Hua Weng* (*Xiamen University, China*);

11:20 Pyroelectric Properties of the Sr-doped Ferroelectric Barium Iron Niobate
S. B. Bajaj (*JES College, India*); *R. L. Raibagkar* (*Gulbarga University, India*); *Ganeshchandra Narharrao Shinde* (*Indira Gandhi College, India*);

Session 3A5
Advanced CEM Methods for Electrically Large Problems

Wednesday AM, March 24, 2010

Room E

Organized by Jin-Fa Lee, Zhen Peng

Chaired by Zhen Peng

08:20 Study of EM Scattering from Electrically Large Objects in Planarly Multilayered Media with a Fast Algorithm
Lei Zhuang (*Wuhan University, China*); *Si-Yuan He* (*Wuhan University, China*); *Jing-Jing Yao* (*Wuhan University, China*); *Ding-Feng Yu* (*Wuhan University, China*); *Guo-Qiang Zhu* (*Wuhan University, China*);

08:40 Shooting and Bouncing Ray Tracing Method Based on Uniform Stationary Phase Approach
Wenming Yu (*Southeast University, China*); *Jun Zhang* (*Southeast University, China*); *Xiaoyang Zhou* (*Southeast University, China*); *Tie Jun Cui* (*Southeast University, China*);

09:00 Efficient Analysis of Electromagnetic Scattering Problem Using Proper Orthogonal Decomposition
Chao-Fu Wang (*National University of Singapore, Singapore*);

09:20 Electromagnetic Modeling of Finite Metallic Grid FSS Structures Using Scale Changing Technique
Euloge B. Tchikaya (*LAAS, France*); *Aamir Rashid* (*LAAS, France*); *Hervé Aubert* (*Centre National de la Recherche Scientifique (CNRS), France*); *Hervé Legay* (*Thales Alenia Space, France*); *Nelson Fonseca* (*CNES, France*);

09:40 The Probability Distribution of the EM Fields in Single-cavity System and the Application of PWB Method
Juan Liu (*Sichuan University, China*); *Xiang Zhao* (*Sichuan University, China*); *Kama Huang* (*Sichuan University, China*);

10:00 **Coffee Break**

10:20 Solving Low Frequency Scattering from Dielectric Objects by Improved IE-FFT
Jiliang Yin (*University of Electronic Science and Technology of China, China*); *Jun Hu* (*University of Electronic Science and Technology of China, China*); *Zai-Ping Nie* (*University of Electronic Science and Technology of China, China*);

10:40 An Efficient Domain Decomposition Method for Solving Extremely Large Cavity Scattering Problems
Zhen Peng (*The Ohio State University, USA*); *Jin-Fa Lee* (*The Ohio State University, USA*);

11:00 A Hybrid Lattice-adaptable ADI-FDTD/PSTD Algorithm
Hong-Xing Zheng (*Tianjin University of Technology and Education, China*); *Chong Peng* (*Tianjin University of Technology and Education, China*);

11:20 A Soft Source Technique Introduced to the ADI-PSTD Method
Hong-Xing Zheng (*Tianjin University of Technology and Education, China*);

Session 3A6
Antenna Theory, Radiation, Microstrip and Printed Antennas 1

Wednesday AM, March 24, 2010

Room F

Organized by Hou Zhang

Chaired by Hou Zhang, Hong-Xing Zheng

08:00 Improved Team Progress Algorithm for Wide Sector Pattern Synthesis of Antenna Arrays
M. Zhang (*Nanjing University of Posts and Telecommunications, China*); *Yaming Bo* (*Nanjing University of Posts and Telecommunications, China*);

08:20 Design and Simulation of Planar Archimedean Spiral Antenna
Changjie Sun (*Northwestern Polytechnical University, China*); *Guobin Wan* (*Northwestern Polytechnical University, China*); *Zhang Hu* (*Northwestern Polytechnical University, China*); *Xin Ma* (*Northwestern Polytechnical University, China*);

08:40 Dual-frequency Dual-polarization V-Band Reconfigurable Antenna
Xiaoyan Yuan (*Utah State University, USA*); *Yasin Damgaci* (*Utah State University, USA*); *Bedri A. Cetiner* (*Utah State University, USA*);

09:00 Capacitively Fed Wide-band PIFA with Modified Ground Plane
Hema Swaroop Mopidevi (*Utah State University, USA*); *Ali Khoshniat* (*Utah State University, USA*); *Bedri A. Cetiner* (*Utah State University, USA*);

09:20 Study on Optimize Efficiency of Particle Swarm Optimization for the Synthesis of Subarrayed Arrays
Ning Ren (*Northwestern Polytechnical University, China*); *Guobin Wan* (*Northwestern Polytechnical University, China*); *Xin Ma* (*Northwestern Polytechnical University, China*);

09:40 Directive Surface Wave Excitation Using Yagi-Uda Slots
Jinsheng Dong (*Sichuan University, China*); *Liping Yan* (*Sichuan University, China*); *Kama Huang* (*Sichuan University, China*);

10:00 **Coffee Break**

10:20 Wideband Slot Antenna by Controlling Resonances
Hyengcheul Choi (*Hanyang University, Korea*); *Sinhyung Jeon* (*Hanyang University, Korea*); *Oul Cho* (*Hanyang University, Korea*); *Seungwoo Kim* (*Hanyang University, Korea*); *Hyeongdong Kim* (*Hanyang University, Korea*);

10:40 Design of a Gaussian Backscatter Antenna with Ring Focus Feed
Wanwisa Thaiwirot (*Institute of Engineering, Thailand*); *Rangsan Wongsan* (*Suranaree University of Technology, Thailand*); *Monai Krairiksh* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

11:00 High Directive Gain Antenna Using Shorted-end Curved Strip Dipole on Electromagnetic Band Gap
N. Fhafhiem (*Suranaree University of Technology, Thailand*); *Piyaporn Krachodnok* (*Suranaree University of Technology, Thailand*); *Rangsan Wongsan* (*Suranaree University of Technology, Thailand*);

11:20 A Microstrip-fed Super-wideband Printed Elliptical Patch Antenna
Jianjun Liu (*Macquarie University, Australia*); *Karu P. Esselle* (*Macquarie University, Australia*); *Shun-Shi Zhong* (*Shanghai University, China*);

11:40 Printed Temperature Sensors for Passive RFID Tags
Jinlan Gao (*Mid Sweden University, Sweden*); *Johan Siden* (*Mid Sweden University, Sweden*); *Hans-Erik Nilsson* (*Mid Sweden University, Sweden*);

Session 3AP
Poster Session 2

Wednesday AM, March 24, 2010
9:00 AM - 4:00 PM
Room K

2 MIMO Channel Evaluation in Terms of Correlation and Capacity for LTE in Indoor Environment
Jinyoung Lee (*Korea Advanced Institute of Science and Technology, Korea*); *Jung-Hwan Choi* (*Korea Advanced Institute of Science and Technology, Korea*); *Seong-Ook Park* (*Korea Advanced Institute of Science and Technology, Korea*);

3 Radiation Pattern Improvement of Wideband Bowtie Antenna Using High Impedance Surface
Xiankun Meng (*Institute of Electronics, Chinese Academy of Sciences, China*); *Chao Li* (*Institute of Electronics, Chinese Academy of Sciences, China*); *Guangyou Fang* (*The Institute of Electronics, Chinese Academy of Sciences, China*);

4 Outline of Noise Spectroscopy Potentialities
Radek Kubásek (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Pavel Fiala* (*Brno University of Technology, Czech Republic*); *Karel Bartušek* (*Institute of Scientific Instruments, Academy of Sciences of Czech Republic, Czech Republic*);

5 Analysis of the RCS and Radiation Pattern of a Planar Array Antenna Integrated with Dielectric and FSS
Wenming Tian (*University of Electronic Science and Technology of China, China*); *Xin-Yu Hou* (*University of Electronic Science and Technology of China, China*);

6 Wide-Angle Transmision Wave Polarizers Using Dielectric Layers
Mohammad Khalaj-Amirhosseini (*Iran University of Science and Technology, Iran*);

7 Corrugated Tapered Slot Antenna Design and Measurement
Kekun Chang (*National Taipei University of Technology, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

8 Triple-band Antenna Design Using Enhanced Particle Swarm Optimization
Wen Tao Li (*Xidian University, China*); *Cunlong Li* (*Xidian University, China*); *Zhi-Qing Lv* (*Xidian University, China*); *Xiao Wei Shi* (*Xidian University, China*);

9 Design of a Highly-directive Patch Antenna with Honeycomb-like Metamaterial Cover
Hang Zhou (*Air Force Engineering University, China*); *Zhibin Pei* (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Jieqiu Zhang* (*Air Force Engineering University, China*); *Chunhui Chen* (*Air Force Engineering University, China*); *Song Xia* (*Xi'an Jiaotong University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*);

10 Frequency Reconfigurable Top-loaded Monopole Based on Fractal Geometry
King Yin Cheung (*City University of Hong Kong, China*); *Wing Shing Chan* (*City University of Hong Kong, China*);

12 Design of Circularly Polarized Annular-ring Slot Antenna
Ching-Fang Tseng (*National United University, Taiwan*);

13 Design of Slot Array Antenna at 24 GHz
Se-Hwan Choi (*Korea Electronics Technology Institute, Republic of Korea*); *Jin-Sup Kim* (*Korea Electronics Technology Institute, Republic of Korea*); *Kyu-Bok Lee* (*Korea Electronics Technology Institute, Republic of Korea*); *Jae-Young Lee* (*Korea Electronics Technology Institute, Korea*);

14 A Broadband Shorted-patch Antenna for DCS/PCS/UMTS Application
Dongya Shen (*Yunnan University, China*); *Jie Xu* (*Yunnan University, China*); *Yanni Cui* (*Yunnan University, China*); *Xiupu Zhang* (*Concordia University, Canada*); *Ke Wu* (*Montreal University, Canada*);

15 Design of Planar Monopole Antenna with Annulus Shape for Ultra-wideband Applications
Fangfang Yan (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*);

16 Wideband Reflectarray Using Sub-wavelength Ring Elements
Gang Zhao (*Xidian University, China*);

17 X-band Microstrip Antenna Array Using Stacked Structure and Aperture Coupling Feeding
Fan Zhang (*Xidian University, China*); *Fu-Shun Zhang* (*Xidian University, China*); *Gang Zhao* (*Xidian University, China*); *Chen Lin* (*Xidian University, China*); *Yong-Chang Jiao* (*Xidian University, China*);

18 Directive Circularly Polarized Antenna Using Low-profile Resonant Cavity Based on Metamaterial Superstrate
Gang Zhao (*Xidian University, China*); *Yong-Chang Jiao* (*Xidian University, China*); *Fu-Shun Zhang* (*Xidian University, China*);

19 Universal UHF RFID Rose Reader Antenna
Tamer G. Abo-Elnaga (*Electronics Research Institute, Egypt*); *Esmat Abdel-Fattah Abdallah* (*Electronics Research Institute, Egypt*); *Hadia M. Elhenawy* (*Ain Shams University, Egypt*);

20 Antenna Radome Using Split Ring Resonator
The-Nan Chang (*Tatung University, Taiwan*); *Jyun-Ming Lin* (*Tatung University, Taiwan*); *Min-Chi Wu* (*WHA YU Industrial Corporation, Taiwan*);

21 Design of the Novel Band Notched UWB Antenna with the Spiral Loop Resonators
Dang-Oh Kim (*Kyungpook National University, South Korea*); *Nam-I Jo* (*Kyungpook National University, South Korea*); *Dong-Muk Choi* (*Kyungpook National University, South Korea*); *Che-Young Kim* (*Kyungpook National University, South Korea*);

22 UWB Circular Polarization RFID Reader Antenna for 2.4 GHz Band
Tamer G. Abo-Elnaga (*Electronics Research Institute, Egypt*); *Esmat Abdel-Fattah Abdallah* (*Electronics Research Institute, Egypt*); *H. El-Hennawy* (*Ain Shams University, Egypt*);

23 A Compact UWB Antenna Design for Breast Cancer Detection
Shahid Adnan (*University of Bradford, UK*); *Raed A. Abd-Alhameed* (*University of Bradford, UK*); *Chan H. See* (*University of Bradford, UK*); *H. I. Hraga* (*University of Bradford, UK*); *Issa T. E. Elfergani* (*University of Bradford, UK*); *Dawei Zhou* (*University of Bradford, UK*);

24 An 8-element Tapered Slot Antenna Array with a Bandwidth in Excess of 16.5:1
Yue Song (*Xidian University, China*); *Yong-Chang Jiao* (*Xidian University, China*); *Nai-Biao Wang* (*Xidian University, China*); *Tian-Ling Zhang* (*Xidian University, China*); *Fu-Shun Zhang* (*Xidian University, China*);

25 New Antenna System Measurement Technology for GPS OTA Operation
Jui-Yi Yang (*Yuan Ze University, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Yung-Sheng Chen* (*Yuan Ze University, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

26 Comparison between Empirical and Deterministic Models to Predict the Propagation Losses in Indoor Scenarios
Oscar Gutiérrez Blanco (*Alcalá University, España*); *Antonio Juliá López-Barrantes* (*Universidad Politécnica de Valencia, España*); *M. Francisco Sáez De Adana* (*Alcalá University, España*); *Rainer Kronberger* (*Cologne University of Applied Sciencies, Alemania*);

27 IMS-based Multimedia Applications with QoS Guarantee
Zhimin Feng (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*);

28 A Novel Indoor UWB Antenna Array Design by PSO
Shu-Han Liao (*Tamkang University, Taiwan, R.O.C.*); *Min-Hui Ho* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Ching Chiu* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Hung Chen* (*Taipei College of Maritime Technology, Taiwan, R.O.C.*); *Chien-Hui Chung* (*Tamkang University, Taiwan, R.O.C.*);

30 Short Range Propagation Characteristics of UHF Frequency Band for Moving Vehicles RFID
Deock-Ho Ha (*Pukyong National University, Korea*); *Yeon-Wook Choe* (*Pukyong National University, Korea*);

31 A 1.2 V Low-power Receiver for Short Range Applications
Wei-Hsiang Hung (*National Taiwan University, Taiwan, R.O.C.*); *Kuan-Ting Lin* (*National Taiwan University, Taiwan, R.O.C.*); *Shey-Shi Lu* (*National Taiwan University, Taiwan, R.O.C.*);

32 Design of a Novel Three-way Tri-band Power Divider
Xin Huai Wang (*Xidian University, China*); *Yan Fu Bai* (*Xidian University, China*); *Dong-Zhou Chen* (*Xidian University, China*); *Xiao-Wei Shi* (*Xidian University, China*); *Xin Li* (*Xidian University, China*);

33 Bit Error Rate Reduction of Multi-user by UWB Antennas
Chien-Hung Chen (*Taipei College of Maritime Technology, Taiwan, R.O.C.*); *Shu-Han Liao* (*Tamkang University, Taiwan, R.O.C.*); *Min-Hui Ho* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Ching Chiu* (*Tamkang University, Taiwan, R.O.C.*);

34 UWB Communication Characteristics for Different Distribution of Pedestrian
Chien-Hung Chen (*Taipei College of Maritime Technology, Taiwan, R.O.C.*); *Min-Hui Ho* (*Tamkang University, Taiwan, R.O.C.*); *Shu-Han Liao* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Ching Chiu* (*Tamkang University, Taiwan, R.O.C.*);

35 Ultra-wideband (UWB) Dipole Antenna Design and Measurement
Guan-Yu Chen (*National Taipei University of Technology, Taiwan*); *Kekun Chang* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

36 Wire Inverted-F Antenna Design for WLAN and Bluetooth Operation
Kuo-Liang Wu (*National Taipei University of Technology, Taiwan*); *Guan-Yu Chen* (*National Taipei University of Technology, Taiwan*); *Jwo-Shiun Sun* (*National Taipei University of Technology, Taiwan, R.O.C.*); *Y. D. Chen* (*High Tech. Computer Corporation (HTC), Taiwan*);

37 Compact Ultra-wideband Antenna for Mobile Handsets
Ho-Jun Lee (*Korea Electronics Technology Institute, Korea*); *Jong-Kyu Kim* (*Korea Electronics Technology Institute, Korea*); *Se-Hwan Choi* (*Korea Electronics Technology Institute, R. O. Korea*);

38 Design of a 1.575 GHz Helical LTCC Chip Antenna for GPS Application
Tao Huang (*Zhejiang University of Technology, China*); *Yali Qin* (*Zhejiang University of Technology, China*);

39 Pattern Synthesis for Cone Conformal Array with Optimized Polarization Properties
Fan Zhang (*Xidian University, China*);

40 A Compact Band Notched UWB Antenna for Mobile Applications
Nam-I Jo (*Kyungpook National University, South Korea*); *Dang-Oh Kim* (*Kyungpook National University, Korea*); *Che-Young Kim* (*Kyungpook National University, South Korea*);

41 Numerical Modeling a Microwave and Detection of Partial Discharge inside of HV Transformer
Pavel Fiala (*Brno University of Technology, Czech Republic*); *Eva Gescheidtová* (*Brno University of Technology, Czech Republic*); *Tomáš Jirků* (*Brno University of Technology, Czech Republic*);

42 Progress in Studies of Radio Frequency Radiation of the Wireless Communication Device
Chaoqun Jiao (*Beijing Jiaotong University, China*); *Lei Gao* (*Beijing Jiaotong University, China*);

43 Behavioral Models for Power Amplifier Using a Difference-frequency Dual-signal Injection Method
Hui Wang (*NUDT, China*); *Peiguo Liu* (*National University of Defense Technology, China*);

44 Analysis and Design for High-gain Antenna with Periodic Structures
Han-Nien Lin (*Feng-Chia University, Taiwan*); *Chun-Chi Tang* (*Feng-Chia University, Taiwan*);

45 High Frequency Parameters of a Hermetic Motor and Their Effects on Conducted Emission
Ming Chen (*Tsinghua University, China*); *Xudong Sun* (*Tsinghua University, China*); *Lipei Huang* (*Tsinghua University, China*);

46 Using Grey Decision Making Approach to Improve FPGA Performance
Jan-Ou Wu (*De Lin Institute of Technology, Taiwan, R.O.C.*); *Yang-Hsin Fan* (*National Taitung University, Taiwan, R.O.C.*); *San-Fu Wang* (*National Taipei University of Technology, Taiwan, R.O.C.*);

47 Stability Study of Subwavelength Image in Photonic Crystal Slab
Chen-Yu Chiang (*National Central University, Taiwan*); *Pi-Gang Luan* (*National Central University, Taiwan*);

48 Effect of Heat Treatment on Property of Giant Magnetostrictive TbDyFe Films
Yirui Liang (*Lanzhou University, China*); *Xiaojing Zheng* (*Lanzhou University, China*);

49 Finite Element Analysis of Electromagnetic Valve Actuation for Engine
Shizuo Li (*Guangxi University, China*);

50 Seismic Traveling Macroscale Irregularities at Ionospheric F2-region on Data of Distance Sounding
U. K. Kalinin (*Fedorov Institute of Applied Geophysics, Russia*); *N. P. Sergeenko* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowaves Propagation RAS, Russia*); *M. V. Rogova* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowaves Propagation, Russia*);

51 Based on the Coherent Point Tartget Monitoring Urban Subsidence in Beijing
Hong-Li Zhao (*China University of Geosciences (Beijing), China*); *Jian-Ping Chen* (*China University of Geosciences (Beijing), China*); *Jing-Hui Fan* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*); *Xiao-Fang Guo* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*); *Huan-Huan Liu* (*China University of Geosciences (Beijing), China*);

52 A Study of the High Resolution COSMO-SkyMed SAR Data for Ground Subsidence
Hong-Li Zhao (*China University of Geosciences (Beijing), China*); *Jing-Hui Fan* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*); *Zhen-Chao Wang* (*China University of Geosciences (Beijing), China*); *Jian-Ping Chen* (*China University of Geosciences (Beijing), China*); *Huan-Huan Liu* (*China University of Geosciences (Beijing), China*); *Xiao-Fang Guo* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*);

53 A New Method of Near-field Three Dimensional Radar Synthetic Aperture Imaging
Nan-Jing Li (*Northwestern Polytechnic University, China*); *Chu-Feng Hu* (*Northwestern Polytechnic University, China*); *Lin-Xi Zhang* (*Northwestern Polytechnic University, China*);

54 The Research of Artificial Corner Reflectors in InSAR
Wu Zhu (*Chang'an University, China*); *Qin Zhang* (*Chang'an University, China*); *Chaoying Zhao* (*Chang'an University, China*); *Chengsheng Yang* (*Chang'an University, China*);

55 Inversion of Vegetation Parameters Based on Polarimetric SAR Interferometry
Lin-Xi Zhang (*Northwestern Polytechnic University, China*); *Jie Ren* (*Northwestern Polytechnical University, China*); *Xingzhao Liu* (*Northwestern Polytechnical University, China*); *Chu-Feng Hu* (*Northwestern Polytechnic University, China*);

56 Detection of Interfaces between Frozen and Melted Sediment Using GPR: A Case Examination on Qinghai-Tibet Railway
Zhen-Wei Guo (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Jian-Ping Xiao* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*);

57 GPR Data Processing for Permafrost Detection in Qinghai-Tibet Railway
Zhen-Wei Guo (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Jian-Ping Xiao* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*); *Wei Zhang* (*Central South University, China*); *Jie Li* (*Central South University, China*);

58 GPR Polarization Simulation with 3D HO FDTD
Jing Li (*Jilin University, China*); *Zhao-Fa Zeng* (*Jilin University, China*); *Ling Huang* (*Jilin University, China*); *Fengshan Liu* (*Delaware State University, USA*);

59 Fine Exploration Based on Dense Frequency Pseudo-random Harmonic Electromagnetic Method
Weibin Luo (*Chang'an University, China*); *Qingchun Li* (*Chang'an University, China*);

60 GPR Migration Imaging Algorithm Based on NUFFT
Hao Chen (*Civil Aviation University of China, China*); *Renbiao Wu* (*Civil Aviation University of China, China*); *Jiaxue Liu* (*Civil Aviation University of China, China*); *Zhiyong Han* (*Civil Aviation University of China, China*);

61 Analysis of MMW Imaging System with Scanning Mirrors and Extended Hemispherical Lens
Zucun Zhang (*Southeast University, China*); *Wen-Bin Dou* (*Southeast University, China*);

62 Simulation for GPR Echoes Based on Non-constant-Q Attenuation Model
Weikun He (*Civil Aviation University of China, China*); *Zhigang Su* (*Civil Aviation University of China, China*); *Renbiao Wu* (*Civil Aviation University of China, China*); *Zhiyong Han* (*Civil Aviation University of China, China*); *Jiaxue Liu* (*Civil Aviation University of China, China*);

63 Adaptation in Front of Ground Penetrating Radar (GPR) Antenna by Layered Dielectric Slab and Resistive Loading
Yuyu Wahyu (*Indonesian Instititute of Science, Indonesia*); *R. S. Sianipar* (*Radar and Communication Systems (RCS))-Solusi247, Indonesia*); *Adit Kurniawan* (*Bandung Institute of Technology, Indonesia*); *Sugihartono* (*Bandung Institute of Technology, Indonesia*); *Andaya A. Lestari* (*IRCTR, Delft University of Technology-Indonesia Branch, Indonesia*);

64 Consideration of Antenna Pattern Design for FY3 Precipitation Measurement Satellite Dual-frequency Precipitation Radar
Honggang Yin (*National Satellite Meteorological Center, China*); *Xiaolong Dong* (*Center for Space Science and Applied Research CAS, China*);

65 A Millimeter-wave Interferometric Radiometer for Atmosphere Observation from Geostationary Orbit
Ailan Lan (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Shengwei Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Hao Liu* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Jingye Yan* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Ji Wu* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

66 Forward Modeling of Direct Current Method Based on ANSYS
Dong-Feng Zhang (*Central South University, China*);

67 Micro-motion Simulation and Micro-Doppler Extraction
Ning Chao (*National Key Lab. of Target and Environmental Electromagnetic Scattering and Radiation, China*); *Huang Jing* (*National Key Lab. of Target and Environmental Electromagnetic Scattering and Radiation, China*);

68 An Integration of Electronic System and Some Solutions to Its Key Point
Yanhong Hao (*Xidian University, China*); *Jiali Wang* (*Xidian University, China*);

69 Laser Pulse Scattering from a Moving One Dimensional Rough Surface
Ming-Jun Wang (*Xianyang Normal College, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*); *Ying-Le Li* (*Xianyang Normal University, China*);

70 Hilbert Transform for Processing of Laser Doppler Microvibration Signals
Ying-Li Wu (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Yan-Hui Li* (*Xidian University, China*); *Ping-Zhou Li* (*Xidian University, China*);

71 A Study of Deformation Monitoring Using StaMPS Technique
Huan-Huan Liu (*China University of Geosciences (Beijing), China*); *Jian-Ping Chen* (*China University of Geosciences (Beijing), China*); *Hong-Li Zhao* (*China University of Geosciences (Beijing), China*); *Jing-Hui Fan* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*); *Xiao-Fang Guo* (*China Aero Geophysical Survey & Remote Sensing Centre for Land & Resources (AGRS), China*);

72 Global Land Surface Temperature and IR Spectral Emissivity Monitoring Using Current and Future Satellite Measurements
Daniel K. Zhou (*National Aeronautic and Space Administration, USA*);

73 Amazon Forests Did Not Green up during the 2005 Drought
Arindam Samanta (*Boston University, USA*); *Sangram Ganguly* (*Boston University, USA*); *Hirofumi Hashimoto* (*California State University, USA*); *Sadashiva Devadiga* (*NASA Goddard Space Flight Center, USA*); *Eric Vermote* (*University of Maryland, USA*); *Yuri Knyazikhin* (*Boston University, USA*); *Ramakrishna R. Nemani* (*NASA Ames Research Center, USA*); *Ranga B. Myneni* (*Boston University, USA*);

74 Compact Dual-band Balanced Handset Antenna for WLAN Application
A. G. Alhaddad (*University of Bradford, UK*); *Raed A. Abd-Alhameed* (*University of Bradford, UK*); *Dawei Zhou* (*University of Bradford, UK*); *Chan H. See* (*University of Bradford, UK*); *E. A. Elkhazmi* (*The Higher Institute Of Electronics, Libya*); *Peter S. Excell* (*Glyndwr University, UK*);

75 Isolation Enhancement Based on Adaptive Leakage Cancellation
Jingyu Wang (*Zhejiang University, China*); *Bo Lv* (*Zhejiang University, China*); *Wan-Zhao Cui* (*Xi'an Institute of Space Radio Technology, China*); *Wei Ma* (*Xi'an Institute of Space Radio Technology, China*); *Jiangtao Huangfu* (*Zhejiang University, China*); *Li-Xin Ran* (*Zhejiang University, China*);

76 Superluminal Phase Velocity in the Dispersive Media
Dexin Ye (*Zhejiang University, China*); *Yuhua Wang* (*Zhejiang University City College, China*); *Shan Qiao* (*Zhejiang University City College, China*); *Jiangtao Huangfu* (*Zhejiang University, China*); *Li-Xin Ran* (*Zhejiang University, China*);

77 Microwave Contactless Moisture Measurement for Tobacco
Lingling Jiang (*Zhejiang University, China*); *Jiangtao Huangfu* (*Zhejiang University, China*); *Li-Xin Ran* (*Zhejiang University, China*);

78 Application of EH4 in the Shihu Gold Deposit of Western Hebei, China
Mingyan Wang (*Institute of Mineral Resources of the Chinese Academy of Geological Science, China*); *Tagen Dai* (*Central South University, China*); *Chaozhuang Xi* (*Central South University, China*); *Xiaoming Fu* (*Central South University, China*); *Danyan Huang* (*Central South University, China*);

79 An Optimized Monopole Microstrip Patch Antenna with Gradual Steps for Ultrawideband Applications
Reza Khalilpour (*Telecommunication Company of Iran, Iran*); *Javad Nourinia* (*Urmia University, Iran*); *Changiz Ghobadi* (*Urmia University, Iran*);

80 Utilization of Effective Apparent Resistivity in Magnetotelluric Data Processing and Interpretation
Ai-Yong Li (*Central South University, China*); *Jian-Xin Liu* (*Central South University, China*); *Xiao-Zhong Tong* (*Central South University, China*); *Wei Zhang* (*Central South University, China*); *Chuang-Hua Cao* (*Central South University, China*);

81 Research and Application on Supergain Property of Arrays for Target Detection
Zhanlin Xie (*Northwestern Polytechnical University, China*); *Yingmin Wang* (*Northwestern Polytechnical University, China*);

82 The Study of Directional Couplers Based on Omnidirectional Reflection of Photonic Crystal Optical Waveguide
Zhaohong Wang (*Xi'an Jiaotong University, China*); *Zichen Liu* (*Xi'an Jiaotong University, China*); *Bo Ning* (*Xi'an Jiaotong University, China*); *Chentao Gu* (*Xi'an Jiaotong University, China*);

84 Discrete Time Synergetic Control for DC-DC Converter
Qian Wang (*South China University of Technology, China*); *Tao Li* (*South China University of Technology, China*); *Jiuchao Feng* (*South China University of Technology, China*);

85 Novel Optical Signal Processing Using Free Carrier Effect in Silicon
Yukio Iida (*Kansai University, Japan*); *Norimitsu Wakama* (*Kansai University, Japan*);

86 Novel Optical Neuronal Cell and Data Recognition-generation Circuits in RFID Tags
Norimitsu Wakama (*Kansai University, Japan*); *Yukio Iida* (*Kansai University, Japan*);

87 3-D Analysis of Magnetic Flux Density in Modular Toroidal Coil Using Cubic Meshing
Mohammad Reza Alizadeh Pahlavani (*Iran University of Science and Technology, Iran*); *Abbas Shiri* (*Iran University of Science and Technology, Iran*); *A. Shoulaie* (*Iran University of Science and Technology, Iran*);

88 Electromagnetic Force Distribution on Cylindrical Coils' Body
Abbas Shiri (*Iran University of Science and Technology, Iran*); *Mohammad Reza Alizadeh Pahlavani* (*Iran University of Science and Technology, Iran*); *H. A. Mohammadpour* (*Iran University of Science and Technology, Iran*); *A. Shoulaie* (*Iran University of Science and Technology, Iran*);

89 Magnetic Flux Density Analysis of Helical Toroidal Coil Using Finite Element Approach
M. R. Alizadeh Pahlavani (*Iran University of Science and Technology, Iran*); *Abbas Shiri* (*Iran University of Science and Technology, Iran*); *H. A. Mohammadpour* (*Iran University of Science and Technology, Iran*); *A. Shoulaie* (*Iran University of Science and Technology, Iran*);

Session 3P1
Remote Sensing of the Earth, Ocean, and Atmosphere

Wednesday PM, March 24, 2010

Room A

Organized by George Vakhtang Jandieri

Chaired by George Vakhtang Jandieri

13:20 Numerical Simulations and Analysis of Electromagnetic Scattering from a PEC Target below a Two-layered Dielectric Rough Surfaces: Vertical Polarization
An-Qi Wang (*Xidian University, China*); *Lixin Guo* (*Xidian University, China*); *Cao Chai* (*Xidian University, China*);

13:40 Design and Development of a Ground-based Microwave Radiometer System
Yu Zhang (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Jie Ying He* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Shengwei Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

14:00 Geophysical Parameter Retrievals from Advanced IR Sounders and Their Applications
Jinlong Li (*University of Wisconsin-Madison, USA*); *Jun Li* (*University of Wisconsin-Madison, USA*);

14:20 Relationship between Lightning Discharges and Rapid Changes in Cross Polarization Discrimination of the Ka-band Satellite Radio Signal
Yasuyuki Maekawa (*Osaka Electra-Communication University, Japan*);

14:40 Linearization of NDVI Based on Its Relationship with Vegetation Fraction
Zhangyan Jiang (*University of Arizona, USA*); *Alfredo R. Huete* (*University of Arizona, USA*);

15:00 **Coffee Break**

15:20 Derive Atmospheric Soundings from Hyperspectral Infrared Radiances in Cloudy Regions
Jun Li (*University of Wisconsin-Madison, USA*); *Elisabeth Weisz* (*University of Wisconsin-Madison, USA*); *Jinlong Li* (*University of Wisconsin-Madison, USA*);

15:40 Calibration and Temperature Retrieval of Improved Ground-based Atmospheric Microwave Sounder
Jie Ying He (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Yu Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Shengwei Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

16:00 Investigation of GPS-measured Ionospheric Total Electron Content Variations Generated by HF-heating at Mid-latitudes
Viacheslav E. Kunitsyn (*M. V. Lomonosov Moscow State University, Russia*); *Artem M. Padokhin* (*M. V. Lomonosov Moscow State University, Russia*); *Alexey E. Vasiliev* (*M. V. Lomonosov Moscow State University, Russia*); *Gregory A. Kurbatov* (*M. V. Lomonosov Moscow State University, Russia*); *Vladimir L. Frolov* (*Radiophysical Research Institute, Russia*); *Georgy P. Komrakov* (*Radiophysical Research Institute, Russia*);

16:20 Fluctuation of Electromagnetic Field Parameters Propagating in Magnetized Plasma with Random Variation of Electron Density and Magnetic Field
George Vakhtang Jandieri (*Georgian Technical University, Georgia*); *Akira Ishimaru* (*University of Washington, USA*); *Vakhtang G. Jandieri* (*Kumamoto University, Japan*); *I. B. Shirokov* (*Georgian Technical University, Georgia*); *Yu. B. Gimpilevich* (*Georgian Technical University, Georgia*); *A. G. Khantadze* (*Tbilisi State University, Georgia*); *N. N. Zhukova* (*Institute of Cybernetics, Georgia*);

16:40 Recent Advances in Fully Polarimetric Space-SAR Sensor Design and Its Applications to the Remote Sensing of Earth, Ocean and Atmosphere
Wolfgang-Martin Boerner (*University of Illinois at Chicago, USA*);

Session 3P2a
EM Scattering Models and Applications

Wednesday PM, March 24, 2010

Room B

Organized by Yang Du, Hong Tat Ewe

Chaired by Yang Du, Hong Tat Ewe

13:00 Radar Imaging of Target above the Gaussian Random Rough Surface Using the Accelerated MOM/PO Hybrid Method
Si-Yuan He (*Wuhan University, China*); *Fang-Shun Deng* (*Wuhan University, China*); *Jing-Jing Yao* (*Wuhan University, China*); *Guo-Qiang Zhu* (*Wuhan University, China*);

13:20 Improving the Convergence Properties of Certain Numerical Method for Scattering from Rough Surfaces Using the Second-degree Stochastic Method
Bin Liu (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*);

13:40 Study of the Validity Region of the Extended T-matrix Method for Scattering from Dielectric Cylinders
Wenzhe Yan (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*); *Ziyuan Li* (*Institute of Forest Resources Information Techniques, China*); *Erxue Chen* (*Institute of Forest Resources Information Techniques, China*); *Jiancheng Shi* (*University of California, USA*);

14:00 Channel Capacity Enhancement by Applying 3-D Space-polarization Diversity to MIMO Systems
Lin Hai (*Nanjing University of Posts and Telecommunications, China*); *Ye-Rong Zhang* (*Nanjing University of Posts and Telecommunications, China*);

14:20 Further Study on Electromagnetic Scattering from Multiple Cylinders
Wenzhe Yan (*Zhejiang University, China*); *Dawei Liu* (*Beihang University, China*); *Hong Tat Ewe* (*Tunku Abdul Rahman University, Malaysia*); *Yang Du* (*Zhejiang University, China*);

15:20 Multiyear Analysis of an Inverse Model for Sea Ice Thickness Retrieval
Yu Jen Lee (*Multimedia University, Malaysia*); *Wee Keong Lim* (*Multimedia University, Malaysia*); *Hong Tat Ewe* (*Universiti Tunku Abdul Rahman, Malaysia*); *Hean Teik Chuah* (*Universiti Tunku Abdul Rahman, Malaysia*);

15:40 Modeling of Microwave Emission from Soil with Vegetation Cover
Luis M. Camacho (*The University of Texas at Arlington, USA*); *Saibun Tjuatja* (*The University of Texas at Arlington, USA*);

Session 3P2b
Wireless Sensor Network and Applications

Wednesday PM, March 24, 2010

Room B

Organized by Yang Du, Hong Tat Ewe

Chaired by Yang Du, Hong Tat Ewe

16:00 Further Results on Performance of Slotted IEEE 802.15.4 with Downlink and Uplink Traffic
Wei Wang (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*);

16:20 An Optimized Ad Hoc MAC Scheduling Algorithm for IEEE 802.15.3
Guangdi Yang (*Zhejiang University, China*); *Fan Wang* (*Zhejiang University, China*); *Rufeng Lin* (*Zhejiang University, China*); *Yang Du* (*Zhejiang University, China*);

16:40 Convergecast of Multi-destinations in Zigbee Tree-based Wireless Sensor Network
Pakorn Juleang (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

17:00 Conception of Patch Antennas in the GSM and UMTS Band
M. Iftissane (*Microwave and Materials Group, ESTM, Morocco*); *Seddik Bri* (*Microwave and Materials Group, ESTM, Maroc*); *L. Bellarbi* (*Equipe Materiaux et Hyperfrequences-ESTM, Maroc*);

Session 3P3
Passive Optical Waveguide Theory and Numerical Modelling

Wednesday PM, March 24, 2010

Room C

Organized by Hung-Wen Chang

Chaired by Hung-Wen Chang, Nai-Hsiang Sun

13:20 Computing 2-D Green's Function for Multi-layer Dielectric Waveguides
Hung-Wen Chang (*National Sun Yat-sen University, Taiwan*); *Chia-Da Chang* (*National Sun Yat-sen University, Taiwan*); *Sin-Yuan Mu* (*National Sun Yat-sen University, Taiwan*);

13:40 Computing Leaky Mode Based on Pseudospectral Method
Po-Jui Chiang (*Kaohsiung University of Applied Sciences, Taiwan*); *Nai-Hsiang Sun* (*I-Shou University, Taiwan*);

14:00 Boundary Element Method for Solving Leaky Modes in Photonic Crystal Fiber
Jung-Sheng Chiang (*I-Shou University, Taiwan*); *Jiun-Jie Liau* (*I-Shou University, Taiwan, R.O.C.*); *Jo-Ying Wang* (*I-Shou University, Taiwan, R.O.C.*);

14:20 Cascaded SHG/DFG Coupled Mode Equations Considering the Third-order Susceptibility Effect
Shih-Chiang Lin (*I-Shou University, Taiwan, R.O.C.*); *Chia-Ming Hu* (*I-Shou University, Taiwan*); *Chih-Chun Chen* (*I-Shou University, Taiwan*); *Tsung-Cheng Wu* (*I-Shou University, Taiwan*);

14:40 Radiation Loss at Discontinuities in Dielectric Waveguides Using Perfectly Electric Conductor Approximation Method
Nai-Hsiang Sun (*I-Shou University, Taiwan*); *Chia-Ming Hu* (*I-Shou University, Taiwan*); *Po-Hao Cheng* (*I-Shou University, Taiwan*);

15:00 **Coffee Break**

15:20 Light Propagation in Micro-optical-lattice Waveguide
Xiaofei Chen (*Zhejiang University of Technology, China*); *Yali Qin* (*Zhejiang University of Technology, China*); *Hongliang Ren* (*Zhejiang University of Technology, China*); *Fei Liu* (*Zhejiang University of Technology, China*);

15:40 Numerical Analysis of Dielectric Waveguide Devices Using Coupled Transverse-mode Integral Equation
Yan-Huei Wu (*National Sun Yat-sen University, Taiwan*); *Shih-Min Lu* (*National Sun Yat-Sen University, Taiwan, R.O.C.*); *Hung-Wen Chang* (*National Sun Yat-sen University, Taiwan*); *Meng-Huei Sheng* (*Chia Nan University of Pharmacy & Science, China*);

16:00 Analysis of Scattering Problem at Dielectric Continuity
Nai-Hsiang Sun (*I-Shou University, Taiwan*); *Chia-Ming Hu* (*I-Shou University, Taiwan*); *Min-Yu Tsai* (*I-Shou University, Taiwan*); *Po-Jui Chiang* (*National Kaohsiung University of Applied Sciences, Taiwan*);

16:20 A Combined Cavity with Improved Performance under Simultaneous Resonance of Sub-cavities
Chih Jung Wu (*Shenzhen University, China*); *Qiang Liu* (*Shenzhen University, China*); *Chung Ping Liu* (*Yuan Ze University, Taiwan*); *Jong C. Wang* (*Yuan Ze University, Taiwan*); *Zhengbiao Ouyang* (*Shenzhen University, China*);

16:40 Coupled Integral-equation Analysis of Crossing Waveguides
Hung-Wen Chang (*National Sun Yat-sen University, Taiwan*); *Sin-Yuan Mu* (*National Sun Yat-sen University, Taiwan*); *Shih-Min Lu* (*National Sun Yat-Sen University, Taiwan*);

17:00 Numerical Solutions of Nonlinear Schrödinger Equation by Runge-Kutta Method with Cubic Spline Functions
Sen-Eon Liu (*National Sun Yat-sen University, Taiwan*); *Hung-Wen Chang* (*National Sun Yat-sen University, Taiwan*);

Session 3P4
Nonlinear Photonics in Disordered Structures and Metamaterials

Wednesday PM, March 24, 2010

Room D

Organized by Yuri S. Kivshar, Sergey A. Gredeskul

Chaired by Yuri S. Kivshar, Sergey A. Gredeskul

13:00 Subwavelength Imaging in Disordered Wire Media
David A. Powell (*Australian National University, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

13:20 Transmission and Localization of Classical Waves in Weakly Scattering Metamaterials
Ara A. Asatryan (*University of Technology, Australia*); *Sergey A. Gredeskul* (*Ben Gurion University of the Negev, Israel*); *Lindsay C. Botten* (*University of Technology, Australia*); *Michael A. Byrne* (*University of Technology, Australia*); *Valentin D. Freilikher* (*Bar-Ilan University, Israel*); *Ilya V. Shadrivov* (*Australian National University, Australia*); *Ross C. McPhedran* (*University of Sydney, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

13:40 Nonlinear and Tunable Metamaterials
Ilya V. Shadrivov (*Australian National University, Australia*); *David A. Powell* (*Australian National University, Australia*); *Mikhail Lapine* (*University of Seville, Spain*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:00 Magnetic-resonance Enhanced Second Harmonic Generations in Metamaterials
Shiwei Tang (*Fudan University, China*); *Hao Xu* (*Fudan University, China*); *Lei Zhou* (*Fudan University, China*);

14:20 Polarization Effects on Anderson Localization in the Presence of Metamaterials
Ara A. Asatryan (*University of Technology, Australia*); *Lindsay C. Botten* (*University of Technology, Australia*); *Michael A. Byrne* (*University of Technology, Australia*); *Valentin D. Freilikher* (*Bar-Ilan University, Israel*); *Sergey A. Gredeskul* (*Ben Gurion University of the Negev, Israel*); *Ilya V. Shadrivov* (*Australian National University, Australia*); *Ross C. McPhedran* (*University of Sydney, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*);

14:40 Frequency Mixing in Disordered Quadratic Media
W. Wang (*Australian National University, Australia*); *K. Kalinowski* (*Australian National University, Australia*); *D. N. Neshev* (*Australian National University, Australia*); *Yuri S. Kivshar* (*Australian National University, Australia*); *Wieslaw Krolikowski* (*Australian National University, Australia*); *Yongfa Kong* (*Nankai University, China*); *V. Roppo* (*Universitat Politécnica de Catalunya, Spain*); *C. Cojocaru* (*Universitat Politécnica de Catalunya, Spain*); *J. Trull* (*Universitat Politécnica de Catalunya, Spain*); *R. Vilaseca* (*Universitat Politécnica de Catalunya, Spain*); *Kestutis Staliunas* (*Universitat Politecnica de Catalunya, Spain*);

15:00 **Coffee Break**

15:20 Bistability of Localized States in One-dimensional Nonlinear Random Media
Ilya V. Shadrivov (*Australian National University, Australia*); *K. Y. Bliokh* (*Institute of Radio Astronomy, Ukraine*); *Yu. P. Bliokh* (*Technion Israel Institute df Technology, Israel*); *Valentin D. Freilikher* (*Bar-Ilan University, Israel*); *Yuri S. Kivshar* (*Australian National University, Australia*);

15:40 Soliton Propagation through a Disordered Segment: Statistics of the Transmission Delay
Yaroslav Prylepskiy (*Aston University, UK*); *Sergey A. Gredeskul* (*Ben Gurion University of Negev, Israel*); *Stanislav A. Derevyanko* (*Aston University, UK*); *A. S. Kovalev* (*B. Verkin Institute for Low Temperature Physics and Engineering, National Academy of Sciences of Ukraine, Ukraine*);

16:00 Slowing and Stopping Light with Gap-acoustic Solitons
Richard S. Tasgal (*Ben-Gurion University of the Negev, Israel*); *R. Shnaiderman* (*Ben-Gurion University of the Negev, Israel*); *Yehuda Band* (*Ben-Gurion University of the Negev, Israel*);

16:20 Dynamics of Fluctuations in an Optical Laval Nozzle
I. Fouxon (*Tel-Aviv University, Israel*); *O. V. Farberovich* (*Tel-Aviv University, Israel*); *S. Bar-Ad* (*Tel-Aviv University, Israel*); *Victor Fleurov* (*Tel-Aviv University, Israel*);

16:40 Controlling the Radiation of a Source in One-dimensional Random Media
V. Romanovskii (*Bar-Ilan University, Israel*); *K. Y. Bliokh* (*Institute of Radio Astronomy, Ukraine*); *Yu. P. Bliokh* (*Technion Israel Institute df Technology, Israel*); *Valentin D. Freilikher* (*Bar-Ilan University, Israel*);

17:00 Unconventional Metal-insulator Transition in a Quantum Spin Hall Systems
Yshai Avishai (*Ben Gurion University of the Negev, Israel*);

Session 3P5a
Physiological Effects of Static Magnetic Fields

Wednesday PM, March 24, 2010

Room E

Organized by János F. László

Chaired by János F. László, Arthur D. Rosen

13:00 Static Magnetic Field Induced Mechanotransduction in Osteoblastic Cells via Calmodulin-dependent Pathway — An in Vitro Culture Study
Haw-Ming Huang (*Taipei Medical University, Taiwan*);

13:20 Static Magnetic Field Interferes with the Physiological Removal of Circulating Apoptotic Lymphocytes
Luciana Dini (*University of Salento, Italy*);

13:40 Studies on the Effect of Static Magnetic Fields on Biological Systems
Arthur D. Rosen (*Purdue University, USA*);

14:00 Cellular Perception and Static Magnetic Fields Active Penetration Depth for Pain Magnetotherapy
Pierre Le Chapellier (*Soissons General Hospital, France*); *Badri Matta* (*Soissons General Hospital, France*);

14:20 Anticonvulsant Effects of Static Magnetic Fields in Animal Seizure Models
Michael J. McLean (*Vanderbilt University Medical Center, USA*); *Stefan Engstrom* (*Vanderbilt University Medical Center, USA*); *Qinkun Zhang* (*Vanderbilt University Medical Center, USA*); *Minhua Zhang* (*Vanderbilt University Medical Center, USA*);

14:40 Analysis of Inhomogeneous Static Magnetic Field-Induced Antinociceptive Activity in Mice
János F. László (*Institute for Research Organization, Hungarian Academy of Sciences, Hungary*); *Klára Gyires* (*Semmelweis University, Hungary*);

15:00 **Coffee Break**

Session 3P5b
Systems and Components, Electromagnetic Compatibility

Wednesday PM, March 24, 2010

Room E

Organized by Predrag Osmokrović

Chaired by Predrag Osmokrović, Koviljka Stankovic

15:20 Radiation Induced Forward Emitter Current Gain Degradation of Lateral and Vertical PNP Power Transistors in Voltage Regulators
Vladimir Vukić (*Institute of Electrical Engineering "Nikola Tesla", Serbia*); *Predrag Osmokrović* (*University of Belgrade, Serbia*);

15:40 Influence of Gamma Radiation on Some Commercial EPROM and EEPROM Components
Boris Loncar (*University of Belgrade, Serbia*); *Srboljub J. Stankovic* (*VINCA Institute of Nuclear Sciences, Serbia*); *Koviljka Stankovic* (*University of Belgrade, Serbia*); *Bojan Jovanovic* (*University of Belgrade, Serbia*);

16:00 Ambiguous Influence of Radiation Effects in Solar Cells
Aleksandra Vasic (*University of Belgrade, Serbia*); *Milos Vujisic* (*University of Belgrade, Serbia*); *Koviljka Stankovic* (*University of Belgrade, Serbia*); *Bojan Jovanovic* (*University of Belgrade, Serbia*);

16:20 Influence of Tube Volume on Measurement Uncertainty of GM Counter
Koviljka Stankovic (*University of Belgrade, Serbia*); *Predrag Osmokrović* (*University of Belgrade, Serbia*); *Milos Vujisic* (*University of Belgrade, Serbia*);

16:40 Monte Carlo Simulations of Proton and Ion Beam Irradiation on Titanium Dioxide Memristors
Ćemal Doličanin (*University of Novi Pazar, Serbia*); *Bratislav Iričanin* (*University of Belgrade, Serbia*); *Milos Vujisic* (*University of Belgrade, Serbia*); *Predrag Osmokrović* (*University of Belgrade, Serbia*);

17:00 Influence of Irradiation on Semiconductor and Gas-filled Diodes for Over-voltage Protection
Radeta Maric (*Electric Power Industry of Serbia (EPS), Serbia*); *Miladin Jurosevic* (*Alumina Factory, Birač, Republic of Srpska, Bosnia and Herzegovina*); *Gvozden Ilic* (*Electric Power Industry of Serbia (EPS), Serbia*); *Predrag Osmokrović* (*University of Belgrade, Serbia*);

17:20 A Shape Display Method Based on Electromagnetic Localization and Actuation
Kai Deng (*The University of Arizona, USA*); *Eniko T. Enikov* (*The University of Arizona, USA*); *P. Marek* (*Slovak University of Technology in Bratislava, Slovakia*);

Session 3P6a
Antenna Theory, Radiation, Microstrip and Printed Antennas 2

Wednesday PM, March 24, 2010

Room F

Organized by Hou Zhang

Chaired by Hou Zhang, Hong-Xing Zheng

13:00 Coplanar-fed UWB Elliptical Patch Antenna with Notched Band Characteristics
R. A. Sadeghzadeh (*Khajenasirtoosi University, Iran*); *M. Amin Honarvar* (*Islamic Azad University, Najafabad Branch, Iran*); *Ahmad-Reza Eskandari* (*Islamic Azad University, Tehran East Branch, Iran*);

13:20 Near Field Antenna Investigation and Evaluation for UHF RFID Systems
Zijian Xing (*Northwestern Polytechnical University, China*); *Ling Wang* (*Northwestern Polytechnical University, China*); *Changying Wu* (*Northwestern Polytechnical University, China*); *Dengshan Huang* (*Northwestern Polytechnical University, China*);

13:40 Design of a Wideband Planar Inverted E Type Antenna
Sinhyung Jeon (*Hanyang University, Korea*); *Hyengcheul Choi* (*Hanyang University, Korea*); *Seungwoo Kim* (*Hanyang University, Korea*); *Oul Cho* (*Hanyang University, Korea*); *Hyeongdong Kim* (*Hanyang University, Korea*);

Session 3P6b
Microstrip, Printed Antenna and Array antennas

Wednesday PM, March 24, 2010

Room F

Chaired by Johnson Jenn-Hwa Wang, Wai-Yip Tam

14:00 Theory of Broadband Planar Traveling-wave Arrays (TWA) with 2-D Elements
Johnson Jenn-Hwa Wang (*Wang Electro-Opto Corporation, USA*);

14:20 On the Compound Air-fed Array Antenna with AMC Base
Wen Xun Zhang (*Southeast University, China*); *Z. H. Wu* (*Southeast University, China*);

14:40 A Wideband High-gain Subwavelength Fabry-Perot Cavity Antenna
Kwok L. Chung (*The Hong Kong Polytechnic University, China*); *Sarawuth Chaimool* (*King Mongkut's University of Technology North Bangkok, Thailand*);

15:00 **Coffee Break**

15:20 Miniaturization of Rectangular Microstrip Antennas Using Electric-LC Resonators
Wai-Yip Tam (*The Hong Kong Polytechnic University, China*); *Kuisong Zheng* (*Northwestern Polytechnical University, China*);

15:40 The Design and Simulation of an S-band Circularly Polarized Microstrip Antenna Array
Ying Jiang (*University of Electronic Science and Technology of China, China*); *Hong-Chun Yang* (*University of Electronic Science and Technology of China, China*); *Xiong Wang* (*University of Electronic Science and Technology of China, China*);

16:00 A Design of Reconfigurable Patch Array Antenna with Dual Circular Polarizations
Chung-Hsun Weng (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Hsien-Wen Liu* (*National Taiwan University of Science and Technology, Taiwan*); *Sheng-Yu Lin* (*National Taiwan University of Science and Technology, Taiwan*); *Chang-Fa Yang* (*National Taiwan University of Science and Technology, Taiwan*);

16:20 Moment-method Analysis of Planar Archimedean Spiral Antenna with Dielectric Superstrate
Yajian Wu (*Northwestern Polytechnical University, China*); *Huiling Zhao* (*Northwestern Polytechnical University, China*); *Dan Jiang* (*Northwestern Polytechnical University, China*); *Nakun Jing* (*Northwestern Polytechnical University, China*);

Session 3P7
Modeling and Simulations in Materials Science

Wednesday PM, March 24, 2010

Room G

Organized by Xiaojing Zheng

Chaired by Xiaojing Zheng

13:00 Elasticity-stochastic Description on the Adhesion of Elastic Media via Molecular Bond Clusters
Jizeng Wang (*Lanzhou University, China*);

13:20 Electromagnetic Elasto-plastic Dynamic Behaviors of Conductive Circular Plate
Yuanwen Gao (*College of Civil Engineering and Mechanics, Lanzhou University, China*);

13:40 Rearrangement of Martensitic Variants and Mechanical-magneto-thermal Behavior of a Ferromagnetic Shape Memory Alloy Rod
Xingzhe Wang (*Lanzhou University, China*); *Fang Li* (*Lanzhou University, China*); *Xuebing Han* (*Lanzhou University, China*);

14:00 Analysis on Absorption and Thermal Stress of a Functionally Graded-absorbing Infinite Plate in Electromagnetic Fields
Hongyan Tian (*Lanzhou University, China*); *Xingzhe Wang* (*Lanzhou University, China*); *Youhe Zhou* (*Lanzhou University, China*);

14:20 A Model of Size Effect on Thermal Conductivity for Thin Metallic Films
Wei Luo (*Lanzhou University, China*); *Xiaojing Zheng* (*Lanzhou University, China*);

14:40 Dynamic Analysis for Electrified Cantilever Conductive Thin Plates under Transverse Multi-pulse Magnetic Field
Huijuan Bai (*Lanzhou University, China*); *Xiaojing Zheng* (*Lanzhou University, China*);

15:00 **Coffee Break**

15:20 A One-dimension Transient Constitutive Model for Giant Magnetostrictive Materials
Tian-Zhong Wang (*Lanzhou University, China*); *Le Sun* (*Lanzhou University, China*); *Youhe Zhou* (*Lanzhou University, China*);

15:40 Crack Problem in a Thin Superconducting Disk
Feng Xue (*Lanzhou University, China*); *Youhe Zhou* (*Lanzhou University, China*);

16:00 Magnetoelastic Model of Magnetizable Media
Ke Jin (*Lanzhou University, China*); *Yong Kou* (*Lanzhou University, China*); *Xiaojing Zheng* (*Lanzhou University, China*);

16:20 Theoretical Analysis on Quantum Well at Undoped GaN/$In_xGa_{1-x}N$/GaN Heterostructure Interface
Shah Mohammad Bahauddin (*University of Dhaka, Bangladesh*); *Farha Diba Sumana* (*University of Dhaka, Bangladesh*); *Md. Rubaiyat Hossain* (*University of Dhaka, Bangladesh*); *Md. Ahsan Uddin* (*University of Dhaka, Bangladesh*); *Zahid Hasan Mahmood* (*University of Dhaka, Bangladesh*);

16:40 Active Vibration Control of a Rotating Laminated Beam with Magnetostrictive Layer
Longfei Li (*Lanzhou University, China*); *Xingzhe Wang* (*Lanzhou University, China*); *Youhe Zhou* (*Lanzhou University, China*);

17:00 Consistency of Generalized Bruggeman Effective Medium Theory Formula for Dispersive Composites at Microwave Frequencies
Ping Chen (*Nanjing University, China*); *Rui-Xin Wu* (*Nanjing University, China*);

Session 4A1
Microwave Remote Sensing of Land Surface

Thursday AM, March 25, 2010

Room A

Organized by Jiancheng Shi

Chaired by Jiancheng Shi

08:20 Optimization for Rotating-scanning Ring Arrays of Synthetic Aperture Radiometer
Weiying Sun (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Hao Liu* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Zhang Cheng* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Shengwei Zhang* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Ji Wu* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*);

08:40 Modeling the Radar-polarimetric Phase Signature over Evaporitic Soils
Philippe Paillou (*University of Bordeaux, France*); *Anthony Freeman* (*Jet Propulsion Laboratory, USA*); *Eric R. Pottier* (*University of Rennes, France*); *P.-L. Frison* (*University Paris-Est, France*);

09:00 W-band Dual Polarization Radiometer and Emissivity Measurement Depend on Polarization and Look Angle
Yong-Hoon Kim (*Gwangju Institute of Science and Technology, Korea*); *Sung-Hyun Kim* (*Gwangju Institute of Science and Technology, Korea*);

09:20 A Study of Multipolarized Ka-band Waves Propagation through Trees
Chih-Yuan Chu (*National Central University, Taiwan*); *Kun-Shan Chen* (*National Central University, Taiwan*); *Jiangcheng Shi* (*University of California, USA*);

09:40 Behaviours of Microwave Vegetation Indices Derived from Simulations of the Zeroth and First Radiative Transfer Equation
Linna Chai (*Beijing Normal University and Institute of Remote Sensing Applications, Chinese Academy of Sciences, China*); *Jiancheng Shi* (*University of California, USA*); *Lixin Zhang* (*Beijing Normal University and Institute of Remote Sensing Applications Chinese Academy of Sciences, China*); *Lingmei Jiang* (*Beijing Normal University, China*);

10:00 **Coffee Break**

10:20 Microwave Scattering Model of Vegetated Surfaces for Applications in SMAP Mission
Xiaolan Xu (*University of Washington, USA*); *Leung Tsang* (*University of Washington, USA*); *Shaowu Huang* (*University of Washington, USA*); *Eni Gerald Njoku* (*California Institute of Technology, USA*);

10:40 A Physically Based Parameterized Method to Estimate Cloud Liquid Water over Land Using AMSR-E
Yongqian Wang (*Institute of Remote Sensing Applications, China*); *Jiancheng Shi* (*University of California, USA*); *Bangsen Tian* (*Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China*);

11:00 SMOS First Results
Y. H. Kerr (*CESBIO, France*); *P. Waldteufel* (*IPSL-SA, France*); *Francois Cabot* (*CESBIO, France*); *P. Richaume* (*CESBIO, France*); *A. Mialon* (*CESBIO, France*); *Steven Delwart* (*ESA-ESTEC, The Netherlands*); *J. P. Wigneron* (*INRA, France*);

11:20 Analysis of Electromagnetic Scattering by Random Rough Soil Surfaces at L Band Using Numerical Solutions of Maxwell Equations of 3 Dimensional Simulations (NMM3D)
Shaowu Huang (*University of Washington, USA*); *Leung Tsang* (*University of Washington, USA*); *Eni Gerald Njoku* (*California Institute of Technology, USA*); *Kun-Shan Chen* (*National Central University, Taiwan*);

11:40 Comparison of Algorithms for Retrieving Soil Moisture from High Resolution ASAR Images
Claudia Notarnicola (*Institute for Applied Remote Sensing, Eurac Research, Italy*); *Simonetta Paloscia* (*CNR-IFAC, Italy*); *S. Pettinato* (*CNR-IFAC, Italy*); *G. Preziosa* (*Politecnico di Bari, Italy*); *Emanuele Santi* (*CNR-IFAC, Italy*); *Bartolomeo Ventura* (*Università di Bari, Italy*);

Session 4A2
EMC and EM protection

Thursday AM, March 25, 2010

Room B

Organized by Wen-Yan Yin, Peiguo Liu

Chaired by Wen-Yan Yin

08:20 TDIE-TDPO Hybrid Formulation Using the Laguerre Polynomials for Scattering from Three-Dimensional Perfectly Conducting Bodies
Ming-Da Zhu (*Shanghai Jiao Tong University, China*); *Xi-Lang Zhou* (*Shanghai Jiaotong University, China*); *Wen-Yan Yin* (*Shanghai Jiao Tong University, China*);

08:40 Transient Responses Analysis of Ultra-wideband Filters Illuminated by High-power Electromagnetic Pulses (EMP)
Zheng Jiang (*Zhejiang University, China*); *Jian Wang* (*Shanghai Jiao Tong University, China*); *Wen-Yan Yin* (*Zhejiang University, China*);

09:00 Research on New Technology on Protection of Electronic Systems from High Power Electromagnetic Pulse
Zhonghao Lu (*NUDT, China*); *Chunxiao Jian* (*NUDT, China*); *Shuanglin Wan* (*NUDT, China*); *Peiguo Liu* (*National University of Defense Technology, China*);

09:20 Multi-physics Simulation and Analysis for High-power EMP Effects on Micro/Nanoelectronics Devices
Xiao-Peng Wang (*Zhejiang University, China*); *Ming Yi* (*Shanghai Jiao Tong University, China*); *Wen-Yan Yin* (*Shanghai Jiao Tong University, China*);

09:40 A Novel Hybrid Method for Solving the Response of Non-uniform Transmission Line Network
Yujian Qin (*National University of Defense Technology, China*); *Peiguo Liu* (*National University of Defense Technology, China*); *Jianguo He* (*National University of Defense Technology, China*);

10:00 **Coffee Break**

10:20 Solving Method for Electromagnetic Pulse Propagation Based on Combination of EMT and TDIE
Gaosheng Li (*National University of Defense Technology, China*); *Yujian Qin* (*National University of Defense Technology, China*); *Peiguo Liu* (*National University of Defense Technology, China*); *Jianguo He* (*National University of Defense Technology, China*);

Session 4A3
Optics, Fiber, Lasers and Optical Sensors

Thursday AM, March 25, 2010

Room C

Chaired by Takahiro Numai

08:00 Phase Control in the Ramsey Resonance Cavity with 2 Ring Cavities at both Ends by Inserting Loop Antenna Using Varactor in Series in the Rings for Cesium Beam Frequency Standard
Koji Nakagiri (*Kinki University, Japan*); *Yusuke Kawano* (*Kinki University, Japan*);

08:20 Study of Sapphire Loaded H-Maser in Shanghai Observatory
Ke Dai (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*); *Wei Qun Zhang* (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*); *Yan Jun Zhang* (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*); *Wen Ming Wang* (*Shanghai Astronomical Observatory, Chinese Academy of Sciences, China*);

08:40 Improvements on Phase-Shifted Distributed-Coupling-Coefficient Distributed Feedback Laser Structures for Single Longitudinal Mode Operation
José Maria Bastardo De Miranda Boavida (*Instituto de Telecomunicacoes, Portugal*); *Carlos Alberto Ferreira Fernandes* (*Instituto de Telecomunicacoes, Portugal*); *José Augusto Passos Morgado* (*Instituto de Telecomunicacoes, Portugal*);

09:00 On the Performance of DFB Laser Structures Specially Designed for Directly-Modulated Optical Communication Systems
José Maria Bastardo De Miranda Boavida (*Instituto de Telecomunicacoes, Portugal*); *Carlos Alberto Ferreira Fernandes* (*Instituto de Telecomunicacoes, Portugal*); *José Augusto Passos Morgado* (*Instituto de Telecomunicacoes, Portugal*);

09:20 Reduction of Four-wave-mixing Noises by Unequally-spaced Allocations with Dual Base Units in FDM Optical Fiber Transmission Systems
Toru Nakamura (*Ritsumeikan University, Japan*); *Takahiro Numai* (*Ritsumeikan University, Japan*);

09:40 Reduction of Four-wave-mixing Noises by FSK Modulation with Dual Deviation Frequencies in FDM Optical Fiber Transmission Systems
Takuya Tamo (*Ritsumeikan University, Japan*); *Takahiro Numai* (*Ritsumeikan University, Japan*);

10:00 **Coffee Break**

10:20 Fabrication of Separately Formed Electro-spun Fibers
Hirohisa Tamagawa (*Gifu University, Japan*);

10:40 Performance Improvement of Phase Modulation with Interferometric Detection through Low-biasing
Lan Liu (*Zhejing University, China*); *Shilie Zheng* (*Zhejiang University, China*); *Xianmin Zhang* (*Zhejiang University, China*); *Xiaofeng Jin* (*Zhejiang University, China*); *Hao Chi* (*Zhejiang University, China*);

11:00 Profile Measurement for Micro-optical Component Using Lensless Fourier Digital Holography
Yunxin Wang (*Beijing University of Technology, China*); *Dayong Wang* (*Beijing University of Technology, China*); *Yan Li* (*Beijing University of Technology, China*); *Jie Zhao* (*Beijing University of Technology, China*); *Yizhuo Zhang* (*Beijing University of Technology, China*); *Yuhong Wan* (*Beijing University of Technology, China*); *Zhuqing Jiang* (*Beijing University of Technology, China*);

11:20 A Novel Data Transmission Security via a Noisy Channel Using a Microring Resonator System
Thanunchai Threepak (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

11:40 Ferroelectric Properties of $BiFeO_3$ Thin Film Grown on $LaNiO_3$ Buffered Si (100) Substrate via Pulsed Laser Deposition
Feng Yan (*National University of Singapore, Singapore*); *Li Lu* (*National University of Singapore, Singapore*); *Man On Lai* (*National University of Singapore, Singapore*); *Tiejun Zhu* (*Zhejiang University, China*);

Session 4A4a
Metamaterial and Electromagnetic Cloak

Thursday AM, March 25, 2010

Room D

Chaired by Yijun Feng, Bae-Ian Wu

08:00 An Experimental Design for Reversed Cherenkov Radiation in a Double-negative-metamaterial-loaded Waveguide
Zhaoyun Duan (*University of Electronic Science and Technology of China, China*); *Xutong Mao* (*University of Electronic Science and Technology of China, China*); *Jucheng Lu* (*University of Electronic Science and Technology of China, China*); *Yan-Yu Wei* (*University of Electronic Science and Technology of China, China*); *Yu-Bin Gong* (*University of Electronic Science and Technology of China, China*); *Wen-Xiang Wang* (*University of Electronic Science and Technology of China, China*); *Bae-Ian Wu* (*Massachusetts Institute of Technology, USA*); *Min Chen* (*Massachusetts Institute of Technology, USA*);

08:20 Electromagnetic Detection of a Perfect Transformation-based Invisibility Cloak
Baile Zhang (*Massachusetts Institute of Technology, USA*); *Bae-Ian Wu* (*Massachusetts Institute of Technology, USA*);

08:40 Non-magnetic Cylindrical Cloak with Optimized Homogeneous Isotropic Layers
Zhenzhong Yu (*Nanjing University, China*); *Yijun Feng* (*Nanjing University, China*); *Xiaofei Xu* (*Nanjing University, China*);

09:00 Transient Investigation of Super-lens Realized by Transmission Line Metamaterials
Junming Zhao (*Nanjing University, China*); *Yijun Feng* (*Nanjing University, China*);

09:20 A Novel Broadband Metamaterial Resonator with Negative Permittivity
Jian Zhang (*The University of Manchester, UK*); *Zhirun Hu* (*The University of Manchester, UK*);

09:40 Study of Cherenkov Radiation in Matematerials
Sheng Xi (*Zhejiang University, China*); *Hongsheng Chen* (*Zhejiang University, China*); *Binzheng Zhang* (*Dartmouth College, USA*); *Bae-Ian Wu* (*Massachusetts Institute of Technology, USA*); *Min Chen* (*Massachusetts Institute of Technology, USA*);

10:00 **Coffee Break**

Session 4A4b
Micro/Nanomanufacturing of Metamaterials and Photonic Structures

Thursday AM, March 25, 2010

Room D

Organized by Herbert O. Moser, LinKe Jian

Chaired by Herbert O. Moser, LinKe Jian

10:20 Fabrication of THz Meta-foil by Means of Microlithography and Metal Deposition
Lin Ke Jian (*National University of Singapore (NUS), Singapore*); *Herbert O. Moser* (*National University of Singapore (NUS), Singapore*); *S. M. P. Kalaiselvi* (*National University of Singapore (NUS), Singapore*); *S. Virasawmy* (*National University of Singapore (NUS), Singapore*); *S. M. Maniam* (*National University of Singapore (NUS), Singapore*); *M. Bahou* (*National University of Singapore (NUS), Singapore*); *S. P. Heussler* (*National University of Singapore (NUS), Singapore*); *Shahrain bin Mahmood* (*National University of Singapore (NUS), Singapore*); *Hongsheng Chen* (*Zhejiang University, China*); *Xiangxiang Cheng* (*Zhejiang University, China*); *Bae-Ian Wu* (*Massachusetts Institute of Technology, USA*);

10:40 Properties of Meta-foils
Herbert O. Moser (*National University of Singapore (NUS), Singapore*); *Lin Ke Jian* (*National University of Singapore (NUS), Singapore*); *M. Bahou* (*National University of Singapore (NUS), Singapore*); *S. M. P. Kalaiselvi* (*National University of Singapore (NUS), Singapore*); *S. Virasawmy* (*National University of Singapore (NUS), Singapore*); *K. Banas* (*National University of Singapore (NUS), Singapore*); *A. Banas* (*National University of Singapore (NUS), Singapore*); *S. M. Maniam* (*National University of Singapore (NUS), Singapore*); *S. P. Heussler* (*National University of Singapore (NUS), Singapore*);

11:00 Metamaterials via Ferroelectrics and Liquid Crystal Technologies
Fuli Zhang (*Northwestern Polytechnical University, China*); *Qian Zhao* (*Tsinghua University, China*); *Lei Kang* (*Tsinghua University, China*); *Ji Zhou* (*Tsinghua University, China*); *Didier Lippens* (*Université des Sciences et Technologies de Lille, France*);

11:20 Metamaterial-based Optical Components for the Terahertz (THz) Technology
Oliver Paul (*University of Kaiserslautern, Germany*); *P. Weis* (*University of Kaiserslautern, Germany*); *B. Reinhard* (*University of Kaiserslautern, Germany*); *R. Beigang* (*University of Kaiserslautern, Germany*); *Marco Rahm* (*University of Kaiserslautern, Germany*);

11:40 Optical Metamaterials and Photonic Crystals: Aspects of Large-scale Micro- and Nanofabrication
Reinhard Geiss (*Friedrich-Schiller-Universität, Germany*); *Christian Helgert* (*Friedrich-Schiller-Universität, Germany*); *Holger Hartung* (*Friedrich-Schiller-Universität, Germany*); *Ernst-Bernhard Kley* (*Friedrich-Schiller-Universität, Germany*); *Carsten Rockstuhl* (*Friedrich-Schiller-Universität, Germany*); *Frank Schrempel* (*Friedrich-Schiller-Universität, Germany*); *Falk Lederer* (*Friedrich Schiller University Jena, Germany*); *Andreas Tünnermann* (*Fraunhofer Institute for Applied Optics and Precision Engineering, Germany*); *Werner Wesch* (*Friedrich-Schiller-Universität, Germany*); *Thomas Pertsch* (*Friedrich-Schiller-Universität, Germany*);

Session 4A5
Novel Mathematical Methods in Electromagnetics

Thursday AM, March 25, 2010

Room E

Organized by Kazuya Kobayashi, Yury V. Shestopalov

Chaired by Kazuya Kobayashi

08:20 Maxwell Equation in Electromagnetic and Gravitational Fields
Zi-Hua Weng (*Xiamen University, China*);

08:40 Electromagnetic Stresses and Torques on Rotating Media
Robin W. Tucker (*Lancaster University, UK*);

09:00 Study on Description of Electromagnetic Wave
Yelin Xu (*Institute of Biophysics, Chinese Academy of Sciences, China*);

09:20 Mutual Inductance Calculations Using Bessel Functions for Non Coaxial Coils with an Explicitly Finite Number of Turns
John Thomas Conway (*University of Agder, Norway*);

10:00 **Coffee Break**

10:20 On 3D Potential Field Solutions for Atmospheric Charge Distributions
Geert C. Dijkhuis (*Convectron N. V., The Netherlands*);

10:40 Spectral Theory of Beam Scatterings for Object Imaging Using Scanning Millimeter Wave Radar Sensor
Yasumitsu Miyazaki (*Aichi University of Technology, Japan*);

11:00 FDTD Parallel Computing of Electromagnetic Wave Scattering by Clouds for Microwave Remote Sensing of Weather Satellite
Yasumitsu Miyazaki (*Aichi University of Technology, Japan*); *Nobuo Goto* (*The University of Tokushima, Japan*); *Koichi Takahashi* (*Aichi University of Technology, Japan*);

11:20 THz Applications for the Engineering Approach to Modelling Frequency Dispersion within Normal Metals at Room Temperature
Stepan Lucyszyn (*Imperial College London, UK*); *Yun Zhou* (*Imperial College London, UK*);

Session 4A6a
Biological Effects of Electromagnetic Fields

Thursday AM, March 25, 2010

Room F

Chaired by Chung-Kwang Chou

08:20 Evaluation of Wireless Electromagnetic Interference Due to the Interaction between Cellular Phones and Medical Devices within Hospital Environments
Hsing-Yi Chen (*Yuan Ze University, Taiwan, China*); *Cheng-Yi Chou* (*Yuan Ze University, Taiwan, China*);

08:40 Sensing of Human Micro-vibration Transmitted Along Solid Using Pico-Tesla Magneto-impedance Sensor (pT-MI Sensor)
Kaneo Mohri (*Nagoya Industrial Science Research Institute (NISRI), Japan*); *Y. Nakamura* (*Yamazaki Mazak Optonics Co., Japan*); *Tsuyoshi Uchiyama* (*Nagoya University, Japan*); *Yoshiyuki Mohri* (*Meijo University, Japan*); *Yuko Mohri* (*Meijo University, Japan*); *Y. Inden* (*Nagoya University, Japan*);

09:00 Numerical Modelling for Evaluation of Biological Effects Due to High Frequency Radiations in Indoor Environment
Matteo Cacciola (*University Mediterranea of Reggio Calabria, Italy*); *G. Megali* (*University Mediterranea of Reggio Calabria, Italy*); *Diego Pellicano* (*University Mediterranea of Reggio Calabria, Italy*); *M. Versaci* (*University Mediterranea of Reggio Calabria, Italy*); *Francesco Carlo Morabito* (*University Mediterranea of Reggio Calabria, Italy*);

09:20 ADI-PSTD Simulation of Light Scattered from Biological Tissues Using Optical Phase Conjugation Refocusing
Hong-Xing Zheng (*Tianjin University of Technology and Education, China*);

Session 4A6b
Applicators for Medical and Industrial Applications of EM Field

Thursday AM, March 25, 2010

Room F

Organized by Jan Vrba

Chaired by Jan Vrba

10:20 Waveguide-based Applicators for Local Microwave Thermotherapy: Feasibility Study of Matrix Array Treatment
Barbora Vrbova (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*Czech Technical University in Prague, Czech Republic*);

10:40 Comparisson and Verification of Dosimetry Results Obtained by Two Different Numerical Methods of the Whole-body Exposure Chamber
Lukáš Víšek (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*Czech Technical University in Prague, Czech Republic*);

11:00 Microwave Intracavitary Applicators for Thermotherapy in Urology an Cardiology
Jan Vrba (*Czech Technical University in Prague, Czech Republic*); *Katerina Novotna* (*Czech Technical University, Czech Republic*); *Barbora Vrbova* (*Czech Technical University in Prague, Czech Republic*);

11:20 Evanescent Mode Waveguide Applicators for Microwave Thermotherapy
Jan Vrba (*Czech Technical University in Prague, Czech Republic*); *Paolo Togni* (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*RWTH Aachen University, Germany*); *David Vrba* (*Czech Technical University in Prague, Czech Republic*);

11:40 Prospective Medical Imaging and Diagnostics Based on Microwave Technology
Jan Vrba (*Czech Technical University in Prague, Czech Republic*); *Ladislav Oppl* (*Czech Technical University in Prague, Czech Republic*); *Jaroslav Vorlicek* (*Czech Technical University, Czech Republic*); *David Vrba* (*Czech Technical University in Prague, Czech Republic*); *Jan Vrba* (*RWTH Aachen University, Germany*);

Session 4A7
Matter, Signals and Waves

Thursday AM, March 25, 2010

Room G

Organized by Roman Kubacki

Chaired by Roman Kubacki, Zbigniew Bielecki

08:20 The Absorption Capability Measurements of the Free Space Absorbers
Leszek Nowosielski (*Military University of Technology, Poland*); *Marian Wnuk* (*Military University of Technology, Poland*); *Roman Kubacki* (*Military University of Technology, Poland*); *Rafał Przesmycki* (*Military University of Technology, Poland*);

08:40 Electric and Magnetic Properties of Powdered Ferrite Materials
Roman Kubacki (*Military University of Technology, Poland*); *Marian Wnuk* (*Military University of Technology, Poland*); *Leszek Nowosielski* (*Military University of Technology, Poland*); *Rafał Przesmycki* (*Military University of Technology, Poland*);

09:00 Influence of Parameters of Dielectric in Aperture-coupled Stacked Patch Antenna on the Bandwidth
Jarosław Bugaj (*Military University of Technology, Poland*); *Marian Wnuk* (*Military University of Technology, Poland*); *Leszek Nowosielski* (*Military University of Technology, Poland*);

09:20 Multi-element Antenna on Dielectric Layer with Circular Polarization
Marek Bugaj (*Military University of Technology, Poland*); *Marian Wnuk* (*Military University of Technology, Poland*); *Roman Kubacki* (*Military University of Technology, Poland*);

09:40 The Expanded Uncertainty for Radio Frequency Immunity Testing
Rafał Przesmycki (*Military University of Technology, Poland*); *Leszek Nowosielski* (*Military University of Technology, Poland*); *Marian Wnuk* (*Military University of Technology, Poland*); *Roman Kubacki* (*Military University of Technology, Poland*);

10:00 **Coffee Break**

10:20 Audio Hash Function Used for Digital Rights Management
Zbigniew Piotrowski (*Military University of Technology, Poland*); *Piotr Gajewski* (*Military University of Technology, Poland*);

10:40 Multi-spectral Optoelectronic Sensor Employing Cavity Enhanced Absorption Spectroscopy
Jacek Wojtas (*Military University of Technology, Poland*); *Zbigniew Bielecki* (*Military University of Technology, Poland*); *Janusz Mikolajczyk* (*Military University of Technology, Poland*); *Miroslaw Nowakowski* (*Military University of Technology, Poland*); *Beata Rutecka* (*Military University of Technology, Poland*);

11:00 Free Space Optics Second Generation versus Shorter Wavelengths
Miroslaw Nowakowski (*Military University of Technology, Poland*); *Zbigniew Bielecki* (*Military University of Technology, Poland*); *Janusz Mikolajczyk* (*Military University of Technology, Poland*); *Jacek Wojtas* (*Military University of Technology, Poland*); *M. Gutowska* (*Military University of Technology, Poland*);

11:20 Infrared Detection Module for Free Space Optics
Marcin Ratajczyk (*VIGO System S.A., Poland*); *Ryszard Paliwoda* (*VIGO System S.A., Poland*); *Maciej Rzeczkowski* (*VIGO System S.A., Poland*); *Waldemar Gawron* (*VIGO System S.A., Poland*); *Jarosław Pawluczyk* (*VIGO System S.A., Poland*); *Józef Piotrowski* (*VIGO System S.A., Poland*);

Session 4AP
Poster Session 3

Thursday AM, March 25, 2010
9:00 AM - 4:00 PM
Room K

1 Long-term Data Record of Vegetation Leaf Area Index from Multiple Satellite-borne Sensors: Evaluation and Validation
Sangram Ganguly (*Boston University, USA*); *Arindam Samanta* (*Boston University, USA*); *Mitchell A. Schull* (*Boston University, USA*); *Cristina Milesi* (*University Corporation Monterey, USA*); *Ramakrishna R. Nemani* (*NASA Ames Research Center, USA*); *Yuri Knyazikhin* (*Boston University, USA*); *Ranga B. Myneni* (*Boston University, USA*);

2 Real Time Atmosphere Sensing from Singular Ground-based GPS Station
Qing-Lin Zhu (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Zhenwei Zhao* (*China Research Institute of Radio-wave Propagation, China*); *Le-Ke Lin* (*China Research Institute of Radio-wave Propagation, China*);

3 Experimental Study of Relationship between Sea Clutter and Wave Height in Littoral Environment
Yu-Shi Zhang (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Hui-Ming Li* (*China Reserch Institute of Radiowave Propagation, China*);

4 D-InSAR Atmospheric Delay Correction by MODIS and GPS — A Case of Xi'an
Chengsheng Yang (*Chang'an University, China*); *Qin Zhang* (*Chang'an University, China*); *Chaoying Zhao* (*Chang'an University, China*); *Wu Zhu* (*Chang'an University, China*);

5 Simulation of Beam Filling Effect on Spaceborne Precipitation Radar Rainfall Retrieval
Honggang Yin (*National Satellite Meteorological Center, China*); *Ailan Lan* (*Center for Space Science and Applied Research, Chinese Academy of Sciences, China*); *Hu Yang* (*National Satellite Meteorological Center, China*);

6 Comparison of ASAR IM Data and ASAR WS Data in Investigating Co-seismic Deformation of Yutian Earthquake
Xi'ai Cui (*Peking University, China*); *Qiming Zeng* (*Peking University, China*); *Cunren Liang* (*Peking University, China*); *Jian Jiao* (*Peking University, China*);

7 Field Campaigns by Multi-frequency and Multi-polarized Synthetic Aperture Radars in the Coastal Area of South Korea
Chan-Su Yang (*Korea Ocean Research and Development Institute, Korea*); *Kazuo Ouchi* (*National Defense Academy, Japan*); *Kazuki Nakamura* (*National Institute of Advanced Industrial Science and Technology (AIST), Japan*);

8 Interpretation of First-year Sea Ice Parameters by Multi-frequency and Multi-polarized Synthetic Aperture Radars in Kongsfjorden, Svalbard: Recent Results from the Spring 2009 Measurement
Chan-Su Yang (*Korea Ocean Research and Development Institute, Korea*); *Kazuo Ouchi* (*National Defense Academy, Japan*); *Kazuki Nakamura* (*National Institute of Advanced Industrial Science and Technology (AIST), Japan*);

10 Design of Electrometric Amplifier for Aspiration Condenser Measurement
Zdeněk Roubal (*University of Technology Brno, Czech Republic*); *Miloslav Steinbauer* (*University of Technology Brno, Czech Republic*);

11 Calculation of Angstrom Coefficient of Nano-size Particles in Liquid Environment
Gholamreza Shayeganrad (*Islamic Azad University, Karaj Branch, Iran*); *Leila Mashhadi* (*Amirkabir University of Technology, Iran*); *Tahereh Ghanbarirad* (*Islamic Azad University, Karaj Branch, Iran*);

12 Electromagnetic Properties of Surface Waves on Multilayer Absorbing Coated Plane
Haiying Yao (*National University of Singapore, Singapore*);

13 Application of Genetic Algorithm for of a Partially Immersed Non-uniform Conductivity Cylinder
Wei Chien (*De Lin Institute of Technology, Taiwan, R.O.C.*); *Hua-Pin Chen* (*Ming Chi University of Technology, Taiwan, R.O.C.*); *Chi-Hsien Sun* (*Tamkang University, Taiwan, R.O.C.*); *Chien-Ching Chiu* (*Tamkang University, Taiwan, R.O.C.*); *Yi Sun* (*Beijing Jiaotong University, China*);

14 An Iteration Method for Solving the Asymptotic Equation of Optically Thick Layers
Guangyuan Zhao (*Shandong University of Technology, China*); *Xianming Sun* (*Shandong University of Technology, China*);

15 Depolarization and Polarization of Light Scattering by Dustlike Tropospheric Aerosols
Xianming Sun (*Shandong University of Technology, China*); *Haihua Wang* (*Shandong University of Technology, China*);

16 Error Analysis of Using Henyey-Greensterin in Monte Carlo Radiative Transfer Simulations
Guangyuan Zhao (*Shandong University of Technology, China*); *Xianming Sun* (*Shandong University of Technology, China*);

17 2-D Image Reconstruction from Microwave Scattering Data
Jie Li (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*);

18 Surface Plasmon Resonance Absorption in a Multilayered Bigrating
Taikei Suyama (*Kumamoto University, Japan*); *Yaoju Zhang* (*Wenzhou University, China*); *Yoichi Okuno* (*Kumamoto University, Japan*); *Z. Luo* (*Kumamoto University, Japan*); *Toyonori Matsuda* (*Kumamoto National College of Technology, Japan*);

19 A Low-frequency RCS Measurement System in an Anechoic Chamber
Chu-Feng Hu (*Northwestern Polytechnic University, China*); *J. D. Xu* (*Northwestern Polytechnic University, China*); *N. J. Li* (*Northwestern Polytechnic University, China*); *L. X. Zhang* (*Northwestern Polytechnic University, China*);

20 Analytical Solutions of TD Scattering Fields from Parabolic Reflector Antenna Illuminated by Plane Waves and Gaussian Beams
Shih-Chung Tuan (*Oriental Institute of Technology, Taiwan*); *Hsi-Tseng Chou* (*Yuan Ze University, Taiwan*);

21 THz Bessel Beams Generated by BOEs
Yan-Zhong Yu (*Quanzhou Normal University, China*);

22 Creation of Approximate Bessel Beams by Use of a Fractal Conical Lens
Yan-Zhong Yu (*Quanzhou Normal University, China*);

23 Ku-band Balanced Resistive FET Mixer with Very Low IMD3
Ramezan Ali Sadeghzadeh (*Khaje Nasir Toosi University of Technology, Iran*); *Ahmad Reza Eskandari* (*Islamic Azad University, East Tehran Branch, Iran*); *M. Amin Honarvar* (*Islamic Azad University, Najafabad Branch, Iran*);

24 Efficient Computer Aided Design of Compact Multicoupled Stripline Resonators Filters
Jorge A. Ruiz-Cruz (*Universidad Autónoma de Madrid, Spain*); *Pedro Crespo-Valero* (*Schmid & Partner Engineering AG (SPEAG), Switzerland*); *Juan R. Mosig* (*École Polytechnique Fédérale de Lausanne, Switzerland*);

25 Ultra-compact MMIC Chip Set Employing InGaP/GaAs HBT for Ku-band Receiver System
Young-Bae Park (*Korea Maritime University, Korea*); *Bo-Ra Jung* (*Korea Maritime University, Korea*); *Jang-Hyeon Jeong* (*Korea Maritime University, Korea*); *Jeong-Gab Ju* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Young Yun* (*Korae Maritime University, Korea*);

27 A Study on RF LTCC Coupler Reliability Assessment
Soon-Mi Hwang (*Korea Electronics Technology Institute (KETI), Korea*); *No-Chang Park* (*Korea Electronics Technology Institute (KETI), Korea*);

28 A Study on Global Positioning System Module Made by Domestic Products and Foreign Advanced Products
Soon-Mi Hwang (*Korea Electronics Technology Institute (KETI), Korea*); *Chul-Hee Kim* (*Korea Electronics Technology Institute (KETI), Korea*); *Kwan-Hun Lee* (*Korea Electronics Technology Institute (KETI), Korea*); *Byeong-Suk Song* (*Korea Electronics Technology Institute (KETI), Korea*);

29 A Novel 4 Way Ka-band Power Divider/Combiner Based on Fin-line
Yi-Hong Zhou (*University of Electronic Science and Technology of China, China*); *Jia-Yin Li* (*University of Electronic Science and Technology of China, China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China, China*);

30 A X-band Duplexer Based on 3-D SICC Using LTCC Technology
Jian Gu (*University of Electronic Science and Technology of China, China*); *Yong Fan* (*University of Electronic Science and Technology of China, China*); *Dakui Wu* (*University of Electronic Science and Technology of China, China*);

31 The Solution and Simulation for the Stability of Active Receiving Antennas
Jing Li (*Northwestern Polytechnical University, China*); *Lei Xing* (*Northwestern Polytechnical University, China*); *Qian Xu* (*Northwestern Polytechnical University, China*); *Jun Ding* (*Northwest Polytechnical University, China*); *Chen-Jiang Guo* (*Northwestern Polytechnical University, China*);

32 Improved Design of a Compact Ultra-wideband Microwave Bandpass Filter Using a EBG Structure
Haiyan Chen (*University of Electronic Science and Technology of China, China*); *Haipeng Lu* (*University of Electronic Science and Technology of China, China*); *Longjiang Deng* (*University of Electronic Science and Technology of China, China*);

33 Tuned Periodical Structures in THz Band Applied in Safety Applications
Pavel Fiala (*Brno University of Technology, Czech Republic*); *Radim Kadlec* (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*);

34 The Application of a Novel Snake-like Gap Slanted DGS Structure in Microstrip Filter Design
Bin Dong (*Southwest Jiaotong University, China*); *Quanyuan Feng* (*Southwest Jiaotong University, China*); *Lei Hou* (*Southwest Jiaotong University, China*);

35 Millimetre Wave Beam Combiner Designed by a GA and the HFSS
Yan-Zhong Yu (*Quanzhou Normal University, China*); *Mei Lin* (*Jiangxi Polytechnic College, China*);

36 Computer Aided Design of Depressed Collector for TWTs Using a New Numerical Methodology
Jianqiang Lai (*University of Electronic Science and Technology of China, China*); *Yu-Bin Gong* (*University of Electronic Science and Technology of China, China*); *Hairong Yin* (*University of Electronic Science and Technology of China, China*); *Yan-Yu Wei* (*University of Electronic Science and Technology of China, China*); *Wen-Xiang Wang* (*University of Electronic Science and Technology of China, China*);

37 Study on Circularly Polarized Traveling Wave Tube
Xiong Xu (*University of Electronic Science and Technology of China, China*); *Yan-Yu Wei* (*University of Electronic Science and Technology of China, China*); *Wen-Xing Liu* (*University of Electronic Science and Technology of China, China*); *Jian-Ping Wei* (*University of Electronic Science and Technology of China, China*); *Wen-Xiang Wang* (*University of Electronic Science and Technology of China, China*); *Yu-Bin Gong* (*University of Electronic Science and Technology of China, China*);

38 A Ka-band Power Amplifier Based on Double-probe Microstrip to Waveguide Transition
Yi-Hong Zhou (*University of Electronic Science and Technology of China, China*); *Jia-Yin Li* (*University of Electronic Science and Technology of China, China*); *Bo Zhao* (*University of Electronic Science and Technology of China, China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China, China*);

39 A 3.5 GHz High-efficiency CMOS RF Power Amplifier with Adaptive Bias
Yi-Chen Chen (*Yuan Ze University, Taiwan, R.O.C.*); *Jeng-Rern Yang* (*Yuan Ze University, Taiwan, R.O.C.*);

40 A Novel Four-way Ka-band Power Divider/Combiner Based on Finline
Yi-Hong Zhou (*University of Electronic Science and Technology of China, China*); *Jia-Yin Li* (*University of Electronic Science and Technology of China, China*); *Hai-Yang Wang* (*University of Electronic Science and Technology of China, China*);

41 The Design a LNA of 3.1∼10.6 GHz UWB Receive System
Chao-Hsu Chen (*Yuan Ze University, Taiwan, R.O.C.*); *Jeng-Rern Yang* (*Yuan Ze University, Taiwan, R.O.C.*);

42 Design of Fully Integrated RF Power Amplifier for WLAN Applications
Cheng-Tang Liu (*Yuan Ze University, Taiwan*); *Jeng-Rern Yang* (*Yuan Ze University, Taiwan*);

43 The Analysis and Design of High Power Millimeter Wave Pulse Detector for 2 mm Frequency Band
Guangqiang Wang (*Tsinghua University, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*); *Xingzhou Wang* (*Northwest Institute of Nuclear Technology, China*); *Ruyu Fan* (*Tsinghua University, China*);

44 Interference Suppression in DC-DC Switch Converter By H∞ Controller
Yanhua Xian (*South China University of Technology, China*); *Jiuchao Feng* (*South China University of Technology, China*);

46 Volume Phase Holographic Grating Fabricated in Trans-4-Stilbenemethanol Doped PMMA
Zhi Feng Zhang (*The Hong Kong Polytechnic University, China*); *Xiao-Ming Tao* (*The Hong Kong Polytechnic University, China*); *G. F. Wang* (*The Hong Kong Polytechnic University, China*); *J. M. Yu* (*Fountain Set Limited, China*);

47 Optimization of Broadband Antireflection Coating for Solar Cell Applications by Genetic Algoritms
Ming-Jer Jeng (*Chang Gung University, Taiwan, R.O.C.*); *Yun-Hsih Chou* (*St. John's University, Taiwan*); *Jun-Yi Dong* (*Chang Gung University, Taiwan, R.O.C.*); *Liann-Be Chang* (*Chang Gung University, Taiwan, R.O.C.*);

48 Analysis of Optical Properties of a High-temperature Superconducting Film Operating in Near Zero-permittivity Region
Heng-Tung Hsu (*Yuan Ze University, Taiwan, R.O.C.*); *Chien-Jang Wu* (*National Taiwan Normal University, Taiwan*);

49 Investigation of Detector Responsivity in the "Water Window" Wavelength Range
Janusz Mikolajczyk (*Military University of Technology, Poland*); *Zbigniew Bielecki* (*Military University of Technology, Poland*); *Miroslaw Nowakowski* (*Military University of Technology, Poland*); *Jacek Wojtas* (*Military University of Technology, Poland*);

51 The Novel Active Mode-locking 402.5 MHz Repetition Rate Pico-second Laser Based on PLL Structure
Yan Zhou (*Beihang University, China*);

53 Disorder Effect on Energy Gap of GeSn
H.-Z. Lin (*National Kaohsiung University of Applied Sciences, Taiwan*); *T.-Y. Lin* (*National Kaohsiung University of Applied Sciences, Taiwan*); *K.-J. Su* (*National Kaohsiung University of Applied Sciences, Taiwan*); *J.-S. Guo* (*National Kaohsiung University of Applied Sciences, Taiwan*); *H.-C. Chang* (*National Kaohsiung University of Applied Sciences, Taiwan*); *H. H. Cheng* (*National Taiwan University, Taiwan*); *Kuan-Ming Hung* (*National Kaohsiung University of Applied Sciences, Taiwan*);

54 Charge-induced Deformation in Heavily-doped Si
N.-C. Hsieh (*National Kaohsiung University of Applied Sciences, Taiwan*); *K.-J. Su* (*National Kaohsiung University of Applied Sciences, Taiwan*); *C.-H. Chang* (*National Kaohsiung University of Applied Sciences, Taiwan*); *H. H. Cheng* (*National Taiwan University, Taiwan*); *Kuan-Ming Hung* (*National Kaohsiung University of Applied Sciences, Taiwan*);

55 Implantable Antenna for Biotelemetry with Medical Devices
Ho-Jun Lee (*Korea Electronics Technology Institute, Korea*); *Jin-Sup Kim* (*Korea Electronics Technology Institute, R. O. Korea*); *Se-Hwan Choi* (*Korea Electronics Technology Institute, R. O. Korea*);

56 Static Magnetic Field Synergizes with Paramagnetic Nanoparticles to Induce Cellular Toxicity in Normal Hepatocytes
Kwon-Seok Chae (*Kyungpook National University, Korea*);

58 Measurement of Electropotentials on Interface of Solid-liquid Phase
Miloslav Steinbauer (*Brno University of Technology, Czech Republic*); *Zdeněk Roubal* (*Brno University of Technology, Czech Republic*); *Dominik Heger* (*Masaryk University, Czech Republic*);

60 Investigation of Artificial Dress Embedded with Nanomagnetic Particles
Ya-Hui Chan (*National Taipei University of Technology, Taiwan*); *Sheng-Wei Feng* (*Taipei Medical University, Taiwan*); *Hsin-Ta Wang* (*National Taipei University of Technology, Taiwan*); *Keng-Liang Ou* (*Taipei Medical University, Taiwan*); *Che-Tong Lin* (*Taipei Medical University, Taiwan*); *Haw-Ming Huang* (*Taipei Medical University, Taiwan*);

61 Static Magnetic Field Reduced Disseminated Intravascular Coagulation in the LPS-induced Mice
Wei-Yi Lai (*Taipei Medical University, Taiwan*); *Che-Tong Lin* (*Taipei Medical University, Taiwan*); *Sheng-Yang Lee* (*Taipei Medical University, Taiwan*); *Haw-Ming Huang* (*Taipei Medical University, Taiwan*);

62 Inference of SMF on Red-blood-cells Cryopreservation
Chun-Yen Lin (*Taipei Medical University, Taiwan*); *Po-Chieh Yang* (*Taipei Medical University, Taiwan*); *Sheng-Yang Lee* (*Taipei Medical University, Taiwan*); *Che-Tong Lin* (*Taipei Medical University, Taiwan*); *Haw-Ming Huang* (*Taipei Medical University, Taiwan*);

63 Magnetic Resonance Imaging (MRI) Safety of Implants: Estimating Specific Absorption Rate (SAR) at Design-simplified Stents of Different Lengths Placed Inside a Virtual Phantom Model Using a Generic RF Body Coil at a MR Frequency of 63.9 MHz
Mark J. Pawlenka (*MR:comp GmbH, Germany*); *Gregor Schaefers* (*MR:comp GmbH, Germany*);

64 Accurate Evaluation of RF Coil-tissue Interactions Using a Hybrid FDTD-MoM Method
Wenlong Xu (*China Jiliang University, China*); *Feng Liu* (*The University of Queensland, Australia*); *Ling Xia* (*Zhejiang University, China*); *Stuart Crozier* (*The University of Queensland, Australia*);

65 Choice of Suitable Wavelets for MR Image Processing
Karel Bartušek (*Institute of Scientific Instruments, Academy of Sciences of Czech Republic, Czech Republic*); *Eva Gescheidtová* (*Brno University of Technology, Czech Republic*);

66 Criteria for Wavelet Selection in MR Image Filtering
Eva Gescheidtová (*Brno University of Technology, Czech Republic*); *Karel Bartušek* (*Institute of Scientific Instruments, Academy of Sciences of Czech Republic, Czech Republic*);

67 Diffusion Characteristics of Accumulators Electrode Materials
P. Marcon (*Brno University of Technology, Czech Republic*); *Petr Drexler* (*Brno University of Technology, Czech Republic*); *Karel Bartušek* (*Brno University of Technology, Czech Republic*);

68 Measurement of X-ray Radiation in Airplanes and the Related Methods of Protection
M. Al-Khaddour (*Brno University of Technology, Czech Republic*); *Radek Kubásek* (*Brno University of Technology, Czech Republic*);

69 Computation of SAR Distribution in a Human Exposed to Mobile Phone Electromagnetic Fields
Luan Ahma (*University of Prishtina, Kosovo*); *Mimoza Ibrani* (*University of Prishtina, Kosovo*); *Enver Hamiti* (*University of Prishtina, Kosovo*);

70 Effects of Heliogeomagnetic Disturbances on Haemorheological Parameters of Human
Yu. Ya. Varakin (*Scientific Center of Neurology RAMS, Russia*); *V. G. Ionova* (*Scientific Center of Neurology RAMS, Russia*); *G. V. Gornostaeva* (*Scientific Center of Neurology RAMS, Russia*); *E. A. Sazanova* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation RAS, Russia*); *N. P. Sergeenko* (*Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radiowave Propagation RAS, Russia*);

71 Improvement of the Confidence Interval Level of Multi-frequency Microwave Radiometer System for Measuring Deep Brain Temperature in New Born Infants
Toshifumi Sugiura (*Shizuoka University, Japan*); *N. Umehara* (*Shizuoka University, Japan*); *Shizuo Mizushina* (*Hamamatsu Science Promotion Financial Group, Japan*); *Hisashi Hirata* (*Shizuoka University, Japan*);

72 Validity of Inverse Coupler to Improve Temperature Resolution of One-band Microwave Radiometer for Non-invasive Brain Temperature Monitoring
Hisashi Hirata (*Shizuoka University, Japan*); *T. Ishii* (*Shizuoka University, Japan*); *Y. Okita* (*Shizuoka University, Japan*); *Toshifumi Sugiura* (*Shizuoka University, Japan*);

73 Influence of Effective Mode Area on Stimulated Brillouin Scattering Slow Light in Optical Fibers
Shang-Lin Hou (*Lanzhou University of Technology, China*); *Zhong-Yi Wang* (*Lanzhou University of Technology, China*); *Suo-Ping Li* (*Lanzhou University of Technology, China*); *Jing-Li Lei* (*Lanzhou University of Technology, China*);

74 Characterization of InP Based SAGCM Avalanche Photodetector for Single Photon Fiber Optic Communications
Wen-Jeng Ho (*National Taipei University of Technology, China*); *Jheng-Jie Liou* (*National Taipei University of Technology, China*); *Cheng-Ju Chen* (*National Taipei University of Technology, China*);

75 Design of a Novel Voltage Sensor Based on Fiber Bragg Grating with Electro-optic Crystal Material Cladding
Shang-Lin Hou (*Lanzhou University of Technology, China*); *Bo Chen* (*Lanzhou University of Technology, China*); *Zhong-Yi Wang* (*Lanzhou University of Technology, China*); *Yan-Jun Liu* (*Lanzhou University of Technology, China*); *Jing-Li Lei* (*Lanzhou University of Technology, China*);

76 Numerical Simulation of the HPM Breakdown on Dielectric Surface Including Outgassing
Libing Cai (*Northwest Institute of Nuclear Technology, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*);

77 Multi-branch Waveguide Bender by Using Embedded Optical Transformations
Jianhong Lv (*Huazhong University of Science and Technology, China*); *Lei Wan* (*Huazhong University of Science and Technology, China*); *Baorong Yan* (*Huazhong University of Science and Technology, China*); *Linghua Kong* (*Huazhong University of Science and Technology, China*); *Zhaoquan Chen* (*Huazhong University of Science and Technology, China*); *Minghai Liu* (*Huazhong University of Science and Technology, China*); *Xiwei Hu* (*Huazhong University of Science and Technology, China*);

78 A Planar and Polarization Insensitive Perfect Metamaterial Absorber
Lei Lu (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Xin-Hua Wang* (*Air Force Engineering University, China*); *Chao Gu* (*Air Force Engineering University, China*);

79 A Wideband Three-dimensional Metamaterial Absorber
Lei Lu (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Xin-Hua Wang* (*Air Force Engineering University, China*); *Chao Gu* (*Air Force Engineering University, China*);

80 Modeling and Simulation of Large-scale Rectangular Surface-wave Plasma Source
Chao-Hui Lan (*Institute of Fluid Physics, CAEP, China*); *Wendou Wang* (*Institute of Fluid Physics, CAEP, China*); *Qiang Wang* (*Institute of Fluid Physics, CAEP, China*); *Long Xie* (*Institute of Fluid Physics, CAEP, China*); *Jihao Jiang* (*Institute of Fluid Physics, CAEP, China*); *Caihua Wei* (*Institute of Fluid Physics, CAEP, China*);

81 Property of Subwavelength Resonator with DNG Metamaterials by FDTD Method
Kuisong Zheng (*Northwestern Polytechnical University, China*); *Changying Wu* (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*); *Gao Wei* (*Northwestern Polytechnical University, China*);

82 Experimental Verification of Anisotropic Three-dimensional Left-handed Metamaterial Composed of Jerusalem Crosses
Jiafu Wang (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Song Xia* (*Xi'an Jiaotong University, China*); *Yiming Yang* (*Air Force Engineering University, China*); *Lei Lu* (*Air Force Engineering University, China*); *Xiang Wu* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Qian Wang* (*Liaocheng University, China*);

83 Application of Optimization Algorithm to Designing Absorber Composed of RHM and LHM
Dan Lv (*State Key Lab. of Millimeter Waves, China*); *Chuang-Ming Tong* (*Air Force Engineering University, China*); *Yan Geng* (*Xi'an Satellite Control Center, China*);

84 The Transmission Properties of Electromagnetic Wave in Three-dimensional Plasma Photonic Crystals
Ji-Wei Xu (*Electronic Engineering Institute, China*); *Jia-Ming Shi* (*Electronic Engineering Institute, China*);

85 The Non-constancy of Speed of Light in Vacuum for Different Galilean Reference Systems (Revisited)
Namik Yener (*Kocaeli University, Turkey*);

86 Non-constancy of Speed of Light in Vacuum for Different Galilean Reference Systems in Case of an Impulsive Plane Wave
Namik Yener (*Kocaeli University, Turkey*);

87 Non-constancy of Speed of Light in Vacuum for Different Galilean Reference Systems and Momentum and Energy of a Particle
Namik Yener (*Kocaeli University, Turkey*);

88 Numberical Methods for Three-dimensional Electromagnetic Invisible Cloaks with Irregular Boundary Shapes
Xin-Hua Wang (*Air Force Engineering University, China*); *Shaobo Qu* (*Air Force Engineering University, China*); *Song Xia* (*Xi'an Jiaotong University, China*); *Bin-Ke Wang* (*Air Force Engineering University, China*); *Zhuo Xu* (*Xi'an Jiaotong University, China*); *Hua Ma* (*Air Force Engineering University, China*); *Jiafu Wang* (*Air Force Engineering University, China*); *Chao Gu* (*Air Force Engineering University, China*); *Xiang Wu* (*Air Force Engineering University, China*); *Lei Lu* (*Air Force Engineering University, China*); *Hang Zhou* (*Air Force Engineering University, China*);

89 Accurate Determination of Refraction Points on the Interfaces of Multi-layer Media
Zhiyong Han (*Civil Aviation University of China, China*); *Weikun He* (*Civil Aviation University of China, China*); *Hao Chen* (*Civil Aviation University of China, China*); *Renbiao Wu* (*Civil Aviation University of China, China*);

90 The Stress of Multilayers of W/Si, WSi_2/Si and Single Layer Coatings of W, WSi_2, Si
Qiushi Huang (*Tongji University, China*); *Jingtao Zhu* (*Tongji University, China*); *Jing Xu* (*Tongji University, China*); *Xiaoqiang Wang* (*Tongji University, China*); *Zhanshan Wang* (*Tongji University, China*);

92 Millimeter-wave Signals Generated by Using Up-conversion for Radio-on-fiber System
Chun-Chia Weng (*Ming Chi University of Technology, Taiwan*); *W. S. Tsai* (*Mingchi University of Technology, China*); *Y. F. Lin* (*Mingchi University of Technology, China*); *Hai-Han Lu* (*National Taipei University of Technology, China*);

00:00 SVM-based Approach for Buried Object Detection
Qing He Zhang (*Three Gorges University, China*); *Jing-Jing Yao* (*Wuhan University, China*);

Session 4P1a
Remote Sensing of Water Cycle Related Components

Thursday PM, March 25, 2010

Room A

Organized by Jiancheng Shi

Chaired by Jiancheng Shi

13:20 Estimation on Snow Water Equivalent Using High-frequency SAR Observations
Jinyang Du (*Institute of Remote Sensing Applications, Chinese Academy of Sciences, China*); *Jiancheng Shi* (*University of California, USA*);

13:40 Bistatic Measurements of Soil Moisture by Using GNSS Signals: An Experimental Campaign
Marco Brogioni (*IFAC-CNR, Italy*); *M. Caparrini* (*STARLAB, Spain*); *A. Egido* (*STARLAB, Spain*); *E. Farres* (*STARLAB, Spain*); *M. Motte* (*STARLAB, Spain*); *N. Floury* (*ESA-ESTEC, The Netherlands*); *L. Guerriero* (*CeTeM, Italy*); *Simonetta Paloscia* (*IFAC-CNR, Italy*); *Paolo Pampaloni* (*CeTeM, Italy*); *S. Pettinato* (*CeTeM, Italy*); *N. Pierdicca* (*CeTeM, Italy*); *E. Santi* (*IFAC-CNR, Italy*);

14:00 A Study on Estimation of Soil Moisture with a Combined L-band Radar and Radiometer Measurements
Jiancheng Shi (*University of California, USA*); *K. S. Chen* (*University of California, USA*); *L. Tsang* (*University of California, USA*); *D. Entekhabi* (*University of California, USA*); *E. Njoku* (*University of California, USA*); *T. Jackson* (*University of California, USA*); *P. O'Neill* (*University of California, USA*);

14:20 Improvement of Bare Surface Soil Moisture Estimation with L-band Multi-polarization Radar Data
Ruijing Sun (*Institute for Remote Sensing Applications, CAS, China*); *Jiancheng Shi* (*University of California, USA*); *Thomas J. Jackson* (*USDA ARS, USA*); *Kun-Shan Chen* (*National Central University, Taiwan*); *Yisok Oh* (*Hongik University, Korea*);

14:40 Monitoring Air and Surface Temperature Evolution in Antarctica by Means of Microwave Remote Sensing
Marco Brogioni (*Consiglio Nazionale delle Ricerche, Italy*); *Giovanni Macelloni* (*Consiglio Nazionale delle Ricerche, Italy*); *S. Pettinato* (*Consiglio Nazionale delle Ricerche, Italy*); *Emanuele Santi* (*Consiglio Nazionale delle Ricerche, Italy*);

15:00 **Coffee Break**

Session 4P1b
Synthetic Aperture Radars: Systems and Applications

Thursday PM, March 25, 2010

Room A

Organized by Kazuo Ouchi, Haipeng Wang

Chaired by Kazuo Ouchi, Haipeng Wang

15:20 Development of Novel CP-SAR Sensor onboard an Unmanned Aerial Vehicle Platform
P. Rizki Akbar (*Chiba University, Japan*); *Josaphat Tetuko Sri Sumantyo* (*Chiba University, Japan*); *Hiroaki Kuze* (*Chiba University, Japan*);

15:40 Electronically Tunable Current Mode Second Order High Pass Filter with Variable Central Frequency f_0
G. N. Shinde (*Indira Gandhi SR, India*); *D. D. Mulajkar* (*Dnyanasadhana College, India*);

16:00 A SAR Superresolution Method Based on 2D Linear Prediction Extrapolation
Ping Zhang (*Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China*); *Zhen Li* (*Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China*);

16:20 Long Term Continuously DInSAR for Volume Change Estimation of Land Deformation
Josaphat Tetuko Sri Sumantyo (*Chiba University, Japan*);

16:40 Extraction of Typhoon-damaged Forests from High-resolution Polarimetric SAR Images
Haipeng Wang (*Fudan University, China*); *Kazuo Ouchi* (*National Defense Academy, Japan*);

17:00 Ship Detection Experiments by Multiple Synthetic Aperture Radars
Chan-Su Yang (*Korea Ocean Research and Development Institute, Korea*); *Seong In Hwang* (*National Defense Academy, Japan*); *Shunsuke Taniguchi* (*National Defense Academy, Japan*); *Kazuo Ouchi* (*National Defense Academy, Japan*);

17:20 Deriving Ocean Surface Drift Using Multiple SAR Sensors
Ming-Kuang Hsu (*Technology and Science Institute of Northern Taiwan, Taiwan*); *Antony K. Liu* (*NASA Goddard Space Flight Center, USA*);

Session 4P2
Satellite Land Products, Validation, and Applications

Thursday PM, March 25, 2010

Room B

Organized by Yunyue Yu

Chaired by Yunyue Yu, Qin-Huo Liu

13:20 An Angular-dependent Single Channel Algorithm for Land Surface Temperature Retrieval from the HJ-1B/IRS Thermal Infrared Data
Qin-Huo Liu (*Institute of Remote Sensing Application, Chinese Academy of Sciences, China*); *H. Li* (*Institute of Remote Sensing Application, Chinese Academy of Sciences, China*); *B. Zhong* (*Institute of Remote Sensing Application, Chinese Academy of Sciences, China*);

13:40 A Spatial Representativeness Analysis Model for Satellite LST Validation
Ming Chen (*I. M. Systems Group, Inc., Camp Springs, USA*); *Yunyue Yu* (*NOAA/NESDIS, Camp Springs, USA*); *Dan Tarply* (*Short & Associates, Camp Springs, USA*); *Jeffrey L. Privette* (*NOAA/NESDIS, USA*);

14:00 Monitoring Snow Cover with Multisensor Automated Snow Mapping System at NOAA/NESDIS
Peter Romanov (*University of Maryland, USA*);

14:20 Satellite Data Utilization over Land in NCEP Data Assimilation System
Weizhong Zheng (*NOAA/NCEP/EMC, USA*); *Michael Ek* (*NOAA/NCEP/EMC, USA*); *Helin Wei* (*NOAA/NCEP/EMC, USA*); *Jesse Meng* (*NOAA/NCEP/EMC, USA*); *John Derber* (*NOAA/NCEP/EMC, USA*); *Xubin Zeng* (*University of Arizona, USA*); *Zhuo Wang* (*University of Arizona, USA*);

14:40 Construction of a Global Database of Surface Reflectance and Emissivity at a Sub km Resolution
Louis Gonzalez (*Université des Sciences et Technologies de Lille, France*); *François-Marie Bréon* (*LSCE, France*); *Xavier Briottet* (*ONERA/DOTA, France*);

15:00 **Coffee Break**

15:20 Evaluation of MODIS VI Products Using the AERONET-based Surface Reflectance Validation Network Dataset
Zhangyan Jiang (*University of Arizona, USA*); *Alfredo R. Huete* (*University of Arizona, USA*); *Yujie Wang* (*University of Maryland Baltimore County, USA*); *Alexei Lyapustin* (*University of Maryland Baltimore County, USA*);

15:40 Land Surface Products from the Advanced Baseline Imager of U.S. GOES-R Satellite Mission
Yunyue Yu (*NOAA/NESDIS, USA*); *Mitchell D. Goldberg* (*NOAA/NESDIS, USA*); *Ivan Csiszar* (*NOAA/NESDIS, USA*);

Session 4P3
Optical and Quantum Tweezers for Atom/Molecile Trapping and Transportation

Thursday PM, March 25, 2010

Room C

Organized by Preecha P. Yupapin

13:00 The Cold Atoms Upward Transportation
Xuanhui Lu (*Zhejiang University, China*); *Kaikai Huang* (*Zhejiang University, China*); *Xian Zhang* (*Zhejiang University, China*); *Lei Sun* (*Zhejiang University, China*); *Zhouxiang Xu* (*Zhejiang University, China*); *Hao Xu* (*Zhejiang University, China*);

13:20 A New Concept of Cold Atom Using Fast Optical Tweezers
B. Jakgoljun (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Keerayoot Srinuanjan* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *S. Kamoldilok* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

13:40 Novel Nanoscale Signal Processing and Networking via a Wavelength Router
P. Youplao (*King Mongkut' Institute of Technology Ladkrabang (KMITL), Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

14:00 Novel Molecular Networking via a Simultaneous Optical Wireless Up-down Link Systems
Pongputhai Udomariyasap (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *S. Noppanakeepong* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

14:20 Quantum Parallel Processing Manipulation Using Gaussian Pulses via an Optical Multiplexer
Paiboon Pongwongtragull (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Suebtarkul Suchat* (*Phranakhon Rajabhat University, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

14:40 Molecular Transporters Generations Based on Ant Colony Algorithm for Molecular and Storage Applications
T. Taengtang (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *K. Praitoonwattanakit* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

15:00 **Coffee Break**

15:20 Multi-photons Trapping Stability within a Fiber Bragg Grating for Quantum Sensor Use
H. M. Hairi (*Universiti Teknologi Malaysia, Malaysia*); *Toto Saktioto* (*Universiti Teknologi Malaysia, Malaysia*); *S. Nafisah* (*Universiti Teknologi Malaysia, Malaysia*); *M. Fadhali* (*Ibb University, Yemen*); *Rabia Qindeel* (*Universiti Teknologi Malaysia, Malaysia*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *J. Ali* (*Universiti Teknologi Malaysia, Malaysia*);

15:40 Novel Multi Channels — Multi Layers Atom Transportation and Quantum Security Using Dynamic Tweezer for Communication Link
Charoen Vongchumyen (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

16:00 Generalized DNA Codes via Nonlinear Micro Ring Resonator for Signal Security Use
W. Chatsri (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *W. Siririth* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *O. Pingern* (*Faculty of Science, Ramkhamhaeng University, Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*);

16:20 Perfume Distribution Using Molecular Networking via an Optical Wireless Link
X. Louangvilay (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *M. Tassakorn* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

16:40 Multi Transporters Generation for High Density Molecule Transportation via Optical Communication
Sappasit Thongmee (*Ramkhamhaeng University, Thailand*); *S. Pipatsart* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

17:00 Multi Quantum-molecular Transportation via Multi Wavelength Layers in a Wavelength Router
Sawatsakorn Chaiyasoonthorn (*Ramkhamhaeng University, Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

17:20 Molecule Transportation via Hybrid MUX/DEMUX System
Narong Sangwaranatee (*Rajamangala University of Technology Krungthep, Thailand*); *P. Chaiyachate* (*King Mongkut's Institute of Technology Ladkrabang, Thailand*); *Somsak Mitatha* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*); *Preecha P. Yupapin* (*King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand*);

Session 4P4
Theory and Application of Biisotropic and Anisotropic Metamaterials

Thursday PM, March 25, 2010

Room D

Organized by Cheng-Wei Qiu, Gengkai Hu

Chaired by Cheng-Wei Qiu, Gengkai Hu

13:20 Lateral Shift of an Electromagnetic Wave Reflected from the Chiral Metamaterial
Lei Gao (*Soochow University, China*); *Wenting Dong* (*Soochow University, China*); *Cheng-Wei Qiu* (*National University of Singapore, Singapore*);

13:40 Electromagnetic Field Energy in Metamaterial Media with Strong Dispersion and Finite Loss
Pi-Gang Luan (*National Central University, Taiwan*);

14:00 The Metamaterials: The New Electronic Aggregate Composite Materials and Their Applications
Alain C. Priou (*Universite Paris West, France*); *Habiba Hafdallah Ouslimani* (*University Paris West, France*);

14:20 Hermite-Gaussian Beam Scattering by a Chiral-coating Conducting Sphere
Qiong-Kun Yuan (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Hai-Ying Li* (*Xidian University, China*); *Zheng-Jun Li* (*Xidian University, China*);

14:40 Three-Dimensional Scattering by an Infinite Homogeneous Gyrotropic Elliptic Cylinder
Shi-Chun Mao (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*);

15:00 **Coffee Break**

15:20 A General Method for Designing Transformation Materials of Arbitrary Configuration
Zheng Chang (*Beijing Institute of Technology, China*); *Jin Hu* (*Beijing Institute of Technology, China*); *Xiaoming Zhou* (*Beijing Institute of Technology, China*); *Gengkai Hu* (*Beijing Institute of Technology, China*);

15:40 Experimental Study on Electromagnetic Beam Bender
Qibo Deng (*Beijing Institute of Technology, China*); *Jin Hu* (*Beijing Institute of Technology, China*); *Zheng Chang* (*Beijing Institute of Technology, China*); *Xiaoming Zhou* (*Beijing Institute of Technology, China*); *Gengkai Hu* (*Beijing Institute of Technology, China*);

16:00 Scattering of Two Uniaxial Anisotropic Spheres to Plane Wave
Zheng-Jun Li (*Xidian University, China*); *Zhen-Sen Wu* (*Xidian University, China*); *Hai-Ying Li* (*Xidian University, China*);

16:20 Plasmonic Nanoparticles as Terahertz Oscillators
Xiaobing Cai (*Beijing Institute of Technology, China*); *Gengkai Hu* (*Beijing Institute of Technology, China*);

Session 4P5
High Frequency Properties of Materials and Their Applications

Thursday PM, March 25, 2010

Room E

Organized by Mangui Han

Chaired by Mangui Han

13:20 Microwave Absorption Properties of Cobalt Nanowires Fabricated by Pulse Electrodeposition
Wenbing Chen (*University of Electronic Science and Technology of China, China*); *Mangui Han* (*University of Electronic Science and Technology of China, China*); *Longjiang Deng* (*University of Electronic Science and Technology of China, China*);

13:40 A Comparative Study of the Field Dependence of the Properties of Colloidal Suspensions of Nanoparticles and of Magnetic Microspheres
Paul C. Fannin (*Trinity College, Ireland*); *C. N. Marin* (*West University of Timisoara, Romania*); *C. Couper* (*Trinity College, Ireland*); *I. Malaescu* (*West University of Timisoara, Romania*); *N. Stefu* (*West University of Timisoara, Romania*);

14:00 Microwave Susceptibility Dispersion Spectra of Nanodot Arrays with Perpendicular Anisotropy
Wenbing Chen (*University of Electronic Science and Technology of China, China*); *Mangui Han* (*University of Electronic Science and Technology of China, China*);

14:20 Tunable Microwave Metamaterials Based on Frequency Select Surface Controlled by PIN Diodes
Mangui Han (*University of Electronic Science and Technology of China, China*);

14:40 Oxides as Terahertz Optical Materials
Qi-Ye Wen (*University of Electronic Science and Technology of China, China*); *Huai-Wu Zhang* (*University of Electronic Science and Technology of China, China*); *Qing-Hui Yang* (*University of Electronic Science and Technology of China, China*);

15:00 **Coffee Break**

15:20 Thickness Effects on Microwave Magnetic Properties of FeCoBSi Films Deposited on Flexible Substrate
Haipeng Lu (*University of Electronic Science and Technology of China, China*); *Jing Yang* (*University of Electronic Science and Technology of China, China*); *Longjiang Deng* (*University of Electronic Science and Technology of China, China*);

15:40 Effect of the Very Thin Dielectric Film on the Transmission Properties of the FSS
Xin-Yu Hou (*University of Electronic Science and Technology of China, China*); *Wenming Tian* (*University of Electronic Science and Technology of China, China*); *Yongxing Che* (*University of Electronic Science and Technology of China, China*);

16:00 Microwave Multi-resonant Magnetic Pattern and EM Wave Absorption Application
Peiheng Zhou (*University of Electronic Since and Technology of China, China*); *Haipeng Lu* (*University of Electronic Science and Technology of China, China*); *Huibin Zhang* (*University of Electronic Since and Technology of China, China*); *Haoran Xu* (*University of Electronic Since and Technology of China, China*); *Longjiang Deng* (*University of Electronic Science and Technology of China, China*);

16:20 High Frequency Characteristics and Electrical Properties of Multilayer FeCoHfO/AlO_x Films
Yu Ming Kuo (*National Tsing Hua University, Taiwan, R.O.C.*); *Shandong Li* (*Fujian Normal University, China*); *Jenq-Gong Duh* (*National Tsing Hua University, Taiwan, R.O.C.*); *Su-Yueh Tsai* (*National Tsing Hua University, Taiwan, R.O.C.*);

16:40 A Novel Method to Solve the Complex Transcendental Equation for the Permittivity Determination in Short-circuited Line
Changying Wu (*Northwestern Polytechnical University, China*); *Jianzhou Li* (*Northwestern Polytechnical University, China*); *Gao Wei* (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*);

17:00 Adaptor Calibration Using a Matched Load and an Adjustable Shorter without Specified Phases
Changying Wu (*Northwestern Polytechnical University, China*); *Kuisong Zheng* (*Northwestern Polytechnical University, China*); *Gao Wei* (*Northwestern Polytechnical University, China*); *Jia-Dong Xu* (*Northwestern Polytechnical University, China*);

Session 4P6a
Integrated RF Passives

Thursday PM, March 25, 2010

Room F

Organized by Guoan Wang

Chaired by Hung-Wen Chang

13:20 A Highly Miniaturized Broadband on-chip Impedance Transformer Employing Periodically Arrayed Ground Structure on Silicon RFIC
Jeong-Gab Ju (*Korea Maritime University, Korea*); *Young-Bae Park* (*Korea Maritime University, Korea*); *Bo-Ra Jung* (*Korea Maritime University, Korea*); *Jang-Hyeon Jung* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Young Yun* (*Korae Maritime University, Korea*);

13:40 Highly Miniaturized On-chip 90° Hybrid Coupler Employing Transmission Line with Periodic Structure
Bo-Ra Jung (*Korea Maritime University, Korea*); *Young-Bae Park* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Jang-Hyeon Jeong* (*Korea Maritime University, Korea*); *Jeong-Gab Ju* (*Korea Maritime University, Korea*); *Young Yun* (*Korae Maritime University, Korea*);

14:00 An Artificial-transmission-line-based Miniaturized Doubly Balanced Ring Mixer
Chi-Hui Lai (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *Y. T. Cheng* (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*); *T. G. Ma* (*National Taiwan University of Science and Technology, Taiwan, R.O.C.*);

14:20 Balanced Dual-band Bandpass Filter Design Using Coupled Stepped-impedance Resonators
Chao-Hsing Hsu (*Chienkuo Technology University, Taiwan*); *Yu-Chieh Hung* (*Chienkuo Technology University, Taiwan*); *Jung-Ming Kuo* (*Chienkuo Technology University, Taiwan*);

Session 4P6b
Microwave and Millimeter Wave Circuits and Devices

Thursday PM, March 25, 2010

Room F

Chaired by Jan-Dong Tseng

15:20 Experimental Study of a Longitudinal Magnetic Filter
Chittakorn Polyon (*Ubon Ratchathani University, Thailand*); *S. Photharin* (*Ubon Ratchathani University, Thailand*); *K. Wiangnon* (*Ubon Ratchathani University, Thailand*);

15:40 A Novel Type Phase Shifter Using Rat Race Hybrid
Jan-Dong Tseng (*National Chin-Yi University of Technology, Taiwan, R.O.C.*); *Chien-Wen Ting* (*National Chin-Yi University of Technology, Taiwan, R.O.C.*); *Chien-Hua Su* (*National Chin-Yi University of Technology, Taiwan, R.O.C.*);

16:00 Design of a Class F Power Amplifier
Tian He (*California State University Chico, USA*); *Uma Balaji* (*California State University, USA*);

16:20 Numerical Simulation and Primary Experiment of High Power Terahertz Backward Wave Oscillator
Xiaoze Li (*Northwest Institute of Nuclear Technology, China*); *Changjiang Tong* (*Northwest Institute of Nuclear Technology, China*); *Guangqiang Wang* (*Tsinghua University, China*); *Jianguo Wang* (*Northwest Institute of Nuclear Technology, China*); *Xingzhou Wang* (*Northwest Institute of Nuclear Technology, China*);

16:40 A Study on Equivalent Circuit of Short Wavelength Microstrip Line Employing PPGM on GaAs MMIC
Jang-Hyeon Jung (*Korea Maritime University, Korea*); *Bo-Ra Jung* (*Korea Maritime University, Korea*); *Young-Bae Park* (*Korea Maritime University, Korea*); *Se-Ho Kim* (*Korea Maritime University, Korea*); *Jeong-Gab Ju* (*Korea Maritime University, Korea*); *Suk-Youb Kang* (*Korea Maritime University, South Korea*); *Dong-Woo Kang* (*Korea Maritime University, Korea*); *Mi-Jung Kim* (*Korea Maritime University, Korea*); *Byeong-Su Lim* (*Korea Maritime University, Korea*); *Cheol-Hee Do* (*Korea Maritime University, Korea*); *Young Yun* (*Korae Maritime University, Korea*);

17:00 A Design of the LTCC Balanced-to-Unbalanced Bandpass Filters
Yujie Zhao (*Zhejiang Key Research Lab of Fiber-optic Communication Technology, China*); *Yali Qin* (*Zhejiang Key Research Lab of Fiber-optic Communication Technology, China*); *Shuwei Yang* (*Zhejiang Key Research Lab of Fiber-optic Communication Technology, China*);

PIERS SURVEY

This is to inform you about future Progress in Electromagnetics Research Symposium (PIERS).

Should you be interested in organizing a session, please online fill out this PIERS Survey Form in PIERS web site at **http://emacademy.org** or **http://piers.org**.

Name: _____ Position: _____

Affiliation: _____ Email: _____

_____ Phone: _____

Address: _____ Fax: _____

_____ Web: _____

_____ Date: _____

A1. For the next PIERS to be held on 5–8 July, 2010 in Cambridge, USA,

( ) I will be interested in organizing and chairing a session, and the proposed title is

_____

B. For past PIERS, I attended

( ) 1st PIERS1989 in Boston	( ) 2nd PIERS1991 in Cambridge	( ) 3rd PIERS1993 in Pasadena
( ) 4th PIERS1994 in Noordwijk	( ) 5th PIERS1995 in Seattle	( ) 6th PIERS1996 in Innsbruck
( ) 7th PIERS1997 in Hong Kong	( ) 8th PIERS1997 in Cambridge	( ) 9th PIERS1998 in Nantes
( ) 10th PIERS1999 in Taipei	( ) 11th PIERS2000 in Cambridge	( ) 12th PIERS2001 in Osaka
( ) 13th PIERS2002 in Cambridge	( ) 14th PIERS2003 in Singapore	( ) 15th PIERS2003 in Honolulu
( ) 16th PIERS2004 in Pisa	( ) 17th PIERS2004 in Nanjing	( ) 18th PIERS2005 in Hangzhou
( ) 19th PIERS2006 in Cambridge	( ) 20th PIERS2006 in Tokyo	( ) 21st PIERS2007 in Beijing
( ) 22nd PIERS2007 in Prague	( ) 23rd PIERS2008 in Hangzhou	( ) 24th PIERS2008 in Cambridge
( ) 25th PIERS2009 in Beijing	( ) 26th PIERS2009 in Moscow	

C. I have the following comments about PIERS:

_____

_____

_____

_____

PIERS 2010 in Cambridge

Progress in Electromagnetics Research Symposium

5 – 8 July, 2010 Cambridge, USA

CALL FOR PAPERS

PIERS provides an international forum for reporting progress and recent advances in all aspects of electromagnetics. Spectra range from statics to RF, microwave, photonics, and beyond. Topics include radiation, propagation, diffraction, scattering, guidance, resonance, power, energy and force issues, and all applications and modern developments. Potential session organizers are welcome to propose specific technical topics by filling out the PIERS survey at **http://piers.org/**.

SUGGESTED TOPICS:

1 Electromagnetic theory
2 Computational electromagnetics, hybrid methods
3 Spectra, time, and frequency domain techniques
4 Fast iteration, large scale and parallel computation
5 Transmission lines and waveguide discontinuities
6 Resonators, filters, interconnects, packaging, MMIC
7 Antenna theory and radiation
8 Microstrip and printed antennas, phase array antennas
9 RF and wireless communication, multipath
10 Mobile antennas, conformal and smart skin antennas
11 Power electronics, superconducting devices
12 Systems and components, electromagnetic compatibility
13 Nano scale electromagnetics, MEMS
14 Magnetic levitation, transportation and collision avoidance
15 Precision airport landing systems, GPS
16 Radar sounding of atmosphere, ionospheric propagation
17 Microwave remote sensing and polarimetry, SAR
18 Subsurface imaging and detection technology, GPR
19 Active and passive remote sensing systems
20 Electromagnetic signal processing, wavelets, neural network
21 Rough surface scattering and volume scattering
22 Remote sensing of the earth, ocean, and atmosphere
23 Scattering, diffraction, and inverse scattering
24 Microwave and millimeter wave circuits and devices, CAD
25 Optics and photonics, gyrotrons, THz technology
26 Quantum well devices, microwave photonic systems, PBG
27 Medical electromagnetics, biological effects, MRI
28 Fiber optics, optical sensors, quantum computing
29 Biological media, composite and random media
30 Plasmas, nonlinear media, fractal, chiral media, LHM
31 Constitutive relations and bianisotropic media
32 Moving media, relativity, field quantization, and others

PAPER SUBMISSION MUST BE RECEIVED BY 20 DECEMBER 2009

Abstract Guidelines: Authors are invited to submit a one-page abstract of no less than 250 words in English. No full-length paper is required. The abstract should explain clearly the content and relevance of the proposed technical contribution. On a separate page list the following information: (1) Title of the paper, (2) Name, affiliation, and email of each author, (3) Mailing address, (4) Telephone/Fax numbers, (5) Corresponding author and Presenting author, (6) Topic or Session Organizer, if applicable, (7) State if poster presentation is preferred.

Please use On-Line-Submission (**http://piers.org**) to submit your contribution or via email (tpc@piers.org and/or piers@ewt.mit.edu) by attachments. Authors are recommended to use *.tex, *.doc, or *.pdf as the file format. The abstract submission deadline is **20 December 2009** and the author pre-registration deadline is **20 February 2010**.

Full-length Papers: Author of an accepted abstract is invited to (but is not required to) submit a full-length paper of no more than five pages. All full papers will be subject to a peer-review process. Only accepted and registered papers will be published in the final PIERS Proceedings and available online after the conference. Selected full-length papers will be published in **PIERS Online**. Please visit PIERS website for the latest PIERS sample files. The deadline for the submission of extended papers is **20 February 2010**.

PRESENTING AUTHORS MUST PRE-REGISTER BY 20 FEBRUARY 2010

Each presenting author is limited to presenting no more than three papers in oral and poster sessions, and must pre-register by paying a **non-refundable** fee of **US$460** before **20 February 2010**. For students with valid identification, the non-refundable pre-registration fee is **US$230**. Registration fee will be raised to **$580** after **20 February 2010**. Only pre-registered articles will be scheduled in the final Technical Program. Inclusion of the article in the Technical Program and PIERS Proceedings is guaranteed only after the registration of the presenting author is completed. Registration fee include admission to all technical sessions, break areas, and a copy of the draft proceedings in CD-ROM.

Updated and detail information will be posted at http://piers.org and http://emacademy.org

	MONDAY AM 8:00 MARCH 22		MONDAY PM 13:00 MARCH 22		TUESDAY AM 8:00 MARCH 23		TUESDAY PM 13:00 MARCH 23	
ROOM A	1A1 - Advanced Interferometric SAR Techniques and Their Engineering and Geophysical Applications		1P1 - Remote Sensing, GPR, and SAR		2A1 - Scattering and Guiding Characteristics in Periodic Structures		2P1 - Scattering, Diffraction, and Inverse Scattering	
ROOM B	1A2a - Fields Coupling and Integrated Design of EMs, Temperature and Structure for Antennas and Electronic Equipments	1A2b - Electromagnetic Modeling, Inversion, and Applications 1	1P2 - Electromagnetic Modeling, Inversion, and Applications 2		2A2a - Electromagnetic Seismic Fluid Geophysical and Geological Exploration	2A2b -Biomedical Electromagnetic Instruments and EM Condense Materials and Imaging	2P2 - Electromagnetic Wave in the Materials and Dispersion Simulation for Cloak Metamaterials and Photonic Crystals	
ROOM C	1A3 - X-Ray Sources, X-Ray Optics and Applications of Focused X-Ray Probes		1P3 - Vectorial Properties and Physical Effects of Finite Light Beams and Their Applications in Optical Trapping and Manipulation		2A3 - Plasmonic Nanophotonics 1		2P3a - Plasmonic Nanophotonics 2	2P3b - Optics, Photonics and Nano-photonics
ROOM D	1A4a - Electromagnetic Theory	1A4b - Electromagnetic Detectors of Gravitational Waves	1P4 - Metamaterial, Properties, and Applications		2A4 - Transformation Optics and Metamaterials		2P4a - EM Nondestructive Evaluation and Modeling	2P4b - Advances in Microwave Imaging
ROOM E			1P5a - Computational Electromagnetics	1P5b - Recent Progresses in Time Domain Electromagnetics	2A5 - Advances in Numerical Techniques 1		2P5 - Advances in Numerical Techniques 2	
ROOM F			1P6a - Extended/Unconventional EM Theory, EHD/EMHD, and Electro-biology	1P6b - Education of Electromagnetic Theory	2A6 - Microstrip and Printed Antennas, Phase Array Antennas 1		2P6a - Microstrip and Printed Antennas, Phase Array Antennas 2	2P6b - Mobile Antennas and Antenna with Metamaterials
ROOM G			1P7 - Electromagnetic Wave Applications in Material Processing and Characterization		2A7 - RF Safety Issues		2P7 - Materials, Devices, Processes and Characterizations for Organic Electronics	
ROOM K					2AP - Poster Session 1			

	WEDNESDAY AM 8:00 MARCH 24		WEDNESDAY PM 13:00 MARCH 24		THURSDAY AM 8:00 MARCH 25		THURSDAY PM 13:00 MARCH 25	
ROOM A	3A1 - Microwave Innovative Techniques and Systems in Exploring Planetary Bodies		3P1 - Remote Sensing of the Earth, Ocean, and Atmosphere		4A1 - Microwave Remote Sensing of Land Surface		4P1a - Remote Sensing of Water Cycle Related Components	4P1b - Synthetic Aperture Radars: Systems and Applications
ROOM B	3A2a - Rough Surface Scattering and Volume Scattering	3A2b - Scattering and Rough Surface Scattering	3P2a - EM Scattering Models and Applications	3P2b - Wireless Sensor Network and Applications	4A2 - EMC and EM protection		4P2 - Satellite Land Products, Validation, and Applications	
ROOM C	3A3 - Microwave/Terahertz Photonics Technologies and Their Applications		3P3 - Passive Optical Waveguide Theory and Numerical Modelling		4A3 - Optics, Fiber, Lasers and Optical Sensors		4P3 - Optical and Quantum Tweezers for Atom/Molecile Trapping and Transportation	
ROOM D	3A4 - Wave Propagation and Wave Interaction with Media		3P4 - Nonlinear Photonics in Disordered Structures and Metamaterials		4A4a - Metamaterial and Electromagnetic Cloak	4A4b - Micro/Nanomanufacturing of Metamaterials and Photonic Structures	4P4 - Theory and Application of Biisotropic and Anisotropic Metamaterials	
ROOM E	3A5 - Advanced CEM Methods for Electrically Large Problems		3P5a - Systems and Components, Electromagnetic Compatibility	3P5b - Physiological Effects of Static Magnetic Fields	4A5 - Novel Mathematical Methods in Electromagnetics		4P5 - High Frequency Properties of Materials and Their Applications	
ROOM F	3A6 - Antenna Theory, Radiation, Microstrip and Printed Antennas 1		3P6a - Antenna Theory, Radiation, Microstrip and Printed Antennas 2	3P6b - Microstrip, Printed Antenna and Array antennas	4A6a - Biological Effects of Electromagnetic Fields	4A6b - Applicators for Medical and Industrial Applications of EM Field	4P6a - Integrated RF Passives	4P6b - Microwave and Millimeter Wave Circuits and Devices
ROOM G			3P7 - Modeling and Simulations in Materials Science		4A7 - Matter, Signals and Waves			
ROOM K	3AP - Poster Session 2				4AP - Poster Session 3			