



The 12th International Symposium Antennas, Propagation, and EM Theory (ISAPE 2018)

December 3 - 6, 2018

Hangzhou, CHINA



中國電波傳播研究所

Schedule at a Glance

December 3		December 4		December 5		December 6			
Time	Event/Venue	Time	Event/Venue	Time	Event/Venue	Time	Event/Venue		
06:30-08:00		Breakfast							
13:30-18:00	Check-in <i>Hangzhou Shujiang Hotel</i> (杭州曙光大酒店) Reception Hall	08:30-09:20	Opening Ceremony Lecture Hall	08:30-10:00	Sessions: A1/B1/C1/D1/S Room A/B/C/D/E	08:30-10:00	Sessions: A3/B3/C3/E1/F2 Room A/B/C/D/E		
		09:20-09:50	Group Photo Square of Science & Technology Museum 科技馆前广场						
		09:50-10:20	Coffee Break	10:00-10:30	Coffee Break/Poster	10:00-10:30	Coffee Break/Poster		
		10:20-12:00	Keynotes Lecture Hall	10:30-12:00	Sessions: A1/B1/C1/D1/S Room A/B/C/D/E	10:30-12:00	Sessions: A3/B3/C3/E1/F2 Room A/B/C/D/E		
		12:05-13:10, Lunch (ShuGuang Hall 曙光厅, Floor 1 of Hangzhou Shujiang Hotel)							
		13:30-15:00	Keynotes Lecture Hall	13:30-15:00	Sessions: A2/B2/C2/D2/F1 Room A/B/C/D/E	13:30-15:00	Sessions: A4/B4/A5/E2/F3 Room A/B/C/D/E		
		15:00-15:30	Coffee Break	15:00-15:30	Coffee Break/Poster	15:00-15:30	Coffee Break/Poster		
		15:30-17:00	Keynotes Lecture Hall	15:30-17:00	Sessions: A2/B2/C2/D2/F1 Room A/B/C/D/E	15:30-17:00	Sessions: A4/B4/A5/E2/F3 Room A/B/C/D/E		
18:00-20:00	Dinner Western Restaurant (Floor 2 of Hotel)	17:30-20:00	Banquet ShuGuang Hall 曙光厅	17:30-20:00	Dinner ShuGuang Hall 曙光厅	17:30-20:00	Dinner Western Restaurant (Floor 2 of Hotel)		

Lecture Hall (Floor 2 of Science & Technology Museum, Hangzhou Dianzi University)

Room A, Room B, Room C, Room D, Room E (Floor 3 of Science & Technology Museum, Hangzhou Dianzi University)

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The 12th International Symposium on Antennas, Propagation and EM Theory

December 3-6, 2018 Hangzhou, CHINA

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SESSIONS:

A. Antennas & Related Topics

B. Propagation & Related Topics

C. EM Theory & Related Topics

D. Computational Electromagnetics

E. Electromagnetic Compatibility & Related Topics

F. Others

S. Special Session

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WELCOME TO ISAPE 2018

A Message from a General Co-Chair (Jian Wu)

Welcome Speech at the Opening Ceremony of ISAPE 2018

December 3, 2018 Hangzhou, China



The 12th International Symposium on Antennas, Propagation, and Electromagnetic Theory, is open today. It is my great honor to welcome all the attendees representing the organizing committee of ISAPE 2018. For this year, I'm very glad to hear that there are more than 370 prospective papers submitted to this symposium with many new ideas, new achievements and rich experimental data. Here, I'd like to express my warm welcome to all of you and show thanks to those who have ever helped us in the preparing of this symposium.

First, sincerely thanks should be given to Dr. Ross Stone, Honorary Life Member of IEEE AP-S, and to Prof. Koichi Ito, IEEE AP-S President Elect, for their consistent supports and positive help to the ISAPE as usual. Your great contributions have made and will certainly make the ISAPE serials continue success.

I also want to express my sincere gratefulness to our brilliant keynote speakers who came afar to Hangzhou to generously share their newly achievements, and to many young scientists who actively participant in our symposium and bring us vigor and innovative ideas. I truly believe with all your support, ISAPE will always provide a broader forum for worldwide scientists and engineers of varied backgrounds to exchange new ideas, new findings, new achievements and new reports in the fields of AP and EM theory.

Finally, I would like to express my thanks to our sponsor Chinese Institute of Electronics (CIE) and especially to the Local Organizing Committee from Hangzhou Dianzi University for their hard works and efforts for months to the symposium.

Hangzhou is one of the most beautiful cities in China with both historical and modern sights. I hope all of you enjoy your stay in Hangzhou and have a good time during the symposium with us.

Thank you!

A handwritten signature in blue ink, consisting of stylized Chinese characters '吴健' (Wu Jian).

Prof. Jian Wu
General Co-Chair

WELCOME TO ISAPE 2018

A Message from a General Co-Chair (W. Ross Stone)



It is a great privilege and a particular honor to welcome attendees to the Twelfth International Symposium on Antennas, Propagation, and Electromagnetic Theory, ISAPE2018. The conference is sponsored by the Chinese Institute of Electronics (CIE), and cosponsored by the CIE Radio Propagation Society and the CIE Antennas Society. The symposium is technically cosponsored by the IEEE Antennas and Propagation Society; the National Key Laboratory of Electromagnetic Environment, China; the Key Laboratory of RF Circuits and Systems of the Ministry of Education HDU; the Science and Technology on Electronic Information Control Laboratory, China; the Science and Technology on Communication Information Security Control Laboratory, China; the Science and Technology on Communication Networks Laboratory, China; the Science and Technology on Electromechanical Dynamic Control Laboratory, China; the IEEE Electron Devices Society, Hangzhou Chapter; and the IEEE Microwave Theory and Techniques Society, Hangzhou Chapter. It is supported by the China Committee for URSI, the National Natural Science Foundation of China, the China Research Institute of Radiowave Propagation, Hangzhou Dianzi University, and the Northwest China Research Institute of Electronic Equipment.

I particularly want to welcome you as a Fellow of the CIE, as a Life Fellow of the IEEE, as a Fellow of URSI, as an Honorary Life Member of the IEEE Antennas and Propagation Society (AP-S) AdCom, and as Assistant Secretary General (Publications and GASS) of URSI (the International Union of Radio Science). If you are not a member of the IEEE AP-S, I strongly encourage you to consider joining AP-S. We are honored and very fortunate to have Prof. Koichi Ito, President Elect of AP-S, and Prof. Ahmed Kishk, past President of AP-S, as two of our keynote speakers. If you are not an individual member of URSI, I also urge you to consider joining URSI, which is now accepting individual members. We are honored to have Prof. Jian Wu, Chair of the URSI China Committee as another of our keynote speakers.

33 years ago, the first ISAE (International Symposium on Antennas and Electromagnetics) was held in China, at the Friendship Hotel in Beijing. This was one of the predecessor conferences to the current ISAPE series. My wife and I were fortunate enough to be at that meeting. Even more fortunate, I had the opportunity to meet many distinguished Chinese colleagues for the first time at that meeting. Many of these became very close friends. These are friendships I still have and treasure. Just to complete the historical notes, the first ISRP (International Symposium on Radiowave Propagation) was held in 1988, and some years later, the two series of meetings merged to form the ISAPE of today.

This is a truly international meeting, with participation from many countries around the world. Over 370 very good papers were submitted, and these have been reviewed and a subset accepted to form an excellent technical program, with solid representation across the topics within the scope of the symposium. This is a very special meeting. It is special because it has

such international participation. It is also special because it is hosted by and held in China, one of the areas where there is such tremendous growth in the fields covered by this symposium. China is graduating more electrical engineers – and, I believe, more engineers in the fields represented in this symposium – than any other country in the world. I urge all attendees to learn from my experience in attending these meetings: to take advantage of this unique opportunity to find people from other countries and other parts of your own country who are working in your area of interest, and to take the time to get to know them and their work. You have a wonderful opportunity to not only forge new working relationships, but to make some excellent new friends. Not only have the friendships I made here 33 years ago endured and become tremendously valuable: their number has been multiplied many, many times over in succeeding related meetings through the years. You will find lots of important papers at this meeting. However, it is the people you will meet and the new friends you will make that are the most important.

I am particularly pleased by the large number of students participating in this meeting. Students are our future. If you are a student here, please take advantage of the presence of our more experienced colleagues who are here. Don't be afraid to introduce yourself, and to ask questions, and to develop new friendships and working relationships. This is your opportunity to become a part of the antennas, propagation, and EM community.

This meeting is also very special because it is being held in Hangzhou. Hangzhou is one of the seven ancient capitals of China, and is rightly considered to have some of the most beautiful scenery in China. West Lake is a UNESCO World Heritage Site, as is the Grand Canal. There many other places here of great beauty and historical interest. I hope you will take advantage of the excellent location of this meeting to learn about and explore the marvelous local sights.

Many of our colleagues have worked very hard to make this symposium happen. I must particularly thank my fellow General Co-Chairs, Prof. Jian Wu of the CRIRP and Prof. Zefei Zhu of Hangzhou Dianzi University. Special thanks are due to Prof. Zhiqun Cheng, Ms. Lei Zhao, and Mr. Cunxiang Wang, the Co-Chairs of the Organizing Committee. A tremendous amount of excellent work has been done by the Technical Program Committee. The many International Advisory Committee members have helped make this symposium a success, and their assistance is greatly appreciated.

My very best wishes are to all ISAPE2018 attendees. I hope you enjoy this symposium, find the papers technically stimulating, appreciate the wonderful surroundings, and leave with new friendships for the future.



W. Ross Stone, PhD
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WELCOME TO ISAPE 2018

A Message from a General Co-Chair (Zefei Zhu)



Welcome to ISAPE 2018: the 12th International Symposium on Antennas, Propagation and EM Theory.

As an active forum and connector for researchers all over the world, ISAPE has played an incredible part in the development of IT industries of China over the past few decades. Once every three years, researchers, engineers and practitioners worldwide are gathered here to share their latest findings and exchange their thoughts; here, innovations are inspired and applauded, changes are bred and launched. This, is where young talents are introduced and enlightened. This, is also where collaborations are initiated and deepened.

This year sees the 33th anniversary of ISAPE, and I myself has witnessed many new faces become known, and many lifelong friendships been built. ISAPE is attracting more and more distinguished scientists, and the load of papers submitted just reached a new peak this year.

As the sitting president of one of the best universities in engineering, I can't be more excited and grateful for this event, for it serves as a perfect opportunity for us to listen, exchange and learn. And I believe we will learn so much from each other.

The organizer of ISAPE 2018—Hangzhou Dianzi University is one of the front-runners in Antennas, Propagation and EM studies, and one of the Five Key Universities of the province. It is located close to the spectacular site of the G20 Summit and the picturesque West Lake. There's a saying in China that Hangzhou is like the heaven on earth. I hope ISAPE would be a heaven for exchange and cooperation, and your stay here a wonderful, rewarding and memorable experience.

Thank you!

A handwritten signature in black ink, appearing to be 'Zefei Zhu'.

Prof. Zefei Zhu
General Co-Chair
President of Hangzhou Dianzi University

Check-in

Monday, December 3	13:30-18:00	Venue: Floor 1 Reception Hall of Hangzhou Shujiang Hotel (杭州曙光大酒店一楼大厅)
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Organizing Committee

Opening Ceremony, Tuesday, December 4, 08:30-09:20

Tuesday, December 4	08:30-09:20	Venue: Lecture Hall
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Chair: Zhiqun CHENG

Group Photo, Tuesday, December 4, 09:20-9:50

Tuesday, December 4	09:20-09:50	Venue: Square of Science & Technology Museum 科技馆前广场
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Coffee Break, 09:50-10:20

Keynotes

Tuesday, December 4	10:20-12:00	Venue: Lecture Hall
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Chair: Jian WU

- 10:20** **Human-Centric Antennas**
Prof. Koichi Ito (IEEE AP-S President-Elect 2018, IEEE Life Fellow)
Chiba University, Japan
- 10:50** **Enhancement of Ridge Gap Waveguides for Millimeter-Wave Applications**
Prof. Ahmed A. Kishk (IEEE AP-S President 2017)
Concordia University, Canada
- 11:20** **Wave Chaos Modeling and Control in Electromagnetic Environments**
Dr. Gabriele Gradoni
University of Nottingham, UK

Tuesday, December 4

13:30-17:00

Venue: Lecture Hall

Chairs: Jun HU, Lixin GUO

- 13:30** **Recent Advances in Active Space Experiments Using Ground-based High Power Radio Waves**
Prof. Wayne A. Scales
Virginia Tech, USA
- 14:00** **Non-Foster Microwave Absorbers**
Prof. Zhongxiang Shen
Nanyang Technological University, Singapore
- 14:30** **Development of Magneto-Electric Dipole Antennas for Millimetre-Wave and Terahertz Applications**
Prof. Kwai Man Luk (Fellow of the Royal Academy of Engineering)
City University of Hong Kong, China
- 15:00** **Coffee Break**
- 15:30** **Research on FAST Reflector and Focus Cabin**
Prof. Yuanpeng Zheng
The 54th Research Institute of China Electronics Technology Group Corporation, China
- 16:00** **The Key Technology and Development of Square Kilometre Array Dish**
Prof. Biao Du
The 54th Research Institute of China Electronics Technology Group Corporation, China
- 16:30** **An introduction of International Meridian Circle Program**
Prof. Jian Wu
China Research Institute of Radiowave Propagation, China

Keynote: Human-Centric Antennas

Prof. Koichi Ito

IEEE AP-S President-Elect 2018, IEEE Life Fellow, Chiba University, Japan

Tuesday, December 4, 10:20-10:50

Venue: Lecture Hall

ABSTRACT

Recently, numerous wearable wireless devices have been widely used in our daily life. Also, various implantable wireless devices have been developed and become available for monitoring, stimulating or identification systems. Unlike conventional wireless devices, wearable or implantable wireless devices are used on or in the human body. In this sense, body-centric wireless communications (BCWCs) have become a very active and essential area of research. On the other hand, radio-frequency or microwave medical devices used for cancer treatment and surgical operation have completely different functions. However, they are used on or in the human body. In terms of antennas installed inside the devices, such medical devices have lots of similarities to BCWCs. To design properly and to make the best use of specific antennas for different wireless devices, it is important to treat them as human-centric antennas. In general, the problem of an antenna placed on or in the human body can be treated as a so-called “boundary value problem” where the human body can be considered as a complex lossy medium. However, in reality and simplicity, an individual case is almost treated appropriately in a specific manner by numerical simulation such as the FDTD technique. In this presentation, after brief introduction, a general concept of how to treat antennas and a specific approach to wearable antennas are overviewed. Then, a few examples of wearable and implantable antennas are introduced. Finally, some challenges of human-centric antennas are highlighted.



Biography: **Koichi Ito** received the B.S. and M.S. degrees from Chiba University, Japan, and the Ph.D degree from Tokyo Institute of Technology, Japan. He is currently a Professor Emeritus and Visiting Professor at the Center for Frontier Medical Engineering, Chiba University. From 2005 to 2009, he was Deputy Vice-President for Research, Chiba University. From 2009 to 2015, he served as Director of the Center for Frontier Medical Engineering, Chiba University. His main research interests include small antennas for mobile communications, microwave antennas for medical applications such as cancer treatment, research on evaluation of the interaction between electromagnetic fields and the human body by use of phantoms, and antenna systems for body-centric wireless communications. Dr. Ito is a Life Fellow of the IEEE and a Fellow of the Institute of Electronics, Information and Communication Engineers (IEICE), Japan. He served as Chair of the Technical Committee on Human Phantoms for Electromagnetics, IEICE, from 1998 to 2006, Chair of the IEEE AP-S Japan Chapter from 2001 to 2002, an Associate Editor for the *IEEE Transactions on Antennas and Propagation* from 2004 to 2010, an AdCom member for the IEEE AP-S from 2007 to 2009, a Distinguished Lecturer for the

IEEE AP-S from 2007 to 2011, General Chair of IEEE iWAT2008, a member of the Board of Directors, the Bioelectromagnetics Society (BEMS) from 2010 to 2013, a Councilor to the Asian Society of Hyperthermic Oncology (ASHO) from 2010 to 2018, General Chair of ISAP2012, and a Delegate to the European Association on Antennas and Propagation (EurAAP) from 2012 to 2017. He currently serves as a Vice-President of the Japanese Society for Thermal Medicine (JSTM), Vice-Chair of Commission K, URSI (International Union of Radio Science), and as IEEE AP-S President-Elect for 2018.

Keynote: Enhancement of Ridge Gap Waveguides for Millimeter-Wave Applications

Prof. Ahmed A. Kishk

IEEE AP-S President 2017, Concordia University, Canada

Tuesday, December 4, 10:50-11:20

Venue: Lecture Hall

ABSTRACT

Ridge gap waveguide (RGW) technology has recently found increasing attention in millimeter wave applications. The guiding structure concept does not require electrical contacts between its parts. It supports quasi-TEM modes with the potential to propagate in an air medium. The guiding line is based on the parallel plate waveguide concept, but is not necessarily a straight line, surrounded by textured surfaces that are designed to suppress wave propagation propagating away from the guide. In its ideal form, the wave suppressing region consists of an electric conducting plate parallel to a magnetic conducting surface separated by a gap less than a quarter of a wavelength. As the magnetic conductor surface does not exist in nature, it is realized artificially by a texture of a periodic structure that is designed to have a high surface impedance. The high surface impedance is realized by a bed of conducting nails or a bed of printed mushrooms. The advantages of this structure are in its suitability for millimeter wave applications as it is self-packaged with no radiation losses. Such a guiding structure has around 1:2 bandwidth that can also be enhanced under some conditions. As this is a new guiding structure, when tested, it requires the design of transitions to the standard technologies such as printed circuits, coaxial lines, and waveguides. In addition, for the RGW to be used in microwave circuit's different passive components must be designed such as power dividers and couplers. The RGW is used to design efficient filters and diplexers as well as cooperate feeding networks, and beamforming networks for antenna arrays. Recently, enhancement and new applications of the printed RGW are developed. These applications will be presented by showing different examples at millimeter-wave frequencies that make it suitable for 5G applications.



Biography: **Ahmed A. Kishk** received the BS degree in Electronic and Communication Engineering from Cairo University, Cairo, Egypt, in 1977, and BSc. in Applied Mathematics from Ain-Shams University, Cairo, Egypt, in 1980. In 1981, he joined the Department of Electrical Engineering, University of Manitoba, Winnipeg, Canada, where he obtained his M. Eng. and Ph.D. degrees in 1983 and 1986, respectively. From 1977 to 1981, he was a research assistant and an instructor at the Faculty of Engineering, Cairo University. From 1981 to 1985, he was a research assistant at the Department of Electrical Engineering, University of Manitoba. From December 1985 to August 1986, he was a research associate fellow at the same department. In 1986, he joined the Department of Electrical Engineering, University of Mississippi, as an Assistant Professor. He was on sabbatical leave at Chalmers University of Technology, Sweden during the

1994-1995 and 2009-2010 academic years. He was a Professor at the University of Mississippi (1995-2011). He was the director of the *Center for Applied Electromagnetic System Research (CAESR)* during the period, 2010-2011. Currently, he is a Professor at Concordia University, Montréal, Québec, Canada (since 2011) as Tier 1 Canada Research Chair in Advanced Antenna Systems. He was an Associate Editor of *Antennas & Propagation Magazine* from 1990 to 1993. He is a distinguished lecturer for the Antennas and Propagation Society (2013-2015). He was an Editor of *Antennas & Propagation Magazine* (1993-2014). He was a Co-editor of the special issue, “Advances in the Application of the Method of Moments to Electromagnetic Scattering Problems,” in the *ACES Journal*. He was also an editor of the *ACES Journal* during 1997. He was an Editor-in-Chief of the *ACES Journal* from 1998 to 2001. He was the chair of Physics and Engineering Division of the *Mississippi Academy of Science* (2001-2002). He was a Guest Editor of the special issue on artificial magnetic conductors, soft/hard surfaces, and other complex surfaces, in the *IEEE Transactions on Antennas and Propagation*, January 2005. He was a technical program committee member for several international conferences. He was a member of the AP AdCom (2013-2015) and the 2017 AP-S president. His research interest includes the areas of millimeter wave antennas for 5G applications, analog beamforming network, dielectric resonator antennas, microstrip antennas, small antennas, microwave sensors, RFID antennas for readers and tags, multi-function antennas, microwave circuits, EBG, artificial magnetic conductors, soft and hard surfaces, phased array antennas, and computer-aided design for antennas, reflect/transmit array, wearable antennas, and feeds for parabolic reflectors. He has published over 325-refereed journal articles and 450 conference papers. He is a co-author of four books and several book chapters and the editor of three books. He offered several short courses in international conferences. Dr. Kishk and his students received several awards. Dr. Kishk won the 1995 and 2006 outstanding paper awards for papers published in the *Applied Computational Electromagnetic Society Journal*. He received the 1997 Outstanding Engineering Educator Award from Memphis section of the IEEE. He received the Outstanding Engineering Faculty Member of the Year in 1998 and 2009, Faculty research award for outstanding performance in research in 2001 and 2005. He received the Award of Distinguished Technical Communication for the entry of IEEE Antennas and Propagation Magazine, 2001. He also received The Valued Contribution Award for outstanding Invited Presentation, “EM Modeling of Surfaces with STOP or GO Characteristics – Artificial Magnetic Conductors and Soft and Hard Surfaces” from the Applied Computational Electromagnetic Society. He received the Microwave Theory and Techniques Society, Microwave Prize 2004. He received 2013 *Chen-To Tai Distinguished Educator Award* of the IEEE Antennas and Propagation Society. In recognition "*For contributions and continuous improvements to teaching and research to prepare students for future careers in antennas and microwave circuits,*" Kishk is a Fellow of IEEE since 1998, Fellow of *Electromagnetic Academy*, and a Fellow of the *Applied Computational Electromagnetics Society (ACES)*. He is a member of Antennas and Propagation Society, Microwave Theory and Techniques, Sigma Xi Society, U.S. National Committee of International Union of Radio Science (*URSI*) Commission B, Phi Kappa Phi Society, Electromagnetic Compatibility, and Applied Computational Electromagnetics Society.

Keynote: Wave Chaos Modeling and Control in Electromagnetic Environments

Dr. Gabriele Gradoni

University of Nottingham, UK

Tuesday, December 4, 11:20-11:50

Venue: Lecture Hall

ABSTRACT

The propagation of waves through real-life electromagnetic environments, e.g., structures, channels and media, involves multiple components and space-time scales. The modeling of high frequency fields poses computational challenges when the environment is large and irregular. A statistical model, the random coupling model, which describes the high-frequency excitation of irregular environments, is derived and applied to cavity problems of practical interest. The derivation is outlined following the wave chaos theory paradigm, which brings together semiclassical analysis and random matrix theory. In a linear eigenvalue problem, semiclassics is used to replace exact eigenfunctions with a local superposition of random plane waves, while random matrix theory is used to replace the exact spectrum of resonances with universal distributions of eigenvalues. A few advanced applications are discussed in the context of wave control of energy diffusion and focusing in dynamic confined environments. Results are relevant in wireless channels in telecommunications, wavefront shaping in imaging and radars, reverberation chambers in electromagnetic compatibility, and microwave applicators in material processing engineering.



Biography: **Gabriele Gradoni** received the Ph.D. degree in electromagnetics from the Università Politecnica delle Marche, Ancona, Italy, in 2010. In 2008, he was a Visiting Researcher with the Time, Quantum, and Electromagnetics Team, National Physical Laboratory, Teddington, U.K.. From 2010 to 2013, he has been a Research Associate with the Institute for Research in Electronics and Applied Physics, University of Maryland, College Park, USA. From 2013 to 2016, he was a Research Fellow with the School of Mathematical Sciences, University of Nottingham, U.K. Since 2016, he has been an Assistant Professor of mathematics and electrical engineering with the University of Nottingham. In 2017 he has been a Visiting Professor at the Institute of Physics of the Université de la Côte d'Azur, Nice, France. His research activity is in probabilistic and asymptotics methods for propagation in complex wave systems, wave chaos, and MIMO wireless systems. He is a member of the American Physical Society, and the Italian Electromagnetics Society. He was a recipient of the URSI Commission B Young Scientist Award in 2010 and 2016 and the Gaetano Latmiral Prize in 2015. Since 2014, he has been the URSI Commission E Early Career Representative.

Keynote: Recent Advances in Active Space Experiments Using Ground-based High Power Radio Waves

Prof. Wayne A. Scales

Virginia Tech, USA

Tuesday, December 4, 13:30-14:00

Venue: Lecture Hall

ABSTRACT

The field of ionospheric modification research has seen a number of exciting new advances in recent years. Ground-based experiments involving the interaction of high power high frequency HF radiowaves with the ionosphere have led to substantial understanding of nonlinear plasma physics related phenomena involving plasma waves, instabilities, irregularities, and turbulence for many decades now. Due to the higher transmit power and refined diagnostic instrumentation in recent years, a renaissance in several well established research areas as well as breakthroughs into new areas rich in basic plasma physics have occurred. This presentation will focus on over-viewing recent progress in two specific areas within ionospheric modification research. The first is Stimulated Electromagnetic Emissions SEE. SEE is secondary radiation produced by parametric decay instabilities (PDI) during ionospheric interactions with high power radiowaves. Although a substantial research agenda for several decades now, a rejuvenation has occurred with discoveries of new PDI mechanisms, some of which have direct alignment with those during laser plasma interactions. Also of critical importance are the associated new diagnostic capabilities including possible detection of proton precipitation during active geomagnetic conditions, triggering mechanisms for artificial ionization layers, sporadic E layer formation, and detection of minority ion species at lower ionospheric altitudes, and generation of GNSS scintillations. The second research agenda to be discussed involves modulation of turbulence associated with the earth's natural mesospheric dusty (or complex) plasma using high power radiowaves. In recent years, ability to modulate such turbulence has been shown to be a potential diagnostic for the charged dust particles. Also basic charging and diffusion processes which are of fundamental importance to the formation and evolution of the mesospheric dusty plasma can be studied. This overview of these two emerging topics within ionospheric modification research will provide discussions on experimental observations, theory, and development of new computational models.



Biography: **Wayne A. Scales** received the B.S. degree in Honors Electrical Engineering and the M.S. degree in both Electrical Engineering and Applied Mathematics from Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA, USA, and the Ph.D. degree in Electrical Engineering and Applied Physics from Cornell University, Ithaca, NY, USA. He was awarded the American Society of Engineering Education (ASEE) Postdoctoral Fellowship to pursue research at the United States Naval Research

Laboratory Space Plasma Physics Branch in Washington, DC. He is the professor of Bradley department of Electrical and Computer Engineering, J. Byron Maupin Professor of Engineering and affiliate professor of Aerospace and Ocean Engineering at Virginia Tech. He is the founding Director of the Center for Space Science and Engineering Research at Virginia Tech and co-director of interdisciplinary graduate education program in remote sensing. He also serves as Special Assistant to the Dean of Engineering. His current research interests include waves, instabilities, and irregularities in space plasmas, processes in dusty near-earth space plasmas, GNSS ionospheric remote sensing techniques, computational methods for investigating space plasma turbulence, and active space experiments. He currently serves as member-at-large of the United States National Committee of URSI and the Issues and Program Committee of the Universities Space Research Association (USRA). He has published more than 100 journal papers and obtained several education awards at Virginia Tech.

Keynote: Non-Foster Microwave Absorbers

Prof. Zhongxiang Shen

Nanyang Technological University, Singapore

Tuesday, December 4, 14:00-14:30

Venue: Lecture Hall

ABSTRACT

In this talk, I will describe a new concept for the design of thin and wideband microwave absorbers. The key concept is based on non-Foster impedance matching using negative inductors that are realized by active components. Such active absorbers consist of a grounded dielectric sheet coated with a non-Foster metasurface. The non-Foster active metasurface can provide a negatively-inductive reactance that can counteract with the positively-inductive reactance originating from the conductor-backed thin substrate over an ultra-wide band. Practical design considerations and co-simulation modeling method will be proposed for the efficient implementation of the actual structures. Based on the concept of non-Foster active metasurface, we design several non-Foster absorbers operating over the frequency range from 100 MHz to 1000 MHz, while retaining an extremely low profile. Experimental results will also be presented to demonstrate the superior performance of non-Foster microwave absorbers.



Biography: **Zhongxiang Shen** received the B. Eng. degree from the University of Electronic Science and Technology of China, Chengdu, China, in 1987, the M. S. degree from Southeast University, Nanjing, in 1990, and the PhD degree from the University of Waterloo, Canada, in 1997, all in electrical engineering. From 1990 to 1994, he was with Nanjing University of Aeronautics and Astronautics, China. He was with Com Dev Ltd., Cambridge, Canada, as an Advanced Member of Technical Staff in 1997. He spent six months each in 1998, first with the Gordon McKay Laboratory, Harvard University, Cambridge, MA, and then with the Radiation Laboratory, the University of Michigan, Ann Arbor, MI, as a Postdoctoral Fellow. In early 1999, he joined Nanyang Technological University, Singapore, as an Assistant Professor, where he is currently a Full Professor in the School of Electrical and Electronic Engineering. Dr. Shen served as the Chair of the IEEE MTT/AP Singapore Chapter in 2009. From Jan. 2010 to Aug. 2014, he was the Chair of IEEE AP-S Chapter Activities Committee. He is currently the Secretary of IEEE AP-S and an Associate Editor of the *IEEE Transactions on Antennas and Propagation*. Dr. Shen is an IEEE Fellow. His research interests include the design of small and planar antennas for various wireless communication systems, analysis and design of frequency-selective structures and absorbers. He has authored more than 180 journal papers (among them 100 were published in IEEE Journals) and also presented more than 160 conference papers.

Keynote: Development of Magneto-Electric Dipole Antennas for Millimetre-Wave and Terahertz Applications

Prof. Kwai Man Luk

Fellow of the Royal Academy of Engineering, City University of Hong Kong, China

Tuesday, December 4, 14:30-15:00

Venue: Lecture Hall

ABSTRACT

Wideband directed dipole antennas are simple in structure but their radiation patterns vary substantially over their operating frequency range. Microstrip patch antennas are low in profile but narrow in bandwidth. Although various methods are available to increase the bandwidth of this classical antenna, the radiation patterns and gains of wideband patch antennas fluctuate undesirably over the operating frequencies. In 2006, a new class of wideband antennas designated as the magneto-electric dipoles was proposed. These antennas were designed based on the complementary antenna concept. The basic structure consists of a planar electric dipole and a shorted quarter-wave patch antenna, with an L-shaped probe feed. These novel antenna elements have many attractive features, including wide impedance bandwidth, low cross polarization, low back radiation, nearly identical radiation pattern in the two principal planes, and stable radiation pattern and antenna gain over the operating frequency range. They can be designed with linear polarization, circular polarization or dual polarization. Magneto-electric dipoles have been successfully developed for applications in lower microwave frequencies. The structures, however, cannot be simply scaled up for applications in higher microwave frequency bands which will be occupied by future 5G mobile systems. In this talk, the latest development of the substrate-integrated magneto-electric dipoles and arrays operated at the millimeter-wave and terahertz bands will be presented, with emphasis on different feeding methods for different applications.



Biography: **Kwai Man Luk**, a Fellow of the Royal Academy of Engineering and a Fellow of the IEEE, is currently Chair Professor of Electronic Engineering at the City University of Hong Kong. His recent research interests include design of wideband patch antennas, dielectric resonator antennas, microwave and antenna measurements, and millimeter wave technologies. He is the author of 4 books, 12 research book chapters, over 360 journal papers and 260 conference papers. He was awarded 9 US patents and over 10 PRC patents on the designs of various printed antennas. He is a Fellow of IEEE, IET, CIE, FEA and HKIE. He received the Japan Microwave Prize at the

Asia Pacific Microwave Conference in 1994, the Applied Research Excellence Award of City University of Hong Kong in 2001, the Croucher Award of Hong Kong in 2003, the Best Student Paper Awards (with his students) at the Asia Pacific Microwave Conferences in 2005 and 2006, and the Best Paper Awards at the International Symposium on Antennas and Propagation in 2008 and at the IEEE 4th Asia Pacific Conference on Antennas and Propagation in 2015. He was awarded the State Technological Invention Award of China (2nd

Honor) in January 2012. He is the recipient of the 2017 IEEE APS John Kraus Antenna Award. He was the Chief Guest Editor of a special issue on “Antennas in Wireless Communications” for Proceedings of the IEEE, published in July 2012. He is a deputy editor-in-chief of PIERs journals, an associate editor of IET Microwaves, Antennas and Propagation, and a guest editor of Applied Science.

Keynote: Research on FAST Reflector and Focus Cabin

Prof. Yuanpeng Zheng

The 54th Research Institute of China Electronics Technology Group Corporation, China

Tuesday, December 4, 15:30-16:00

Venue: Lecture Hall

ABSTRACT

The reflector surface accuracy and feed position deviation are important factors affecting the efficiency of the five hundred-meter aperture spherical radio telescope (FAST). The reflector is composed with 4450 panels supported by cable net, in which, nodes are connected with actuators to realize panels alignment. The panels are triangular and quadrilateral with a side length of about 12m, and its precision requirement is 2mm. There are more than 400 types of panels for the different size. The aluminum grid structure is adopted to reduce the weight and realize quick assembly. The feeds are mounted in focus cabin which is supported and driven by six cables. The cabin weighs 30 tons, equipped with a two-stage drive mechanisms to adjust feeds in real time to ensure its position deviation is less than 10mm. The report focuses on the research of reflector and focus cabin, construction process and key technical solutions are described, and the development of large radio telescope is also reported.



Biography: **Yuanpeng Zheng** received the B.S and M.S. degrees from the Dalian University of Technology, Dalian, China. He is currently the deputy chief engineer of CETC54 (The 54th Research Institute of China Electronics Technology Group Corporation). He has been engaged in the research on the mechanical design and manufacturing process of reflector antennas for many years. He participated in the design and demonstration of FAST and served as the chief designer of the reflector panel. He also participated in the design and construction of Miyun 50m antenna, Shanghai 65m telescope and SKA dish antenna. He received 2 awards in National

Science and Technology Progress.

Keynote: The Key Technology and Development of Square Kilometre Array Dish

Prof. Biao Du

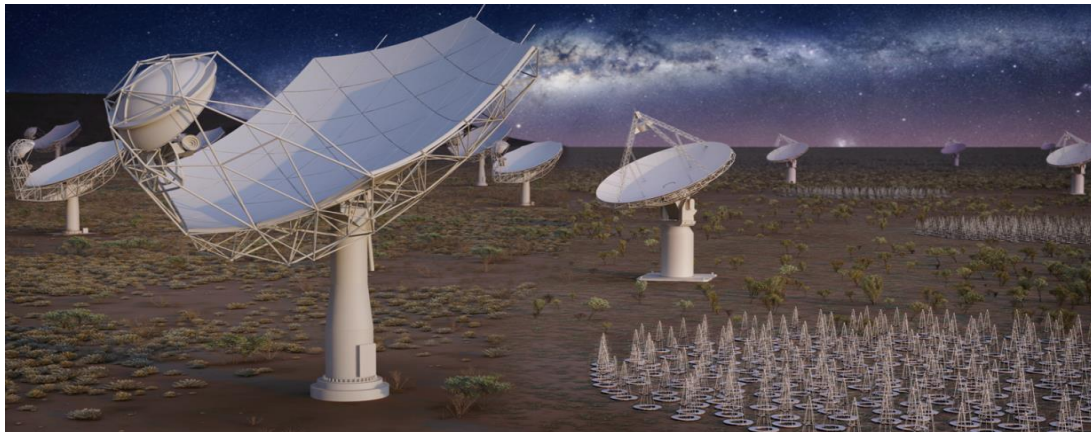
The 54th Research Institute of China Electronics Technology Group Corporation, China

Tuesday, December 4, 16:00-16:30

Venue: Lecture Hall

ABSTRACT

The Square Kilometre Array (SKA) overview is firstly presented, including what is the SKA? SKA science goals, SKA sites, operating frequency range, schedule, cost, performance, challenge, etc.. Then, the key technologies of the SKA dish are discussed. The optical and feed design, structural design, FEA results and the calculated efficiency, error beam of dish are introduced in details. Finally, SKA dish prototype R&D and latest progress are given.



Biography: **Biao Du** received the B.S. degree from the Xidian University, Xi'an, China, in 1983, and the M.S. degree from CETC 54 (The 54th institute of China Electronics Technology Group Cooperation), Shijiazhuang, in 1987, and the Ph.D. degree from Shanghai University, Shanghai, China, in 1996. From 1987 to 1995, he has served as an Engineer in the Antenna Servo Department, CETC 54. From 1996 to 1998, he worked as a senior engineer. From 1999 to 2000, he was a visiting scholar in the Department of Electronic Engineering, City University of Hong Kong. Currently, he is a professor, chair expert and deputy chief engineer of CETC 54. He is the chief designer of Shanghai 65m Tian Ma radio telescope antenna and Square Kilometre Array (SKA) Dish. His research interests are in satellite communication antennas, radio telescope antennas, corrugated horns, ultra-wideband feeds, phased array antennas, metamaterial antennas, etc.. Dr. Du received the Bao Gang Education Award for the excellent students in 1995. He obtained the special allowance of the State Council of China for his outstanding contribution in natural science in 2016. He also received five awards in Science and Technology Progress. He has published more than 60 papers. He has got more than 20 patents. He is a senior member of Chinese Institute of Electronics (CIE).

Keynote: An introduction of International Meridian Circle Program

Prof. Jian Wu

China Research Institute of Radiowave Propagation, China

Tuesday, December 4, 16:30-17:00

Venue: Lecture Hall

ABSTRACT

The space weather event, earthquake and extreme climate are the serious natural disasters happening frequently nowadays. To well understand the underlying mechanisms, the complete physical images of energy input and transport process from the sun and interplanetary field to the magnetosphere, ionosphere, mid-and-upper atmosphere, lower atmosphere, lithosphere and etc has to be set up. Thus we propose the concept of International Meridian Circle Program (IMCP). The Meridian Circle is the only closed circle on land, which is important channel for the evolution of space physical events. The general objectives of IMCP includes: 1. To develop cooperative monitoring capabilities along the "120 °E+ 60 °W" international Meridian Circle on the earth; 2. To establish a platform for data/information sharing and personnel training, and a series of regional and scientific centers to form international cooperation organizations and coordination mechanisms. 3. To promote multidisciplinary and interdisciplinary research on global behavior and multi-layer coupling of geospatial systems, in order to enhance the capacity to jointly deal with geophysical, extreme climatic and space weather disasters. To achieve this goal, the IMCP organize its members and relevant scientific research institutions to carry out long-term jointly experimental observation, scientific research, academic exchanges, data cloud services, education and personnel training, and thus to jointly promote the development of geospatial system science. Finally, the progress in IMCP is presented briefly.



Biography: **Jian Wu** PhD. of Université Pierre et Marie Curie (UPMC). Professor, doctoral supervisor, director general of China Research Institute of Radiowave Propagation (CRIRP), director of National Laboratory of Electromagnetic Environment (LEME). He has engaged in theoretical and experimental research in ionospheric physics, space weather monitoring technology, radio wave propagation for 30 years. He has published over 100 academic articles, and has 30 invention patents. He is one of the main profounders and principals of China's great scientific project, the "Meridian Project". He has led the construction of the first ISR in

China, which is a major infrastructure for ionospheric science and space debris research. He put forward the development strategy, general framework and technical route of new concepts and technologies for active ionospheric experiments in China. With his efforts, China was successfully promoted to join the European Incoherent Scattering Association (EISCAT) as a Council member and he was a former rotating chairman. He is China's representative of the International Radio Science Union (URSI) Council and chairman of the URSI China Committee, hosted the 31st URSI session held in China.

Presentation

Wednesday, December 5 A.M.

Wednesday, December 5 A.M.	08:30-12:00	Venue: Room A
Session A1	Antennas & Related Topics	

Session Chairs: Jiusheng Li, Dasheng Cui

08:30-10:00

AO-01 ID:11

Design and Implementation of a X-band Dual-polarization Phased-array Antenna

Wenjing Wu

Hangzhou Dianzi University

AO-02 ID:12

A Novel Shared Aperture Dual-Band Slot Array

Liang Shi, Zhiguo Gao, Zhao Wang

Institute No.25 of the Second Academy CASIC

AO-03 ID:25

A 1.95-19.35 GHz Quad-Ridge Horn Antenna with Stable Unidirectional Radiation Patterns

Lei Chang, Linglu Chen, Jianqiang Zhang, Dan Li

No.36 Research Institute of CETC

AO-04 ID:32

Fast-Shaping of Reflector Antenna Illuminated by Quasi-Actual Feed

Xinhua Yu, Jun Wang, Xingqiang Huang, Guiyu Sun

Key Laboratory of Cognitive Radio and Information Processing, Guilin University of Electronic Technology

AO-05 ID:46

Jeans Textile Antenna for Smart Wearable Antenna

Kaihong Wang, Jiusheng Li

Centre for THz Research of China Jiliang University

AO-06 ID: 51

220GHz High Gain On-chip Antenna Based on 180nm CMOS

Jiaming Yang, Dasheng Cui, Zhengzhi Ding, Xin Lv

Beijing Institute of Technology

10:00-10:30 Coffee Break

10:30-12:00

AO-07 ID:53

Discrete Dipole Approximation for Predicting Far-Field Pattern of Coding Metasurface Antennas

Shangyang Li

Key Laboratory of Electromagnetic Waves Information, Fudan University

AO-08 ID:62

High Power Metamaterial Based Dielectric Reflectarray Antenna

Qiwen Qiang, Binke Huang, Meng Cao

Xi'an Jiaotong University

AO-09 ID:70

An UWB Antenna with Broad Beamwidth and Dual-circular-polarization Performance

Hao Wang, Junzhe Yu, Yan Wang, Shuanglong Quan, Dalong Xu

Nanjing University of Science and Technology

AO-10 ID:72

A novel Frequency Reconfigurable Antenna Based on Triangular Shaped Fractal Parasitic Elements

Zucun Zhang, YuanJiang Zhu, JinFeng Wang, Lu Xu

723 Research Institute of CSIC

AO-11 ID:76

Research on method of extraction elevation angle from backscatter ionogram

Caicheng Hua, Shikai Wang, Chengfeng Zhang

China Research Institute of Radiowave Propagation

AO-12 ID:78

Design of A Broadband Vertically Polarized Omnidirectional Array Based on Vivaldi Antenna

Qixu Yang, Yuan Yao, Zhijiao Chen, Limei Qi, Junshen Yu, Xiaodong Chen

Beijing University of Posts and Telecommunications

Wednesday, December 5 A.M.	08:30-12:00	Venue: Room B
Session B1	Propagation & Related Topics	

Session Chairs: Lixin Guo, Xiaotong Guo

08:30-10:00

BO-01 ID:8

Multiple Random Phase-Screen Simulation of Scintillation Effect of Bessel-Gaussian Beam in Ocean Turbulence

Ridong Sun, Lixin Guo, Mingjian Cheng, Jiangting Li

Xidian University

BO-02 ID:17

Polarimetric SAR Image Classification: from Polarimetry to Deep Learning

Haipeng Wang, Feng Xu, Yaqiu Jin

Fudan University

BO-03 ID:23

A Framework of Integrated Service System of Ionospheric Scintillation Information

Hongbo Zhang, Yumei Liu, Liang Xu

China Research Institute of Radiowave Propagation

BO-04 ID:24

CPR Modeling for Mini-RF Data Study on Lunar PSR Region

Yaqiu Jin, Niutao Liu

Fudan University

BO-05 ID:28

A Study on Evaluation Detection Performance of HF Surface Wave Radar

Wenling Guo, Xue Li, Yuesong Wang, Xiaotong Guo

China Research Institute of Radiowave Propagation

BO-06 ID:30

Study on methods for suppression of Ionospheric Amplitude Contamination on OTHR

Xue Li, Jining Li, Xiaotong Guo, Binbin Hu

China Research Institute of Radiowave Propagation

10:00-10:30 Coffee Break

10:30-12:00

BO-07 ID:33

Comparative Study on Rainfall Rate Digital Map in China Land Area

Leke Lin, Zhenwei Zhao, Yumei Liu, Ranran Hu, Xin Zhang

China Research Institute of Radiowave Propagation

BO-08 ID:42

Compact tri-band BPF based on embedded asymmetric T-shape stub-loaded resonators

Kaihong Wang, Jiusheng Li

Centre for THz Research of China Jiliang University

BO-09 ID:44

Diurnal Variations of Ionospheric Electron and Ion Temperature with Altitude measured by Qujing Incoherent Scatter Radar

Zonghua Ding, Zhimei Tang, Ning Wang, Liandong Dai, Song Yang, Zhengwen Xu

China Research Institute of Radiowave Propagation

BO-10 ID:49

Comparison of ELF/VLF radiation excitation by different modes in EISCAT modulation heating experiment

Jutao Yang, Qingliang Li, Jianguo Wang, Guanglin Ma, Shuji Hao

School of Electronic and Information Engineering, Xi'an Jiaotong University

BO-11 ID:50

Terahertz switch based on Otto configuration using spoof surface plasmon polariton

Shaohe Li, Jiusheng Li

Centre for THz Research, China Jiliang University

BO-12 ID:66

Study of spatial characteristics of artificial field aligned scattering

Libin Lv, Zhensen Wu, Jutao Yang, Qingliang Li, Shuji Hao, Guanglin Ma

School of Physics and Optoelectronic Engineering, Xidian University

Wednesday, December 5 A.M.	08:30-12:00	Venue: Room C
Session C1	EM Theory & Related Topics	

Session Chairs: Anxue Zhang, Zengrui Li

08:30-10:00

CO-01 ID:35

Multiple Combinational Algorithm to Adaptively Track and Detect Measurement While Drilling Electromagnetic Wave Signal

Fukai Li, Zhiqiang Yang, Yehuo Fan, Chun Hao

China Research Institute of Radiowave Propagation

CO-02 ID:41

Analysis Method of Circular Waveguide TM₀₁ Mode Converter on the Basis of Microwave Network

Xinhong Cui, Xiaolong Liu, Gang Wang, Xiaojun Meng, Hu Ye

CO-03 ID:45

3-bit Polarization Insensitive Reflective Metasurface for RCS Reduction

Saifullah Yasir, Fuheng Zhang, Guomin Yang, Feng Xu

Key Lab for Information Science of EMW, Fudan University

CO-04 ID:54

Novel Microstrip Antenna Array with wideband Radar Cross Section Reduction

Chunhui Mou, Anxue Zhang, Shuxi Gong

Xi'an Jiaotong University

CO-05 ID:63

A novel compact microstrip dual-band bandpass filter (BPF) using embedded SIRs for WLAN/WiMax application

Kaihong Wang, Jiusheng Li

Centre for THz Research of China Jiliang University

CO-06 ID:64

3-bit Programmable Reflective Metasurface

Saifullah Yasir, Fuheng Zhang, Guomin Yang, Feng Xu

Key Lab for Information Science of EMW, Fudan University

10:00-10:30 Coffee Break

10:30-12:00

CO-07 ID:65

Ultra-wideband and Polarization-insensitive RCS Reduction Digital Metasurface Designs

Chenyang Zhang, Jianxun Su, Zengrui Li

Communication University of China

CO-08 ID:68

Equivalent Circuit Extraction for Coaxial-to-Microstrip Transition Structure Using Response Surface Method

Xiaolai Li, Qingmian Wan, Guomin Yang, Yaqiu Jin

Key Laboratory for Information Science of Electromagnetic Waves, Fudan University

CO-09 ID:77

An array antenna calibration method based on GNSS signal

Teng Gao, Xiaofan Jin, Lijun Wang

No.36 Research Institute of CETC

CO-10 ID:107

DDS-PLL Phased Source for Ka-Band Beam Control Phased Array Receiver

Yinghao Zhang, Liu'an Gao, Longying Qi, Wen Wu

No.724 Research Institute of China Shipbuilding Industry Corporation

CO-11 ID:115

Numerical Analysis on the Emissivity Determination of Microwave Calibration Targets by Scattering Measurements

Ming Jin, Bin Li, Ming Bai, Zhiping Li

Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences

CO-12 ID:141

Metasurface Capable of Polarization Conversion and RCS Reduction

Kun Fu, Jiayuan Yin, Lixin Guo

Xidian University

Wednesday, December 5 A.M.	08:30-12:00	Venue: Room D
Session D1	Computational Electromagnetics	

Session Chairs: Yumao Wu, Lixia Yang

08:30-10:00

DO-01 ID:14

Genetic Optimization of General Regression Neural Network Applied to Feature Extraction of Brillouin Scattering Spectrum in BOTDA Sensors

Weixin Kang, Hui Li, Yue Han

Harbin Engineering University

DO-02 ID:27

Individual Recognition of Communication Emitter Based on Deep Learning

Jie Xu, Weiguo Shen, Wei Wang

*Science and Technology on Communication Information Security Control Laboratory/
No.36 Research Institute of CETC*

DO-03 ID:58

An Efficient Domain Decomposition Method Using Phase Extracted Basis Functions

Kui Han, Yongpin Chen, Xiaofeng Que, Chonghua Fang

China Ship Development and Design Center

DO-04 ID:79

Radar Target Recognition Based on Polarization Invariant

Rui Zhang, Linxi Zhang, Yufei Wang, Yuchen Xie

School of Electronics and Information, Northwestern Polytechnical University

DO-05 ID:84

Research on Non-uniform Nested Grid FDTD Method Based on Ionospheric Zakharov Model

Jingjun Song, Lixia Yang

Jiangsu University

DO-06 ID:109

Fast Antenna Design Using Multi-Objective Evolutionary Algorithms and Artificial Neural Networks

Wenwen Qin, Jian Dong, Meng Wang, Yingjuan Li, Shan Wang

Central South University

10:00-10:30 Coffee Break

10:30-12:00

DO-07 ID:113

The Efficient High Frequency Solver for Calculating the Scattered Fields from the Electrically Large Scatterers

Nan Zhang, Anwen Wu, Yumao Wu, Yaqiu Jin

Fudan University

DO-08 ID:121

An adaptive ranging system based on reconfigurable technology

Zhiyi Lou, Xi Pan

Beijing Institute of Technology

DO-09 ID:137

Calculation of the Extinction Coefficient of Dipoles Cloud

Yanchun Zuo, Lixin Guo, Songhua Liu
Xidian University

DO-10 ID:139

Investigation on Electromagnetic Scattering from Multiple Objects above Rough Surface

Zelin Ren, Juan Li, Lixin Guo, Ke Li, Yanlan Pan
Xidian University

DO-11 ID:183

A Multi-Service QoS Guaranteed Scheduling Algorithm for TD-LTE 230 MHz Power Wireless Private Networks

Ping Ma, Yang Lu, Yabo Hou, Xiongwen Zhao, Lei Zhang, Hang Zhu
State Grid Shaoxing Electric Power Supply Company

DO-12 ID:208

Beam Simulation and Band-limited Matrix Decomposition for Fast Imaging of 1-D Random Rough Surface

Jing Yuan, Hongxia Ye
Fudan University

Wednesday, December 5 A.M.	08:30-12:00	Venue: Room E
Session S	Special Session	

Session Chairs: Haiyang Fu, Chen Zhou

08:30-10:00

SO-01 ID:120

Case study of ion line spectra during modulated PMSE condition

Safi Ullah, Hailong Li, Rauf Abdur, Lin Meng, Bin Wang, Maoyan Wang
University of Electronic Science and Technology of China

SO-02 ID:154

Kinetic modeling of stimulated electromagnetic emissions during ionospheric heating experiment

Haiyang Fu, Wayne A. Scales
Fudan University

SO-03 ID:217

Simulation study of the interaction between electromagnetic waves and ionosphere during parametric decay instability (PDI) process

Jing Chen, Yubo Yan, Qingliang Li, Guang Yuan, Shuji Hao, Haiqin Che
Ocean University of China

SO-04 ID:260

The statistic characteristics of HF Oblique Sounding Channel at mid and low latitude during ionospheric disturbance time

Feifei Wang, Yumei Liu, Shuji Sun
China Research Institute of Radiowave Propagation

SO-05 ID:277

Rocket-induced Daytime Midlatitude Plasma Depletions Observed by Swarm Constellation

Angang Tian, Yuhua Zou
Guilin University of Electronic Technology

SO-06 ID:283

Meridional Direction Features of Equatorial and Low-Latitude Plasma Depletions Observed by

Swarm satellites

Shihan Zhang, Yuhua Zou

Guilin University of Electronic Technology

10:00-10:30 Coffee Break

10:30-12:00

SO-07 ID:298

The Research Situation and Prospect on Artificial Ionospheric Modification of National University of Defense Technology HAO Research Group

Zhe Guo, Hanxian Fang, Huijuan Lyu

National University of Defense Technology

SO-08 ID:308

The Particles Releasing Process Using Injections for the Exploration of Active Space Experiment

Lei Li, Shoutian Zhao, Chao Han, Xiaoxia Lu, Mingming Chai, Jiawei Wang

State Key Laboratory of NBC Protection for Civilian

SO-09 ID:326

Aspect dependence of Parametric Instability Excitation by X-mode at EISCAT

Xiang Wang, Chen Zhou, Moran Liu, Ting Feng, Binbin Ni, Zhengyu Zhao

Wuhan University

SO-10 ID:378

The experimental results from SURA HF facility and CSES satellite

Xuemin Zhang, Vladimir Frolov, Shufan Zhao, Chen Zhou, Yalu Wang

Institute of Earthquake Forecasting, China Earthquake Administration

SO-11 ID:386

Investigation on Matching Conditions of Langmuir Parametric Instability in Ionospheric Heating

Ting Feng, Moran Liu, Xiang Wang, Chen Zhou

Wuhan University

SO-12 ID:387

A 2D Numerical Study of the Langmuir Parametric Instability in the Ionospheric Modification

Moran Liu, Ting Feng, Xiang Wang, Chen Zhou

Wuhan University

Wednesday, December 5 P.M.

Wednesday, December 5 P.M.	13:30-17:00	Venue: Room A
Session A2	Antennas & Related Topics	

Session Chairs: Anxue Zhang, Xiaofei Xu

13:30-15:00

AO-13 ID:87

Design of an S-Band Equilateral Triangular Patch Antenna (ETPA) on Mushroom Metamaterials in Compact Configuration

Xiao Deng, Xiaofei Xu, Yefang Wang

Shanghai University

AO-14 ID:96

A compact combined antenna for pulse radiation

Jiaqian Cui, Anxue Zhang

Xi'an Jiaotong University

AO-15 ID:97

Design of Ka-band High Integrated Array Antenna with Wide Beam Width for Security Inspection

Yi Liao

Southwest Electronic Technology Institute

AO-16 ID:102

Novel Leaky-wave Antenna using Finger-connected Interdigital Capacitor-based Composite Right/left-handed Transmission Line

Lin Geng, Wangming Wang, Peng Peng, Yawei Wang

Air Force Engineering University

AO-17 ID:104

Design of a W-band 3-bit Dual Linearly Polarized Transmit-array Antenna

Xiangyu Dong, Yu Xiao, Houjun Sun

Beijing Key Laboratory of Millimeter Wave and Terahertz Techniques

AO-18 ID:105

Millimeter-Wave Microstrip Comb-Line Antenna Array for Automotive Radar

Qingzhuo Zhang, Leilei Wang, Xu Zhang

Shanghai Radio Equipment Research Institute

15:00-15:30 Coffee Break

15:30-17:00

AO-19 ID:119

Low Profile SIW Cavity-Backed Magneto-Electric Dipole with Wide Beamwidth Radiation Patterns

Guanghua Duan, Fushun Zhang

Xidian University

AO-20 ID:132

A Novel Dual-Band Dual-Sense Circularly Polarized Slot Antenna Design

Chao Ni, Weijun Wu, Qifeng Liu, Feifei Lei

Radar and Signal Processing Laboratory, Electronic Information School, Wuhan University

AO-21 ID:143

Circular Antenna Array Synthesis Technique Including Mutual Coupling Using Unit-excitation Active Element Pattern

Tong Cui, Xiongzi Zhu, Jinling Zhang, Zhanqi Zheng

Beijing University of Posts and Telecommunications

AO-22 ID:145

A Novel Method for PD Measurement Using the Equipment Shell Slot as Sensing Antenna

Chenguang Sun, Hongfu Guo, Wenhao Hao

Xidian University

AO-23 ID:157

Design of a Wideband and Wide-Angle Scanning Tightly Coupled Dipole Array

Kangmin Yang, Liang Xu, Hui Zhang

Xidian University

AO-24 ID:163

A Compact Wide-Band Corrugated Horn for Satellite Communication

Xinhua Yu, Xingqiang Huang, Jun Wang, Guiyu Sun

Key Laboratory of Cognitive Radio and Information Processing, Guilin University of Electronic Technology

Wednesday, December 5 P.M.	13:30-17:00	Venue: Room B
Session B2	Propagation & Related Topics	

Session Chairs: Ligu Sun, Peng Liu

13:30-15:00

BO-13 ID:67

Study on Factors Influencing the Ionospheric Conductivity

Yunfan Peng, Jutao Yang, Wentao Wu, Ligu Sun

University of Science and Technology of China

BO-14 ID:74

Characteristics of GPS Ionospheric Scintillations over Sanya and Guilin

Yaqian Chen, Yuhua Zou

Guilin University of Electronic Technology

BO-15 ID:89

A RPCA and RANSAC Based Algorithm for Ship Wake Detection in SAR Images

Yuhuan Zhao, Xiao Han, Peng Liu

Fudan University

BO-16 ID:90

Propagation of Electromagnetic Wave in a Coaxial Gridded Hollow Cathode Dusty Plasma

Jieshu Jia, Ruilin Gao, Liangshuai Guo, Chengxun Yuan, Zhongxiang Zhou

Science and Technology on Electromagnetic Scattering Laboratory

BO-17 ID:106

Study on the Controlled Atmospheric Refractivity Fluctuation Impairing the Imaging Quality of the Heterodyne Detection Lidar

Muyu Hou

Xidian University

BO-18 ID:110

Zonal Variation Features of Low-Latitude Ionospheric Electron Density Observed by Swarm Constellation

Manyi Feng, Yuhua Zou

Guilin University of Electronic Technology

15:00-15:30 Coffee Break

15:30-17:00

BO-19 ID:111

Observations of Traveling Ionospheric Disturbances in the mid-latitudes using combined Ionosphere sounding

Peng Lou

Xidian University/China Research Institute of Radiowave Propagation

BO-20 ID:116

Diurnal Variations of Ionospheric Electron and Ion Temperature with Altitude measured by EISCAT Svalbard Radar

Zhimei Tang, Zonghua Ding

China Research Institute of Radiowave Propagation

BO-21 ID:152

Optimize and design of coupling antenna for TM021 resonant cavity

Xinsheng Yan

University of Science and Technology of China

BO-22 ID:159

Microwave technology used for plasma diagnostic in complicated situations

Jingfeng Yao, Zhi Yu, Hailu Wang, Zebin Li, Chengxun Yuan, Zhongxiang Zhou

Harbin Institute of Technology

BO-23 ID:161

Simulation of the metamaterial structure based on curved surface

Ding'e Wen, Bo Xiong, Leyu Deng

China Ship Development and Design Center

BO-24 ID:205

A study of tropospheric scattering model based on coherent source-induced atmospheric refractivity fluctuation

Xintong Zhang, Shuhong Gong, Yu Liu

School of Physics and Optoelectronic Engineering, Xidian University

Wednesday, December 5 P.M.	13:30-17:00	Venue: Room C
Session C2	EM Theory & Related Topics	

Session Chairs: Zhensen Wu, Xiaochun Liu

13:30-15:00

CO-13 ID:142

Research on Broadcast and Television Signal Power Detection System Based on Space Radiation

Qinglin Shi, Siqiao Dong, Lin Zhu, Guodong Lu

The State Radio Monitoring Center (The State Radio Spectrum Management Center)

CO-14 ID:151

High-Performance Unequal Power Splitter Based on Ferrite Cores

Hanping Fang, Xin Wei

Nanjing Research Institute of Electronics Technology

CO-15 ID:160

Effects of Druyvesteyn Distribution to Transmission Coefficients in Plasma

Jinming Li, Chengxun Yuan, Zhongxiang Zhou, A. A. Kudryavtsev, Xiaou Wang, Xiaodong Chen

Harbin Institute of Technology

CO-16 ID:172

The study of microwave scattering of anisotropic sea surface with the corrected Two-Scale model

Dawei Song, Xi Luo, She Shang, Jianxiao Wang, Dong Li, Xiaojun Li

National Key Laboratory of Science and Technology on Space Microwave

CO-17 ID:176

The Research on Life-signal Detection Based on Short-time Fourier Transform

Wenxia Ding

Dongguan University of Technology

CO-18 ID:191

The Method of Adaptive Gaussian Decomposition Based Recognition and Extraction of Scattering Mechanisms

Xinyi He, Guangde Tong, Wei Gao, Xiaolin Mi, Pengcheng Gao, Yuan Zhang
Science and Technology on Electromagnetic Scattering Laboratory

15:00-15:30 Coffee Break

15:30-17:00

CO-19 ID:202

Modeling of GPS Signal Propagation in Tropospheric Duct on Spherical Rough Sea Surface

Xi Wu, Zhensen Wu

School of physics and Optoelectronic Engineering, Xidian University

CO-20 ID:206

Scattering verification and imaging of vegetation and its components

Fengli Xue, Feng Xu

Fudan University

CO-21 ID:210

Design of 1.9GHz-2.6GHz Microstrip Circulator Based on Ferrite Material

Tianqi Hao, Zhuangli Dong, Qiao Huang

Nanjing University of Posts and Telecommunications

CO-22 ID:228

Reduced-order modeling methods of electromagnetic wave propagation in magnetized plasmas

Yangyang Zhang, Haiyang Fu, Bing Xiong

Fudan University

CO-23 ID:261

Broadband Terahertz linear-to-circular polarization converter based on metasurface

Congcong Shi

Institute of Light wave Technology, Beijing Jiaotong University

CO-24 ID:282

Effect of Cylindrical and Spherical Conformation on Transmission Characteristics of FSS

Qian Wang, Yan Tong, Yan Zhang, Jinhao Wang, Xiaochun Liu, Xiuzhu Ye

The Research Institute for Special Structures of Aeronautical Composite AVIC

Wednesday, December 5 P.M.	13:30-17:00	Venue: Room D
Session D2	Computational Electromagnetics	

Session Chairs: Wenyan Yin, Lixin Guo

13:30-15:00

DO-13 ID:221

Analysis of Bistatic Scattering Characteristics of Vegetation in Clusters

Junxin Xiao, Zhensen Wu

School of physics and Optoelectronic Engineering, Xidian University

DO-14 ID:230

C-Band ISAR Imaging for the Precision Expandable Radar Calibration Sphere

Yun Sui, Haiyang Fu, Feng Xu

Fudan University

DO-15 ID:249

Analytical Derivation of the Ellipsoid Conformal PML for Electromagnetic simulations

Qian Yang, Bing Wei, Shitian Zhang

Xidian University

DO-16 ID:302

Improved SBR Method for Backward Scattering of Ship Target Under Shallow Sea Background

Wanli Xu, Lixin Guo, Shuirong Chai

Xidian University

DO-17 ID:345

Parallel Computing Graphene Frequency Selective Surface (GFSS) with Large Finite Array Using HIE-FDTD Method on High Performance Computer

Tielun Hu, Wenyan Yin, Yazhou Chen, Xianfeng Bao, Zhenguo Zhao

Zhejiang University

DO-18 ID:359

Doppler Spectrum of Backscattered Field From Time-Varying Sea With a Low-Flying Small Target Above It

P. J. Yang, J. Kang, R. Wu, X. C. Ren, Y. Zhao, Y. Q. Zhang

Yanan University

15:00-15:30 Coffee Break

15:30-17:00

DO-19 ID:362

Bistatic Radar Cross Section Prediction of 3-D Target Based on GPU-FDTD Method

Hanyong Zhang

State Key Laboratory of Astronautic Dynamics Xi'an Satellite Control Center

DO-20 ID:375

Optimization Design of Patch Antenna by Introduction of Capacitive Patch

Kisangiri Michael

Nelson Mandela African Institution of Science and Technology, Tanzania

DO-21 ID:376

An Electricalthermal Coupling Numerical Method for Inhomogeneous Medium Problems

Chao Deng, Zuhui Ma

Yunnan University

DO-22 ID:384

Time-Domain Analytical Expression for Far Radiation Field of Arbitrarily Oriented Dipole above Layered Half Space

Ning Shen, Bing Wei, Shitian Zhang, Weike Yi

School of Physics and Optoelectronic Engineering, Xidian University

DO-23 ID:388

Research on Electromagnetic Scattering Characteristics of Kelvin Wake of Ship Based on MPI

Lu Wang, Lixin Guo, Xiao Meng

Xidian University

DO-24 ID:398

A Domain Decomposition Method Based on Volume-Surface Integral Equation for complex Dielectric/Metallic Composite Objects

Xianjin Li

University of Electronic Science and Technology of China

Wednesday, December 5 P.M.	13:30-17:00	Venue: Room E
Session F1	Others	

Session Chairs: Xiaoli Xi, Xiongwen Zhao
13:30-15:00

FO-01 ID:13

An Eight-Port Frequency Reconfigurable MIMO Slot Antenna with Multi-Band Tuning Characteristics

Sharjeel Riaz, Xiongwen Zhao
North China Electric Power University

FO-02 ID:16

Triple-band metamaterial-loaded small monopole antenna for mobile applications

Xiaomin Shi, Chenhao Wang, Chuanyuan Zhao, Yan Zhang, Yuchen Zhao, Xiaoli Xi
Xi'an Shiyou University

FO-03 ID:21

A Novel Structure of FSS With Stable Property for Wireless Communication in S-band

Yi Li, Zheng Xiang, Peng Ren
Xidian University

FO-04 ID:39

Asynchronous WCDMA Signal Long-Period Scrambling Code Estimation and Blind Decoding

Yu Han
State Key Lab of Information Control Technology in Communication System of No.36 Research Institute China Electronic Technology Corporation

FO-05 ID:40

Research on Simplified Model of Spaceborne Early-warning Radar Clutter Simulation

Zhili Wang
China Ship Development and Design Center

FO-06 ID:52

Beam-Switching Lens Antenna at 26GHz for 5G Communications

Mengting Li, Xiaoming Chen, Gantao Peng, Anxue Zhang
Xi'an Jiaotong University

15:00-15:30 Coffee Break

15:30-17:00

FO-07 ID:91

Energy-Efficient Hybrid Precoding Design for Mm-Wave Massive Antenna Multi-User Systems

Yu Zhang, Xiongwen Zhao, Suiyan Geng, Fei Du, Zihao Fu, Mengjun Wang
North China Electric Power University

FO-08 ID:108

Spectrum Sensing Based on kNN Algorithm for 230 MHz Power Private Networks

Chunyan An, Donglei Zhang, Chenglong Yuan, Liang Li, Xiongwen Zhao, Suiyan Geng
Global Energy Interconnection Research Institute Co., Ltd

FO-09 ID:112

28 GHz MIMO Channel Capacity Analysis for 5G Wireless Communication Systems

Ang Xia, Zhongyu Wang, Suiyan Geng, Xiongwen Zhao, Rui Zhang, Yigang Geng
North China Electric Power University

FO-10 ID:118

Channel Simulation and Validation by QuaDRiGa for Suburban Microcells under 6 GHz

Zihao Fu, Xiongwen Zhao, Suiyan Geng, Fei Du, Yu Zhang, Like Huang

North China Electric Power University

FO-11 ID:126

An Improved KPD Algorithm of Multipath Components Clustering for 5G Millimeter Wave Radio Channels

Fei Du, Xiongwen Zhao, Suiyan Geng, Yu Zhang, Zihao Fu, Rui Zhang

North China Electric Power University

FO-12 ID:229

Urban Macrocellular Field Strength Prediction for 230 MHz Electric Wireless Private Networks

Donglei Zhang, Chunyan An, Hui Zhang, Xiongwen Zhao, Liang Li, Weijun Zheng

Global Energy Interconnection Research Institute Co., Ltd

Thursday, December 6 A.M.

Thursday, December 6 A.M.	08:30-12:00	Venue: Room A
Session A3	Antennas & Related Topics	

Session Chairs: Haiwen Liu, Yongchang Jiao

08:30-10:00

AO-25 ID:177

Charge Storage Level Indicator for RF Energy Harvester based on Dual-ID Passive UHF RFID Tag

Nikta Pournoori, Leena Ukkonen, Toni Björninen

Tampere University of Technology

AO-26 ID:189

A Dual-Polarized Full-Corporate Waveguide Slot Array Antenna on W-Band

Yang Niu, Bing Hu

Beijing Institute of Technology

AO-27 ID:213

Design of an X-band Antenna on Airborne Craft with Omnidirection Radiation

Yangdong Yan, Yongchang Jiao, Weijun Zhang

Xidian University

AO-28 ID:218

Research on the improvement of tightly coupled antipodal Vivaldi antenna array

Qi Chen, Zhenghui Xue, Wu Ren, Weiming Li

Beijing Institute of Technology

AO-29 ID:227

The microstrip beamforming array antenna of millimeter wave fuze

Wei Chen, Xiaonan Suo, Cheng Wang, Ruihu Wen, Hongying Li

National Key Laboratory of Electromechanical Engineering and Control Xi'an

AO-30 ID: 234

Bandwidth- and Gain-Enhanced Vivaldi Antenna Array Fed by Non-uniform T-junction Power Divider for Radio Astronomy Application

Zhengbiao Wang, Haiwen Liu, Wenjuan Yang, Yifan Wang, Shuangshuang Zhu, Pin Wen

10:00-10:30 Coffee Break

10:30-12:00

AO-31 ID:242

Ground clutter suppression: Preliminary analysis of Qujing incoherent scatter radar

Liandong Dai, Zonghua Ding, Song Yang, Zhimei Tang

China Research Institute of Radiowave Propagation

AO-32 ID:245

A Dual Circularly Polarized Rectenna with Wide-Beam

Ningxin Mao

University of Electronic Science and Technology of China

AO-33 ID:252

A Differential UWB Quasi-Yagi Antenna with a Notched Band at 5.8 GHz

Xinyi Wang, Wei Zhang, Mingliang Huang

China Ship Development and Design Center

AO-34 ID:257

Omnidirection Vertically Polarized Antenna on Unmanned Aerial Vehicle

Yangdong Yan, Yongchang Jiao

Xidian University

AO-35 ID:265

Ultra-Wideband and High Gain Fabry-Perot Cavity Antenna Using Frequency Selective Surface and Parasitic Patch

Zhipeng Li, Jing Ma, Bin Shi, Lin Peng

Guilin University of Electronic Technology

AO-36 ID:273

A Ka-Band Wideband SIW Cavity-Backed Slot Antenna Array

Guopeng Yang, Jinping Zhang, Yi Yang, Zhipeng Zhou

Nanjing Research Institute of Electronics Technology

Thursday, December 6 A.M.	08:30-12:00	Venue: Room B
Session B3	Propagation & Related Topics	

Session Chairs: XingChang Wei, Maoyan Wang

08:30-10:00

BO-25 ID:170

The Study of Experiment on Tropospheric Scattering Propagation at C-band

Qiang Zhao, Rui Zhang, Leke Lin, Qingliang Li

China Research Institute of Radiowave Propagation

BO-26 ID:171

Study on the absorption properties of two kinds of dihedral corner metamaterial absorbers

Tianji Li

Central China Normal University

BO-27 ID:174

The Two-Dimensional Fusion Imaging method based on Iteration Dictionary Bayesian Parameter Estimation Array

Jing Qin, Zuofeng Zhou, Dawei Song
Shanxi Military Civilian Merging Innovation Institute

BO-28 ID:180

A Novel Electromagnetic Interference Source Reconstruction Method based on Artificial Neural Network

Zekai Hu, Yuhan Zhong, Yiwen Wang, Xingchang Wei, Yufei Shu
Zhejiang University

BO-29 ID:188

Experimental Study on Effects of Ionospheric Multi-path on Echo Spectra in HF Hybrid Sky-surface Wave System

Longquan Yang, Lixin Guo, DeYuan Tian, Wenling Guo, Caicheng Hua, Zhuanxia Lu
China Research Institute of Radiowave Propagation

BO-30 ID:197

Role of high energy precipitating particles on PMSE echoes during the simultaneous observations carried out by EISCAT VHF and UHF radar

RaufAbdur, Hailong Li, Ullah Safi, Lin Meng, Bin Wang, Maoyan Wang
University of Electronic Science and Technology of China

10:00-10:30 Coffee Break

10:30-12:00

BO-31 ID:212

Through-the-Wall Imaging Using Wi-Fi Signals

Lianlin Li
Peking University

BO-32 ID:219

The Variation Characteristics of the Spread-F Occurrences at Chongqing in China

Ning Wang
Xidian University

BO-33 ID:226

Distortion of polarized Bessel vortex beams propagation in sandstorm

Wei Ding, Haiying Li, Jiawei Liu, Lu Bai, Zhensen Wu
Xidian University

BO-34 ID:240

A broadband Linear Polarization Converter and Its Application in RCS Reduction

He Zhao, Zhenghui Xue, Wu Ren, Weiming Li
Beijing Institute of Technology

BO-35 ID:241

A Method of Retrieving Tropospheric Refractivity Above Ocean Surface using GNSS

Xiang Dong, Lei Yang, Qingling Zhu, Caifa Guo, Zhenwei Zhao, Leke Lin
China Research Institute of Radiowave Propagation

BO-36 ID:254

Design of a Dual Band ortho-mode transducer in ka-band

Shundong Zou, Zhihang Wu, Zhengbin Wang, Qiao Huang
Nanjing University of Posts and Telecommunications

Thursday, December 6 A.M.	08:30-12:00	Venue: Room C
Session C3	EM Theory & Related Topics	

Session Chairs: Kuisheng Zheng, Bing Wei

08:30-10:00

CO-25 ID:309

Electron Beam Excited Surface Plasmon Polaritons Carrying Orbital Angular Momentum

Long Xiao, Junfeng Chen, Liang Chen, Qi Zhang, Longying Guo, Meng Yang

China Ship Development and Design Center

CO-26 ID:314

Five-order Equal Ripple Wideband Bandpass Filter with Minimized Variation in Group Delay

Saili Chen, Xiuhua Jin, Xiaodong Huang

Nanjing University of Posts and Telecommunications

CO-27 ID:319

Numerical Simulation of Scattering from an Infinite Dielectric Periodic Surface

Yinyu Wei, Zhensen Wu

Xidian University

CO-28 ID:322

Difference scattering field properties between multilayered defect particles and slightly rough optical surface

Chengxian Ge, Zhensen Wu, Jing Bai, Lei Gong

Xidian University

CO-29 ID:323

Radiation Fields across Sea-air Interface from Underwater Magnetic Dipole Source

Shitian Zhang

China Research Institute of Radiowave Propagation

CO-30 ID:325

Lateral Optical Binding Of Stratified Biological Cells Induced By High-Order Bessel Beams

Jing Bai, Zhensen Wu, Chengxian Ge

Xidian University

10:00-10:30 Coffee Break

10:30-12:00

CO-31 ID:347

Computation of Bessel beams in the FDTD method

Zhefeng Wu, Jiajie Wang, Yiping Han, Le Zhu, Zhiwei Cui, Wenjuan Zhao

Xidian University

CO-32 ID:351

Unconditionally Stable TDFEM Algorithm Based on "Brick" Element

Kaihang Fan, Bing Wei, Shitian Zhang, Xinbo He

Xidian University

CO-33 ID:360

Analysis on the Co-channel Interference caused by Atmospheric duct and Tropospheric scattering

Kai Yang, Zhensen Wu

Xidian University

CO-34 ID:381

Design of wideband radar absorbing structure based on Lossy frequency selective surface

Zhixin Sun, Huiling Zhao

Northwestern Polytechnical University

CO-35 ID:399

The microwave absorbing performance of Co²⁺-Ti⁴⁺ co-doped barium ferrite ceramics

Zhenjia Song, Jun Li, Kouzhong Shi, San He, Chengxun Yuan, Zhongxiang Zhou

Harbin Institute of Technology

CO-36 ID:403

Analysis on the Distribution of Random Rough Surface Scattering by Monte-Carlo Method

Jiyu Xue, Zhensen Wu

Xidian University

Thursday, December 6 A.M.	08:30-12:00	Venue: Room D
Session E1	Electromagnetic Compatibility & Related Topics	

Session Chairs: Guohua Liu, Leke Lin

08:30-10:00

EO-01 ID:10

A Design of 9kHz-0.5GHz Low Noise Amplifier with High Gain and Smooth Flatness

Jun Tang, Zhaowen Yan, Zhaoming Ning, Yaoxing Zhang, Yongcheng Zhao

Beihang University

EO-02 ID:20

A Broadband High Efficiency Class-J Power Amplifier With A Novel Output Matching Method

Zhiwei Zhang, Guohua Liu, Hao Sun, Zhiqun Cheng

Hangzhou Dianzi University

EO-03 ID:34

The Far-field Estimation for Microstrip Line Based on Near-field Scanning

Wei Liu, Zhaowen Yan, Zheng Min

Beihang University

EO-04 ID:60

Shielding Effectiveness of Fiber Reinforced Composites with Random Fluctuation Microstructure

Yanan Chen, Yi Liao, Liming Yuan, Xiaojun Ying, Guochang Shi

Shanghai Radio Equipment Research Institute

EO-05 ID:100

Test of an ionospheric activity index using foF2 data in China

Panpan Ban

China Research Institute of Radiowave Propagation

EO-06 ID:125

Experimental study on surface scattering characteristics of wall and ground in the millimeter wave

Chunzhi Hou, Zhensen Wu, Leke Lin, Rui Zhang, Changsheng Lu, Liwen Ma

Xidian University

10:00-10:30 Coffee Break

10:30-12:00

EO-07 ID:130

W-band Broadband Low Noise Amplifier Using 0.1- μ m GaAs pHEMT Process

Yawen Lu
Hangzhou Dianzi University

EO-08 ID:158

High power microwave system based on power combination and pulse compression of conventional klystrons

Zhengfeng Xiong
Northwest Institute of Nuclear Technology

EO-09 ID:162

Investigation on Ship LEMP Protection Design and Test

Xiaoguang Wu, Shengquan Zhen
China Ship Development and Design Center

EO-10 ID:166

DM EMI Reduction using the Gate Drive Signal in a Flyback Converter

Zhaoming Ning, Zhaowen Yan, Yaoxing Zhang
Beihang University

EO-11 ID:169

Study on Prediction Models of EMI Filter with Near-field Coupling Effect

Na Wang, Zhaowen Yan, Jun Tang, Zhaoming Ning, Biao Xiao, Hui Wang
Beihang University

EO-12 ID:181

Analysis of electromagnetic distribution in building illuminated with airborne antenna array by using a half-space FDTD

Min Zhang, Lianyan Zhu
No.36 Research Institute of CETC

Thursday, December 6 A.M.	08:30-12:00	Venue: Room E
Session F2		Others

Session Chairs: Junhong Wang, Peizhen Zhang

08:30-10:00

FO-13 ID:55

A Near-field Perforated Dielectric Phase-Correcting Structure for Fabry-Perot Resonator Antennas

Xiangxiang Li, Yuanjiang Zhu, Suzhen Ye, Yeqiang Li, Kerong Xu, Baojun Lu
723 Research Institute of CSIC

FO-14 ID:61

A Novel Spark Plug with High Field Intensity

Yaoyao Wang, Zhongli Wang, Yunying Tang, Dajun Wu, Liang Zhu, Jiafang Shan
Institute of Plasma Physics, Chinese Academy of Sciences

FO-15 ID:81

A Foldable Circular Polarized Microstrip Antenna Array for Satellite Communication

Zhihao Zhong, Liang Xu, Hui Zhang, Peizhen Zhang
Xidian University

FO-16 ID:95

Millimeter Wave Butler Matrix Based on Micro-coaxial Lines

Ruihua Liang, Anxue Zhang, Xiaoming Chen
Xi'an Jiaotong University

FO-17 ID:99

Jamming Simulation of Synthetic Aperture Radar Imaging

Jiaxuan Xu, Haipeng Wang

Key Laboratory for Information Science of Electromagnetic Waves (MoE), Fudan University

FO-18 ID:123

A Compact S-band Digital T/R module in Multi-function MIMO System

Xiao Hu

Science and Technology on Antenna and Microwave Laboratory

10:00-10:30 Coffee Break

10:30-12:00

FO-19 ID:164

The design of a high gain, low profile and planar antenna

Chengwen Wang, Zetai Yu, Tianyu Xiang, Helin Yang

College of Physical Science and Technology, Central China Normal University

FO-20 ID:185

Calibration measurement of shore-based radar with active reflector

Xin Li, Huiming Li, Yushi Zhang, Penglang Shui, Jinpeng Zhang, Shuwen Xu

China of Research Institute of Radiowave Propagation

FO-21 ID:187

Bi-iterative MVDR Beamforming based on Beamspace Preprocessing for MIMO radars

Jie Li, Sheng Hong, Yu Ai , Yantao Dong, Zhixin Zhao, Yuhao Wang

Nanchang University

FO-22 ID:199

A Compact Quasi-Yagi Antenna Based on Spoof Surface Plasmon Polaritons

Yijuan Yang, Zheng Li, Bang Wei, Junhong Wang

Key Laboratory of All Optical Network and Advanced Telecommunication Network of Ministry of Education, Beijing Jiaotong University

FO-23 ID:207

Wireless Coverage Analysis for Intra-Wagon Scenario at 60 GHz Band

Haofan Yi, Ke Guan, Danping He, Bo Ai, Zhangdui Zhong, Junhyeong Kim

Beijing Jiaotong University

FO-24 ID:263

The ranging adjustment method of triangle wave FM harmonic ranging radio fuze

Liang Dai, Yong Fan, Yinfu Han, Lei Xia, Qiuhua Ma

National Key Laboratory of Electromechanical Engineering and Control

Thursday, December 6 P.M.

Thursday, December 6 P.M.	13:30-17:00	Venue: Room A
Session A4	Antennas & Related Topics	

Session Chairs: Weiping Cao, Ying Liu

13:30-15:00

AO-37 ID:278

Design of 77GHz Differentially-Fed Antenna Array using Chebyshev Distribution

Ye Cheng Wang, Yan Zhang, Tao Dong, Jie Yin, Jinhao Wang, Shanwei Lv

Beihang University

AO-38 ID:286

A Miniaturized Multi-functional Antenna with UHF and CP Performance for Communication and Navigation System

Hao Wang, Yuancheng Shi, Rui Ding, Yan Wang, Shuanglong Quan, Dalong Xu

Nanjing University of Science and Technology

AO-39 ID:288

Investigation of Miniaturized Wideband Circular-polarized Cavity-Backed Printed Dipole Antenna

Weiping Cao, Xiaotian Jiang, Wen Hai, Xinhua Yu, Fushen Qiu, Yiyang Wang

Guilin University of Electronic Technology

AO-40 ID:289

Design of A Ku-band Corrugated Horn With Good-Symmetrical Pattern

Simin Li, Zhuo Liu, Weiping Cao, Xinhua Yu, Yiyang Wang, Yu Chen

Guilin University of Electronic Technology

AO-41 ID:290

Investigation of Planar Parasitic Technique of the Printed Dipole

Simin Li, Lietian Yu, Yiyang Wang, Xinhua Yu, Mengqi Zhang, Xiaotian Jiang

Guilin University of Electronic Technology

AO-42 ID:291

The Investigation of Compact Handheld Terminal MIMO Antenna for 4G/5G Application

Weiping Cao, Yu Chen, Wen Hai, Xiaoqian Liu, Xinhua Yu, Yiyang Wang

Guilin University of Electronic Technology

15:00-15:30 Coffee Break

15:30-17:00

AO-43 ID:292

Gain Enhancement Technique for Dipole Combining with Cavity and Aperture Radiations

Simin Li, Lietian Yu, Weiping Cao, Yiyang Wang, Xinhua Yu, Xiaotian Jiang

Guilin University of Electronic Technology

AO-44 ID:313

Reducing Mutual Coupling of Millimeter Wave Array Antennas by Fractal Defected Ground Structure

Feng Xu

Nanjing University of Posts and Telecommunications

AO-45 ID:315

A Dual-polarized Broadband Resonant Cavity Antenna

Fanji Meng, Ying Liu, Sharma Satish

University of Electronic Science and Technology of China

AO-46 ID:320

Bandwidth Enhancement and RCS Reduction for a Wideband High-Gain Fabry-Perot Antenna

Shining Sun, Zhiming Liu, Shaobin Liu, Xiaoyu Pang, Xiangkun Kong, Xingzhao Xing

Research Institute for Special Structures of Aeronautical Composite

AO-47 ID:321

Research on factors affecting sidelobe level of millimeter wave microstrip array antenna

Long Li, Handong Wu, Hongfeng Zhao
Fourth Institute of Telecommunications Technology

AO-48 ID:324

A high gain CP antenna with extreme radiation aperture for vehicle applications

Yue Tang, Deqiang Yang, Kai Sun, Maoning Xin

University of Electronic Science and Technology of China

Thursday, December 6 P.M.	13:30-17:00	Venue: Room B
Session B4	Propagation & Related Topics	

Session Chairs: Lianlin Li, Leke Lin

13:30-15:00

BO-37 ID:276

Performance Analysis of a Massive MIMO System in Indoor Scenario

Qichang Li, Liu Liu, Cheng Tao, Yanping Lu, Tao Zhou, Zhongliang Wei

China Academy of Railway Sciences

BO-38 ID:307

The nonlinear propagation of terahertz wave in plasmas

Jinyue Fan, Ying Wang, Chengxun Yuan, Jingfeng Yao, Zhongxiang Zhou, Xiaou Wang

Harbin Institute of Technology

BO-39 ID:310

Experimental Research of Sea Clutter Detection Based on UHF Passive Radar

Xun Zhang, Xianrong Wan, Jianxin Yi, Yuqi Liu

Wuhan University

BO-40 ID:364

Paraxial propagation of the second-order Airy vortex beams in the Free Space

Xiaojin Yang

Xidian University

BO-41 ID:372

A Signal Marker Method Based On Double Threshold Energy Detection

Weilan Hai, Yonghui Zhang, Zhenjia Chen, Xia Guo, Chao He

College of Information Science & Technology, Hainan University

BO-42 ID:394

Super-resolution SAR Image Reconstruction via Generative Adversarial Network

Longgang Wang, Mana Zheng, Wenbo Du, Menglin Wei, Lianlin Li

Peking University

15:00-15:30 Coffee Break

15:30-17:00

BO-43 ID:400

Research on Semantic Segmentation of High-resolution Remote Sensing Image Based on Full Convolutional Neural Network

Xiaomeng Fu, Huiming Qu

Nanjing University of Science and Technology

BO-44 ID:401

Programmable Metasurface for Manipulating Wi-Fi Signals

Ya Shuang, Menglin Wei, Hengxin Ruan, Longgang Wang, Lianlin Li
Peking University

BO-45 ID:402

Measurement, Simulation and Modeling in the Tunnel Channel with Human Bodies at 6 GHz for 5G Wireless Communication System

Shuangde Li, Yuanjian Liu, Leke Lin, Wei Ji, Zhongxiang Zhu

College of Electronic and Optical Engineering, Nanjing University of Posts and Telecommunications

BO-46 ID:408

Single-frequency and Single-sensor Three-dimensional Microwave Imaging Using Programmable Metasurface

Hengxin Ruan, Ya Shuang, Menglin Wei, Lianlin Li

Peking University

Thursday, December 6 P.M.	13:30-17:00	Venue: Room C
Session A5	Antennas & Related Topics	

Session Chairs: Biao Du, Qingsheng Zeng

13:30-15:00

AO-49 ID:329

Frequency Scanning Leaky-wave Antenna Based on Goubau Line Formed by Loading Parasitic Branches

Tao Jiang, Feng Xu, Yinchu Liu

Nanjing University of Posts and Telecommunications

AO-50 ID:330

A Dual-Frequency Substrate Integrated Waveguide Cavity Backed Slot Antenna Using Artificial Magnetic Conductor

Yinchu Liu, Feng Xu, Tao Jiang

Nanjing University of Posts and Telecommunications

AO-51 ID:332

Design and simulation of V-type dipole antenna

Xiaowei Yuan, Liang Dong, Min Wang, Shaojie Guo, Guannan Gao

Yunnan Observations, Chinese Academy of Sciences

AO-52 ID:344

Design of a Ka Broadband Satellite Communication Antenna for Low-Earth-Orbit Constellation

Yang Zhao, Zhenyang Liu, Xing Fan, Ping Gao, Tongzhan Liu

The 29th Research Institute of China Electronics Technology Group Corporation

AO-53 ID:348

Spatial Polarization Characteristics of Wide-angle Scanning Slot Phased Array

Zhiyong Zhou

Institute of Microelectronics of Chinese Academy of Sciences

AO-54 ID:361

Performance Analysis of SKA-P

Shengwen Liu, Biao Du

No.54 Research Institute of CETC

15:00-15:30 Coffee Break

15:30-17:00

AO-55 ID:368

Design of a Folded Reconfigurable Reflectarray Antenna for Mono-Pulse Radar Application

Jianxiao Wang, Dong Li, She Shang, Dawei Song, Xi Luo, Xiaojun Li

National Key Laboratory of Science and Technology on Space Microwave

AO-56 ID:370

Broadband wide beam dual polarization antenna unit and its sparse array

Xiongjie Jin, Shuguang Wang, Youwei Liu

Beijing Institute of Technology

AO-57 ID:382

Center-Fed Shorting-Via-Loaded Circular Patch Antenna with Reconfigurable Polarization and Switchable Beam

Bingbing Ban, Zhiquan Cheng, Shulin Chen

Hangzhou Dianzi University

AO-58 ID:389

The Effect of Discharge Gap on Microwave Discharge

Zhongli Wang, Yaoyao Wang, Liang Zhu, Jiafang Shan, Wendong Ma

University of Science and Technology of China

AO-59 ID:390

The improved optic design of CFETR ECRH antenna

Yunying Tang, Fukun Liu, Xiaojie Wang, Handong Xu, Liyuan Zhang, Dajun Wu

Institute of Plasma Physics, Chinese Academy of Sciences

AO-60 ID:414

Reconfigurable antenna design scheme for 5G application

Yanbin Luo, Qingsheng Zeng, Xia Zhang, Yong Wu, Nan Hu, Wenqing Xie

Beijing University of Posts and Telecommunications

Thursday, December 6 P.M.	13:30-17:00	Venue: Room D
Session E2	Electromagnetic Compatibility & Related Topics	

Session Chairs: Wenyan Yin, Zege Wu

13:30-15:00

EO-13 ID:190

A Novel Method for LFM-Coding Radar Signals Classification

Pulong Nan

Science and Technology on Communication Information Security Control Laboratory

EO-14 ID:194

Design of Solid-state Microwave Source of High Efficiency and High Power for Microwave Plasma Lamps

Liang Zhu, Wendong Ma, Zege Wu

Institute of Plasma Physics, Chinese Academy of Sciences

EO-15 ID:198

Electromagnetic Human Exposure Estimation

Awad. A. Mullah, Latifa S. Elhakim

Head of RF testing laboratory (TPRA Sudan)

EO-16 ID:204

Research on the Influence of Stations Distribution to HF TDOA Geolocation Accuracy

Deyuan Tian, Shikai Wang, Longquan Yang

China Research Institute of Radiowave Propagation

EO-17 ID:267

Distribution Prediction of SLF/ELF Atmospheric Radio Noise in China

Yuanxin Wang

National Key Laboratory of Electromagnetic Environment

EO-18 ID:294

Experimental Study of the Protection Effect of the Short-wave RF Front-end Lightning Electromagnetic Pulse Protection Module Based on Switch-type and Voltage Limiting Type Protective Elements

Dongdong Wang, Liang Chen, Kun Yang

China Ship Development and Design Center

15:00-15:30 Coffee Break

15:30-17:00

EO-19 ID:296

Numerical simulation of two-stream instability induced by equatorial electrojet

Zhaohui Xu, Zhengwen Xu, Haisheng Zhao

National Key Laboratory of Electromagnetic Environment, China Research Institute of Radiowave Propagation

EO-20 ID:304

Fast Simulation of Multilayered Anisotropic Carbon Fiber Composite Thin Layers Using the Embedded Thin Layer Model and Improved FDTD Suitable for High Performance Computing

Han Zhang, Xuesong Meng, Haijing Zhou, Wenyan Yin, Yi Liao, Zhenguo Zhao

Zhejiang University

EO-21 ID:340

An 8-bit 80MS/s 2b/cycle SAR ADC for sensor application

Lei Zhang, Wenzhong Lou, Yige Gao

School of Information and Electronic, Beijing Institute of Technology

EO-22 ID:393

Full-wave Electromagnetic Scattering Simulation of Plunging Breaking Waves

Biyi Wu, Jiajing Wang, Xinqing Sheng

Beijing Institute of Technology

EO-23 ID:409

Mixing Music Using Electromagnetic Reverberation Chamber

Qian Xu, Lei Xing, Jiajia Zhu, Yongjiu Zhao, Tianyuan Jia, Yi Huang

Nanjing University of Aeronautics and Astronautics

EO-24 ID:412

Transmitting Coil Arrays for Improvement of Wireless Power Transmission Efficiency

Cheng Hu, Beibei Xing, Xiaoli Wang, Dan Tang, Tian Hang, Zhiwei Liu

East China Jiaotong University

Thursday, December 6 P.M.	13:30-17:00	Venue: Room E
Session F3	Others	

Session Chairs: Shuangde Li, Bing Wei

13:30—15:00

FO-25 ID:271

Maneuvering target tracking algorithm based on adaptive markov transition probability matrix and IMM-MGEKF

Suyao Qi, Chundong Qi, Wenhua Wang
Beijing Institute of Technology

FO-26 ID:285

Simulation of Indoor MIMO Channel Propagation Characteristics Based on the SBR Method

Lin Yao, Yuanjian Liu, Shuangde Li
College of Electronic and Optics Engineering, Nanjing University of Posts and Telecommunications

FO-27 ID:293

Study on the Propagation characteristics of Indoor Millimeter-wave at 37.2GHz by SBR Method

Wei Ji, Yuanjian Liu, Shuangde Li
College of Electronic and Optical Engineering, Nanjing University of Posts & Telecommunications

FO-28 ID:297

Capacity of Massive MIMO System Based on Indoor Measurement

Yanping Lu, Cheng Tao, Liu Liu, Tao Zhou, Zhongliang Wei, Qichang Li
Beijing Jiaotong University

FO-29 ID:301

Covert Communication with A Full-Duplex Receiver Based on Channel Distribution Information

Tingzhen Xu, Ling Xu, Xiaoyu Liu, Zaoyu Lu
School of Electronic and Optical Engineering, Nanjing University of Science and Technology

FO-30 ID:336

Tracking Algorithm with Data Fusion in Single Frequency Network-based MISO Passive Radar

Hui Wang, Jianxin Yi, Xianrong Wan
School of Electronic Information, Wuhan University

15:00-15:30 Coffee Break

15:30-17:00

FO-31 ID:339

Joint Power and Position Estimation for the Blind Signal using Particle Swarm Optimization

Shen Liu, Yuannian Qin, Yubin Zhao, Xiaofan Li
Guilin University of Electronic Technology

FO-32 ID:349

Measurement of scattering coefficient in time-domain and error analysis of dielectric plate

Minghao Gong, Bing Wei, Shitian Zhang, Bin Wu, Lixin Guo
School of Physics and Optoelectronic Engineering, Xidian University

FO-33 ID:350

Lagrange Programming Neural Network for Constraint Antenna Array Beamforming

Bowen Di, Huiling Zhao, Zhixin Sun, Junjie Tang, Lin Song
Northwestern Polytechnical University

FO-34 ID:358

Ambiguity function analysis of Long Term Evolution transmissions for passive radar

Yangpeng Dan, Xianrong Wan, Jianxin Yi, Yunhua Rao
Wuhan University

FO-35 ID:374

Experimental Research of Multi-FM Based Passive Radar

Deqiang Xie, Jianxin Yi, Ji Shen, Xianrong Wan

Wuhan University

FO-36 ID:416

A algorithm of preamble acquisition base on differential correlation module for CDMA system

Bin Jiang, Wei Wu, Hui Li

Science and Technology on Communication Information Security Control Laboratory

Poster Sessions

AP&CP(01-06)	Wednesday, Dec.5	09:00-10:30	Floor 3 of Science and Technology Museum
DP&CP(07-12)	Wednesday, Dec.5	15:00-16:30	As the above
FP&SP&CP(13-17)	Thursday, Dec.6	09:00-10:30	As the above
BP&EP	Thursday, Dec.6	15:00-16:30	As the above

General Poster Session A: Antennas & Related Topics

AP-01 ID:6

A New Broadband Circularly Polarized Monopole Antenna With Modified Ground

Lei Wang

China Electronic Product Reliability and Environmental Testing Research Institute

AP-02 ID:18

Low Axial Ratio Circularly Polarized Antenna for Airborne Linearly Polarized Radiation Measurement

Hong Jing, Hui Ning, Wenxi Hao, Peng Chen

Northwest Institute of Nuclear Technology

AP-03 ID:26

Adjustment and Testing of an S-Ku Bands Tightly Coupled Dipole Array

Linglu Chen, Guiqing Kong, Lei Chang

No.36 Research Institute of CETC

AP-04 ID:43

Smart patch wearable antenna on Jeans textile for body wireless communication

Shaohe Li, Jiusheng Li

Centre for THz Research, China Jiliang University

AP-05 ID:75

A Helix-loaded Equiangular Spiral Antenna with Compact Structure

Sen Wang¹, Yunpeng Zhang², Jiawei Long², En Li²

¹*Beijing Institute of Space Long March Vehicle*

²*University of Electronic Science and Technology of China*

AP-06 ID:101

Design of A Dual-band Co-aperture Microstrip/waveguide Monopulse Antenna

Fengwei Yao

Shanghai Dianji University

AP-07 ID: 103

A New Type of Small Size and Multiband Antenna For Interphone Communication

Haipeng Liu, Chuanfang Zhang

Beijing Institute of Technology

AP-08 ID:128

Design of a Variable Inclination Continuous Transverse Stub Array

Meng Wei, Juan Liu, Huixin Li, Shenyong Liu

Beijing Institute of Remote Sensing Equipment

AP-09 ID:131

Dual-Band Circularly Polarized Ring-Slot Antenna with Shorted Section in the Ground

Ni Chao¹, Weijun Wu², Qifeng Liu², Feifei Lei³

¹*Radar and Signal Processing Laboratory, Electronic Information School, Wuhan University*

²*Science and Technology on Electromagnetic Compatibility Laboratory*

³*Wuhan Ship Design and Development Center*

AP-10 ID:182

A Two-dimensional Low Side Lobe Frequency Scanning Planar Array with Hybrid Feeding Structure

Yaodan Zhang, Hao Wang, Yan Wang, Shuanglong Quan, Dalong Xu

Nanjing University of Science and Technology

AP-11 ID:215

A Wideband Polarization Reconfigurable Antenna with Six Polarization States

Pengxian Pan, Boran Guan

Hangzhou Dianzi University

AP-12 ID:216

Research on Adaptive Anti-jamming Algorithm of Antenna Array Based on Orthogonal Subspace Projection

Fan Wang, Chuanfang Zhang, Houjun Sun

Beijing Key Laboratory of Millimeter Wave and Terahertz Techniques

AP-13 ID:224

Antenna automation design method based on shape blending

Yuebin Sun, Aiting Wu

Hangzhou Dianzi University

AP-14 ID:268

Development of a Spherical Vacuum Window for Cryogenic Receiver

Jun Ma¹, Lei Xie², Yang Wu², Kai Wang¹, Zeyu Meng²

¹*Xinjiang Astronomical Observatory, Chinese Academy of Sciences*

²*No.54 Research Institute of CETC*

AP-15 ID:269

A UWB label pulse energy recovery circuit

Deqiang Yang, Honglei Zhang

University of Electronic Science and Technology of China

AP-16 ID:270

A Dual Frequency Fabry-Perot Antenna Based on Metamaterial Lens

Jian Yang, Feng Xu

Nanjing University of Posts and Telecommunications

AP-17 ID:274

A High-conversion PW-SW Converter Based on Phase Gradient Metasurface

Xinhua Yu, Guiyu Sun, Jun Wang, Xingqiang Huang

Key Laboratory of Cognitive Radio and Information Processing, Guilin University of Electronic Technology

AP-18 ID:299

Design of Ultra-Wideband Optically Transparent Antenna

Yulin Luo¹, Yuan Yao¹, Zhijiao Chen¹, Limei Qi¹, JunShen Yu¹, Xiaodong Chen²

¹*School of Electronic Engineering, Beijing University of Posts and Telecommunications*

²*School of Electronic Engineering and Computer Science, Queen Marry, University of London*

AP-19 ID:303

Pattern Reconfigurable Antenna with Loading Water Dielectric Array

Jiajun Liang¹, Tao Yuan¹, Linping Feng²

¹*Shenzhen University*

²*University of Macau*

AP-20 ID:331

RCS Reduction and Gain Enhancement for Patch Antenna by Using Low Profile EBG

Zijian Han¹, Wei Song¹, YuqingZhu², Xinqing Sheng¹

¹*Center for Electromagnetic Simulation*

²*Beijing Institute of Technology*

AP-21 ID:342

Simulation Design of Array Electromagnetic Vibrator Combined Ultra Wide Band Antenna

Fuquan Zheng¹, Wenzhong Lou¹, Yanhui Han¹, Dakui Wang²

¹*Beijing Institute of Technology*

²*Beijing Institute of Electronic System Engineering*

AP-22 ID:352

Design of Antenna Rapid Optimization Platform Based on Intelligent Algorithms and Surrogate Models

Jin Fan, Jian Dong, Meng Wang, Shan Wang

Central South University

AP-23 ID:367

RCS Reduction of a Microstrip Patch based on Broadband PRRS

Jianxiao Wang, She Shang, Dawei Song, Xi Luo, Xiaojun Li

National Key Laboratory of Science and Technology on Space Microwave

AP-24 ID:373

New Broadband Bowtie Planar Antenna

Yong Cheng, Jing Lu, Yadan Li

Nanjing University of Posts and Telecommunications

AP-25 ID:379

A Helix Antenna with Broad Beamwidth for Wideband Applications

Shuang He, Hao Wang, Yan Wang, Shuanglong Quan, Dalong Xu

Nanjing University of Science and Technology

AP-26 ID:404

A Half-cut Microstrip Slot Antenna for Implantable Devices at ISM Band

Peng Li, Zhe Wang, Haowei Kang, Shuqi Huang, Bowen Yan, Weihua Zong

Qingdao University

AP-27 ID:405

Efficient Linear Array Synthesis Including Coupling Effects Utilizing Quantum Search Algorithm and Active Element Pattern

Yu Zuo, WeijunWu, Qifeng Liu

China Ship Development and Design Center

General Poster Session B: Propagation & Related Topics

BP-01 ID:29

Short-wave line-of-sight detection system ionospheric clutter Analysis and suppression methods

Wenling Guo, Xue Li, Zhuaxia Lu, Xiaotong Guo, Yuesong Wang

China Research Institute of Radiowave Propagation

BP-02 ID:98

A method for grading evaluation of the atmospheric refraction effect on the radio marginal line-of-sight distance

Ranran Hu

China Research institute of Radiowave Propagation

BP-03 ID:124

Effect of atmospheric stability on radio wave propagation in evaporation duct

- Xiangming Guo
China Research Institute of Radiowave Propagation and OUC
- BP-04 ID:127
New Measurement Methods of Dust Charge Based on Infrared Extinction Theory
Xiaobin Wang¹, Bin Xu², Zhengzheng Ma², Shunxing Hu³
¹*University of Science and Technology of China*
²*China Research Institute of Radiowave Propagation*
³*Anhui Institute of optics and Fine Mechanics, Chinese Academy of Science*
- BP-05 ID:173
Assessment of the shadow zone caused by the atmospheric duct for the shipboard radar and the measures of filling the shadow zone
Lin Jiao
Dalian Ocean Academy
- BP-06 ID:175
Wideband Channel Measurement Over the Horizon
Yongsheng Liu
China Research Institute of Radiowave Propagation
- BP-07 ID:178
On the predictability of foF2 using support vector machine
Chun Chen
China Research Institute of Radiowave Propagation
- BP-08 ID:186
The Statistic and Analysis of Atmospheric Ducts Using ECMWF Global Analysis Fields
Hua Wang
Dalian Naval Academy
- BP-09 ID:193
Comparison of the Ionospheric F2 Region Critical Frequency between Ionosonde Measurements and IRI-2016 Predictions over Sanya
Hui Wang, Yuhua Zou
Guilin University of Electronic Technology
- BP-10 ID:220
Remote Sensing Image Enhancement of the MSRCR Algorithm Based on the Guided Filtering of Sobel Operator
Lu Teng, Feng Xue
Northwestern polytechnical University
- BP-11 ID:232
Research on Cross Language Text Keyword Extraction Based on Information Entropy and TextRank
Xiaoyu Zhang, Yongbin Wang, Lin Wu
Internet Information Research Institute, Communication University of China
- BP-12 ID:284
Clustering Analysis of Multipath Components in Urban Road Scenario for C-V2X Propagation Channels
Zefang Huang¹, Yishun Li², Ruifeng Chen³, Mi Yang⁴
¹*Liaoyang First High School*
²*Datang Mobile Communication Equipment Co., Ltd*
³*Institute of Computing Technology, China Academy of Railway Sciences*
⁴*State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University*

BP-13 ID:363

Analysis of Ultra-short Wave Propagation in Atmospheric Duct

Haichuan Tang

Dalian Naval Academy

BP-14 ID:366

The polarizer design for CFETR high power millimeter wave system

Dajun Wu

Institute of Plasma Physics, Chinese Academy of Sciences

BP-15 ID:406

A multiple bands absorber based on curved metamaterial

Jiao Chen¹, Sha Gong², Helin Yang¹

¹*Central China Normal University*

²*Huangg Normal University*

General Poster Session C: EM Theory & Related Topics

CP-01 ID:15

Comparison of FDTD Analysis with Absorbing Boundary Condition Based on Inverted-F Antenna

Lei Li

School of Electrical Engineering and Automation, Anhui University

CP-02 ID:22

A terahertz frequency selective surface bandpass filter

Pei Wang, Hongwei Gao

Beijing Institute of Radio Measurement

CP-03 ID:47

Compact multi-channel terahertz wave demultiplexer

Shaohe Li, Jiusheng Li

Centre for THz Research, China Jiliang University

CP-04 ID:83

Design of Spoof Surface Plasmon Polaritons Transmission Line Based on Half-mode Substrate Integrated Waveguide

Zhong Tao, Hou Zhang

Air Force Engineering University

CP-05 ID:88

Design method of large power miniaturization for sequential power supply control circuit

Xiaonan Suo

Xi'an Institute of Electromechanical Information Technology

CP-06 ID:147

Design of W-band Sub-harmonic Balanced Mixer Using 0.1 μ m GaAs pHEMT Process

Qian Wu

Hangzhou Dianzi University

CP-07 ID:156

A D-band Monolithic Low Noise Amplifier on InP HEMT Technology

Dandan Yang

Hangzhou Dianzi University

CP-08 ID:225

A tunable filter based on dumbbell metamaterial

Yajuan Zhao

No.33 Research Institute of China Electronics Technology Group Corporation

CP-09 ID:253

Low Conversion Loss Mixers Design Using Reflector Networks

Mei Liang¹, Feiyao Chang², Ming Zhou²

¹*Southeast University*

²*Nanjing Electronic Devices Institute*

CP-10 ID:262

Linear-to-circular Polarization Converter Utilizing Double-arc-based Metasurface at Terahertz Frequency

Jing Zhao

Key Laboratory of Cognitive Radio and Information Processing (Ministry of Education)

CP-11 ID:280

Comparison of spark plugs with different structure

Yaoyao Wang¹, Zhongli Wang¹, Yunying Tang², Dajun Wu², Liang Zhu², Jiafang Shan²

¹*Institute of Plasma Physics, Chinese Academy of Sciences Science Island Branch of Graduate School, University of Science and Technology of China*

²*Institute of Plasma Physics, Chinese Academy of Sciences*

CP-12 ID:305

Numerical Simulation of Hunting Property of Nearest Target Selector of Radar Seeker

Zhiyong Zhou

Institute of Microelectronics of Chinese Academy of Sciences

CP-13 ID:316

A Compact Dual-band Electromagnetic Band-Gap Structure

Fanji Meng¹, Ying Liu¹, Satish Sharma²

¹*University of Electronic Science and Technology of China*

²*San Diego State University*

CP-14 ID:338

Low Frequency Fields Excited by a Horizontal Magnetic Dipole Near Boundary of lossy Half-Space

Huaiyun Peng

National Key Laboratory of Electromagnetic Environment

CP-15 ID:355

SAL imaging method based on Kirchhoff approximation

Chenglin Han, Yanhui Li, Zhensen Wu

School of Science, Xidian University

CP-16 ID:356

The effect of earth curvature on the full-wave model

Kai Liu, Huaiyun Peng, Yu Chen

National Key Laboratory of Electromagnetic Environment, China Research Institute of Radiowave Propagation

CP-17 ID:397

Transmission characteristics of polarized light in low visibility fog

Xingxing Chen, Zhensen Wu

Xidian University

General Poster Session D: Computational Electromagnetics

DP-01 ID:7

Constraining interference in satellite reception and ground station receiver

Fuling Zhao, Yongjun Wang

China Research Institute of Radiowave Propagation

- DP-02 ID:19
Modulation-Specific Angle-of-Arrival Estimation Algorithm for Correlative Interferometry
 Xiaoming Gou, Lantu Guo, Cong Tang
China Research Institute of Radiowave Propagation
- DP-03 ID:59
A Domain Decomposition Method for Solving Electromagnetic Scattering from Thin Coated Metallic Multi-scale Objects
 Kui Han¹, Yongpin Chen², Xiaofeng Que², Chonghua Fang¹
¹*China Ship Development and Design Center*
²*University of Electronic Science and Technology of China*
- DP-04 ID:85
CPML Implementation for FCC-FDTD Method
 Kangbing Liu, Lixia Yang
Jiangsu University
- DP-05 ID:86
Study on Connection Boundary Conditions in Ionospheric Plasma Dispersive Media
 Kai Wang, Kangbing Liu, Lixia Yang
Jiangsu University
- DP-06 ID:94
A Creamer Nonlinear Ocean Surface Doppler Spectrum Simulation of a Fine Physical Model Covered by Oil Film
 Rui Wang, Yao Wang, Lixin Guo
Xidian University
- DP-07 ID:138
Scattering Characteristics of The Multi-Corner Reflector Based on SBR Method
 Guocai Zan, Lixin Guo, Songhua Liu, Wei Liu, Yanchun Zuo, Runze Yang
Xidian University
- DP-08 ID:144
Target Scattering Characteristics under Beam Illumination Based on MoM
 Runze Yang, Lixin Guo, Songhua Liu, Yanchun Zuo, Wei Liu, Guocai Zan
Xidian University
- DP-09 ID:155
Three-dimensional numerical simulation of arbitrary configuration and surface-modified dust particles charging process in plasma
 Zhengzheng Ma¹, Bin Xu¹, Aidong Deng², Hongxin Jia²
¹*China Research Institute of Radiowave Propagation*
²*Shanghai Bright-Tech Information Technology Co., Ltd*
- DP-10 ID:167
A fast integration algorithm for detection of weak space debris using incoherent scatter radar
 Song Yang
China Research Institute of Radiowave Propagation
- DP-11 ID:168
A Bi-iterative Model Electromagnetic Scattering from a Ship Floating on Sea Surface
 Juan Li, Yanlan Pan, Lixin Guo, Zelin Ren, Ke Li
Xidian University
- DP-12 ID:211
Space target scattering characteristic imaging in the visible range based on ray tracing algorithm
 Wenbo Li, Yunhua Cao, Donghui Meng, Zhensen Wu

School of Physics and Optoelectronic Engineering, Xidian University

DP-13 ID:236

Numerical Simulation of Sideflash striking on the side wall of tall buildings

Bo Zhang¹, Xiaoqing Dai¹, Wantai Liu¹, QianChen²

¹*State Key Laboratory of Disaster Prevention & Mitigation of Explosion & Impact, Army Engineering University of PLA*

²*Department of Barracks, Research Institute for Medicine of Nanjing Command*

DP-14 ID:246

An Adaptive Precision Array Laser Fuze Detection Simulation Method

Bo Tian, Tuan Li, Tie Li, Wei Li

Nation Key Laboratory of Science and Technology on Fuze Dynamic Characteristics

DP-15 ID:247

Scattering Modeling of Micro-rough Surface SAR Target Based on Hybrid Method

Wei Li, Bo Tian, Tie Li, Gang Li

Nation Key Laboratory of Science and technology on Fuze Dynamic Characteristics

DP-16 ID:250

Hidden Markov Model Based on Target Narrow Pulse Laser Transient Characteristics

Yali Hou, Hong Su, Bo Tian, Tie Li

National Key Laboratory of Science and Technology on Fuze Dynamic Characteristics

DP-17 ID:295

Fast Calculation of Monostatic RCS by Calder ó n Multiplicative Preconditioner and Compressive Sensing

Meng Kong, Mingsheng Chen, Caoxin Yuan, Kuangxiao Jing, Wuxian Liang

Hefei Normal University

DP-18 ID:306

Research on the Hand Gesture Recognition Based on Deep Learning

Jinghao Sun, Tingting Ji, Shubin Zhang, Jiakui Yang, Jiguang Rong

Ocean University of China

DP-19 ID:311

Analysis of Scattering Characteristics of Near-Field Ship Target

Ying Zhang, Wei Liu, Chunlei Dong

Xidian University

DP-20 ID:312

Integrated Trajectory Optimization of Multiple Aircraft under Electronic Warfare Environment

Wei Chen¹, Yuanchao Yang², Hao Li¹

¹*Science and Technology on Electronic Information Control Laboratory*

²*Northwestern Polytechnical University*

DP-21 ID:335

Distributed Electromagnetic Spectrum Detection System Based on Self-organizing Network

Xia Guo, Yonghui Zhang, Zhenjia Chen, Chao He, Weilan Hai

Hainan University

DP-22 ID:346

An efficient Parallelization Approach of FEM-DDM for Large-Scale 3D Scattering Problems

Ruiqing Liu, Minglin Yang, Hongwei Gao, Xinqing Sheng

Center for Electromagnetic Simulation of Beijing Institute of Technology

DP-23 ID:353

Explicit and unconditionally stable FDTD method for electromagnetic problem analysis

XinBo He¹, Bing Wei¹, Shitian Zhang², Kaihang Fan¹

¹*Xidian University*

²*China Research Institute of Radiowave Propagation*

DP-24 ID:354

A Hybrid Grid DGTD Algorithm for Tetrahedral and Hexahedron Based on Virtual Element

Zhennan Xiao¹, Bing Wei¹, Shitian Zhang², Debiao Ge¹

¹*Xidian University*

²*China Research Institute of Radiowave Propagation*

DP-25 ID:383

Effect of material on secondary scattering of dihedral structure

Zhao Yao, Lu Bai, Wenbo Li

Xidian University

General Poster Session E: Electromagnetic Compatibility & Related Topics

EP-01 ID:9

A Miniature UWB Bandpass Filter Using Fractal Stepped Impedance Resonator

Hongqiao Luo, Peng Wang

Central China Normal University

EP-02 ID:38

Analysis of lightning induced transient effects on coaxial cables for ships

Jing Dong, Ming Zhang, Mingliang Huang

China Ship Development and Design Center

EP-03 ID:57

The Fusion Method of Sea Clutter Amplitude Distribution Model

Zhedong Zhang

China Research Institute of Radiowave Propagation

EP-04 ID:71

Study on Clutter Suppression Method for Micro-Motion Target

Saiqiang Xia, Mingshuo Zhu, Wenfeng Chen, Jun Yang

Air Force Early Warning Academy

EP-05 ID:92

Simulation Study on the Effect of Electrode Shape on Microwave Discharge

Zhongli Wang

University of Science and Technology of China

EP-06 ID:93

Comparison of Three Types of Stirrers in Terms of Field Uniformity in a Reverberation Chamber

Jiazhi Tang¹, Zihao Zhang², Xiaoming Chen¹, Mengran Zhao¹, Shitao Zhu¹, Anxue Zhang¹

¹*Xi'an Jiaotong University*

²*Chongqing University*

EP-07 ID:122

Compact Directional Coupler for High-Power Applications

Hanping Fang¹, Wei Xin²

¹*Nanjing Research Institute of Electronics Technology*

²*College of Electronic and Optical Engineering Nanjing University of Posts and Telecommunications*

EP-08 ID:135

Dosimetry Assessment for Human Exposure to Extremely Low Frequency Magnetic Fields in the Electric Vehicles

Congsheng Li¹, Jun Lin¹, Jianmei Lei², Tongning Wu¹, Dianyuan Qi¹, Rui Chen²

¹*China Academy of Information and Communications Technology*

²*State Key Laboratory of Vehicle NVH and Safety Technology*

EP-09 ID:136

Evaluation of RF Exposure Dosimetry from a Mobile Phone Inside a Vehicle by Numerical Simulation

Congsheng Li¹, Shengkui Xing¹, Jianmei Lei², Jin Zhao¹, Qing Shao¹, Rui Chen²

¹*China Academy of Information and Communications Technology*

²*State Key Laboratory of Vehicle NVH and Safety Technology*

EP-10 ID:149

EMR Field Distribution Analysis of Crystal Oscillator on PCB

Zhiwei He, Hongfu Guo

Xidian University

EP-11 ID:153

A new TMA method for state estimation of underwater target

Wei Sun, Pulong Nan

No.36 Research Institute of CETC

EP-12 ID:222

Experimental Verification of Stirrer Angular Correlation with Different Definitions in a Reverberation Chamber

Qian Xu¹, Lei Xing¹, Dandan Yan¹, Yongjiu Zhao¹, JiaTianyuan², Yi Huang²

¹*Nanjing University of Aeronautics and Astronautics*

²*University of Liverpool*

EP-13 ID:248

Test Method for Target Full Spatial Polarization Characteristics by BRDF Test System

Wei Wang, Tie Li, Jingxin Jiao, Gang Li

Nation Key Laboratory of Science and Technology on Fuze Dynamic Characteristics

EP-14 ID:255

The Effects of Anode Foil Transmission Ratio on the Performance of Vircator

Shih-Chung Tuan¹, Shen Shou Max Chung²

¹*Oriental Institute of Technology*

²*Dept. of Aviation & Communication Electronics Air Force Institute of Technology*

EP-15 ID:256

Radio fuze detector reinforced by RF MEMS components

Yong Fan, Liang Dai, Lei Xia, Yinfu Han

National Key Laboratory of Electromechanical Engineering and Control

EP-16 ID:272

Comparison of the air-sea flux algorithm for the evaporation duct diagnosis

Yunbo Li, Wei Jiang, Xiaoying Shen, Jingjing Pei

Navy Marine Hydrometeorological Center

EP-17 ID:317

Simulation of density decay of rocket exhaust plume with solid and neutral gas mixture production

Bin Xu, Jie Feng, Jian Wu, Zhengzheng Ma, Yabin Zhang

China Research Institute of Radiowave Propagation

EP-18 ID:365

On the propagation of the high-altitude Nuclear Electromagnetic Pulse

Jin Zhang, Yerong Zhang

Nanjing University of Posts and Telecommunications

EP-19 ID:392

A Miniaturized Wideband Amplitude Equalizer Implemented in Feed Network of Phased Array Antennas

Haoyu Wei, Guoming Qian, Qianqian Zhang

Nanjing University of Posts and Telecommunications

General Poster Session F: Others

FP-01 ID:31

An UWB Antenna for Wireless Capsule Endoscope based on 0.05mm Thickness Polyimide

Ping Ma

Hebei University of Technology

FP-02 ID:56

Design of Structural-reliable X-band High-gain Vivaldi Array Antenna

Xiangxiang Li, Zucun Zhang, Kerong Xu, Yejiang Li

723 Research Institute of CSIC

FP-03 ID:80

A Dual Circular Polarized Conical Conformal Sinuous Antenna

Tao Fang¹, Liang Xu¹, Hui Zhang², Qi Li²

¹*Xidian University*

²*Xi'an Starnet Antenna Technology Co., Ltd*

FP-04 ID:114

Effects of Diffraction and Ground Reflection on Ray-Tracing-Based Coverage Predictions in Urban Microcellular Environments

Zhongyu Liu, Tianyu Fan, Lixin Guo

Xidian University

FP-05 ID:117

Parametric analysis for node positioning in optical wireless sensor networks

Ziwei Yan, Lixia Yang

Jiangsu University

FP-06 ID:133

ISAR Imaging Method for Non-Cooperative Slow Rotation Targets in Space

Xi Luo¹, Lixin Guo², Shang She¹, Dawei Song¹, Xiaojun Li¹, Wei Liu²

¹*National Key Laboratory of Science and Technology on Space Microwave*

²*School of Physics and Optoelectronic Engineering, Xidian University*

FP-07 ID:134

Optimized Design of the Radome based on the Digital Beam Forming Technique

Jie Wang, Huilong Yu, Xiaolei Fu

Beijing Institute of Remote Sensing Equipment

FP-08 ID:150

Single Feed Broadband Circularly Polarized Antenna with Parasitic Patch

Zepei Jiang, Fushun Zhang

Xidian University

FP-09 ID:165

Electromagnetic Transmission Calculation in Single Room

Tianyu Fan, Lixin Guo, Zhongyu Liu

School of Physics and Optoelectronic Engineering, Xidian University

FP-10 ID:192

Break Point of the Radio Wave Propagation Generated by Antennas in Rectangular Tunnels

Yuwei Huang¹, Dawei Li², Junhong Wang³, Biao Liu⁴

¹*Beijing Electronic Science and Technology Institute/Beijing University of Posts and*

Telecommunications

²*China Academy of Launch Vehicle Technology*

³*Beijing Jiaotong University*

⁴*Beijing Electronic Science and Technology Institute*

FP-11 ID:200

Statistical Estimation of Uncertainty in Surface Duct Inversion Parameters

Haifeng Zhao¹, Zhensen Wu²

¹*Radar Collaborative Innovation Center*

²*School of physics and Optoelectronic Engineering*

FP-12 ID:209

An Irregular Elliptical Monopole Antenna for Ultra-Wide-Band (UWB) Applications with Dual Notched Bands

Ruiheng Zhang, Xiaofei Xu, Xiao Deng

Shanghai University

FP-13 ID:231

Field Distribution Characteristics of Leaky-Wave System in the Vacuum Tube for High-Speed Rail

Bang Wei¹, Zheng Li¹, Liu Liu², Junhong Wang¹

¹*Institute of Lightwave Technology, Beijing Jiaotong University*

²*Beijing Jiaotong University*

FP-14 ID:233

On the Virtual Cell Power Allocation in Ultra Dense Networks

Zihao Zhang

Chongqing University

FP-15 ID:235

Optimization Analysis of Non-Uniform Array Antennas for Millimeter Waves

Shih-Chung Tuan

Oriental Institute of Technology

FP-16 ID:243

Ka band orthogonal dumbbell groove substrate integrated waveguide filter

Mingdong Li

Science and Technology on Electromechanical Dynamic Control Laboratory, China (Xi'an Institute of Electromechanical Information Technology)

FP-17 ID:264

The LFM fuze Doppler extraction method based on band-pass sampling

Liang Dai, Yong Fan, Yinfu Han, Lei Xia, Qiuhua Ma

National Key Laboratory of Electromechanical Engineering and Control

FP-18 ID:266

Local Power Estimation in High-Speed Railway Communications

Bei Zhang¹, Ting Wang¹, Ruifeng Chen², Mi Yang¹

¹*Beijing Jiaotong University*

²*Institute of computing technology, China Academy of Railway Sciences*

FP-19 ID:275

Efficient Geometry-based Channel Modeling for mmWave High-speed Train Communications

Bin Sun¹, Jingya Yang², Danping He², Liujun Zhao³, Dawei Li³, Junhyeong Kim⁴

¹*National Research Center of Railway Safety Assessment, Beijing Jiaotong University*

²*State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University*

³*China Railway Design Corporation*

⁴*School of Electrical Engineering, Korea Advanced Institute of Science and Technology (KAIST)*

- FP-20 ID:300
A Novel Non-stationary plasma sheath channel estimation and distortion cancellation method
 Cheng Wang, Lei Shi, Yanming Liu, Lei Zhao, Bo Yao, Congying Zhu
School of Aerospace Science and Technology Xidian University
- FP-21 ID:327
A Wireless fingerprint location method based on Target tracking
 Xu Han, Zunwen He
Beijing Institute of Technology
- FP-22 ID:328
Propagation characteristics of Finite Olver beams in chiral medium
 Xiaoru Dong, Zhiwei Cui, Yuanfei Hui
Xidian University
- FP-23 ID:337
The Design of A 3-18GHz Tightly Coupled Dipole Array with An FSS Superstrate
 Nan Shao, Weiming Li, Zhenghui Xue, Wu Ren
Beijing Institute of Technology
- FP-24 ID:357
Laser range profile base on convolution of time domain
 Hong Liao, Yanhui Li, Chenglin Han
School of Science, Xidian University
- FP-25 ID:411
Research on Active Adaptive Cancellation Technology for Tight Coupling Interference
 Chao Liu, Yi Li, Yang Li
Naval University of Engineering
- FP-26 ID:415
Analysis of Downlink Channel Estimation Based on Parametric Model in Massive MIMO Systems
 Kai Liu¹, Cheng Tao¹, Liu Liu¹, Yanping Lu¹, Tao Zhou¹, Jiahui Qiu²
¹*Beijing Jiaotong University*
²*Network Technology Research Institute of China United Network Communications Group Co., Ltd*

General Poster Session S: Special Session

- SP-01 ID:258
Preliminary analysis of the effects of magnetic declination on flux-tube integrated linear growth rate of generalized Rayleigh-Taylor instability
 Shucan Ge¹, Tong Xu², Hailong Li¹, Mengyan Zhu², Yanli Hu², Lin Meng¹
¹*University of electronic science and technology of China*
²*China Research Institute of Radiowave Propagation*
- SP-02 ID:259
Study on the construction of low ionosphere physical model in mid-low latitude
 Mengyan Zhu, Tong Xu, Yanli Hu, Shucan Ge, Jian Wu
China Research Institute of Radiowave Propagation
- SP-03 ID:279
Compensation of Ionospheric Phase Scintillation of ALOS PALSAR Imaging
 Cheng Wang, Qingxin Chen, Liang Chen, Haisheng Zhao
China Academy of Space Technology
- SP-04 ID:371
Study of Low-Latitude Ionospheric Response to the 26 August 2018 Geomagnetic Storm Using In Situ Satellite Measurements

Ruoxiao Liu, Yuhua Zou

Guilin University of Electronic Technology

SP-05 ID:377

Dependence of altitudes of HFPL and HFIL on electron temperature during ionospheric heating

Jun Wu, Jian Wu, Zhengwen Xu, Yabin Zhang, Tong Xu, Haisheng Zhao

China Research Institute of Radiowave Propagation

SP-06 ID:385

Investigations of ionospheric E-region field-aligned irregularities observed with Kunming VHF radar

Yunzhou Zhu, Zhongxin Deng, Tong Xu

China Research Institute of Radiowave Propagation

Brief Introduction to Sponsors

National Key Laboratory of Electromagnetic Environment



The National Key Laboratory of Electromagnetic Environment (LEME), supported by China Research Institute of Radiowave Propagation (CRIRP), set up in 1994, which covers the researches of radio wave in the frequency range from ULF to Millimeter. The main research fields include radio propagation in the troposphere and ionosphere, radio propagation in the mobile environment and radio propagation mechanism in special environment.

Based on the national radio wave propagation observations networks of CRIRP, many experiments and theoretic researches have been carried out in LEME with the date of ionospheric vertical sounding, oblique sounding, ionospheric scintillation, TEC measurement, rain attenuation measurement, incoherent scatter radar, MF radar, ST radar, Meteor radar, clutter measurement radar and so on. Based on these experiments and theoretic researches, various wave propagation prediction models, Chinese Reference ionosphere (CRI), the models of radio meteorology over China and the models of radar clutter have been set up, which make the future work of Laboratory to further expand.

LEME participates actively in the relevant international organizations and international co-operative researches, such as the study group 3 of ITU-R, Commission F and G of International Union of Radio Science (URSI), European Incoherent Scatter Scientific Association (EISCAT), Area Pacific Space Cooperation Organization (APSCO), International Space Environment Service (ISES). LEME has been active in activities of Study Group 3 of ITU-R. Many research results support to form or revise the recommendations of ITU-R P serials such as ITU-R.P 617, 530, 841, 676. Meanwhile, LEME has hosted and organized many international academic conferences and activities.



Science and Technology on Communication Networks Laboratory



Science and Technology on Communication Networks Laboratory is a national key lab which started trial operation in 2008 and was formally approved by the state to be established in 2010. The lab is engaged in exploratory, innovative and application fundamental researches as well as the research of major critical technologies in the area of information transmission and dissemination in communication networks. It has established a world-level open scientific research platform of this technical area. Its research level is in a leading place in China, and also has certain international influence. The lab has made great contribution to the development of information transmission and dissemination technology in communication networks in china.

The research scopes of the lab are general technology of communication networks, information transmission technology in communication networks, information dissemination and management technology in communication networks and survivability and security technology in communication networks.

The research teams in the lab are composed of regular personnel and temporary personnel. In 2017, the regular personnel in the lab was 72, among which there was 1 academician of CAE, 62 persons having senior professional titles, 23 having doctor's degree, 2 chief scientist and 1 chief experts of CETC. The young and middle-aged research personnel below 45 years old occupied 70.7%.

In recent 5 years, the lab has won 12 prizes totally in national and provincial level S&T progress, published 356 papers on national and international academic magazines and conferences proceedings, applied for 289 China Invention patents with 132 having been granted.

Science and Technology on Communication Information Security

Control Laboratory

CISC

**Science and Technology on
Communication Information Security Control Laboratory**

Science and Technology on Communication Information Security Control Laboratory is a government-sponsored laboratory engaged in communication information security control technologies fundamental research and application research. The overall science and technology research level of the laboratory reaches domestically advanced, some of which reaches internationally advanced. Led by academician of the China Academy of Engineering (CAE) Yang Xiaoni, a team dedicated in communication information security control technologies is established, the members of which commit themselves to the fundamental and innovation research and have gained great achievements.

The laboratory is equipped with more than 200 units of RF test, simulation and test and EMC test instruments, providing support for the science and technology programs in the aspects of simulation, design and test methods.

Science and Technology on Electromechanical Dynamic Control Laboratory



The Science and Technology on Electromechanical Dynamic Control Laboratory is jointly established by Xi'an Institute of Electromechanical Information Technology and Beijing Institute of Technology. It is headquartered in Xi'an and has a branch office in Beijing. The laboratory was put into operation in October 1996. After more than 20 years of construction, the laboratory currently has fixed assets of 140 million yuan, of which the equipment assets are about 110 million yuan, and the total laboratory area is 9,600 square meters.

The laboratory has advanced and complete software and hardware tools for basic research in detection and control technology. Including international advanced full ballistic synthetic environment laboratory, domestic advanced gas gun group, accelerometer calibration device up to 200,000g, motion and dynamics analysis software such as ADAMS, ANSYS, signal processing and microwave analysis software such as MENTOR, ANSOFT Micro-mechanical testing equipment such as high-performance vector network analyzers, spectrum analyzers, microwaves, millimeter-wave RF monitoring equipment, and X-ray inspection imaging systems.

Science and Technology on Electronic Information Control Laboratory



Science and Technology on Electronic Information Control Laboratory (EICL) was established in 1992. After a three-year trial run, EICL passed the acceptance inspection and became operational in 1995. The research work of EICL includes the following directions:

1. Electronic information control system design
2. Electromagnetic environment simulation and electronic system performance evaluation
3. Signal processing
4. Innovation on concept, theory and method of electronic information control



For years, EICL has been engaged in intensive researches, yielding fruitful scientific and technological achievements and ten more national, provincial and departmental awards.

Adhering to the philosophy of “science is stimulated by communication”, EICL has been endeavoring to expand the cooperation and communication with relevant universities and institutes both at home and abroad through setting up foundations, holding forums as well as hosting or sponsoring conferences.

Schedule at a Glance

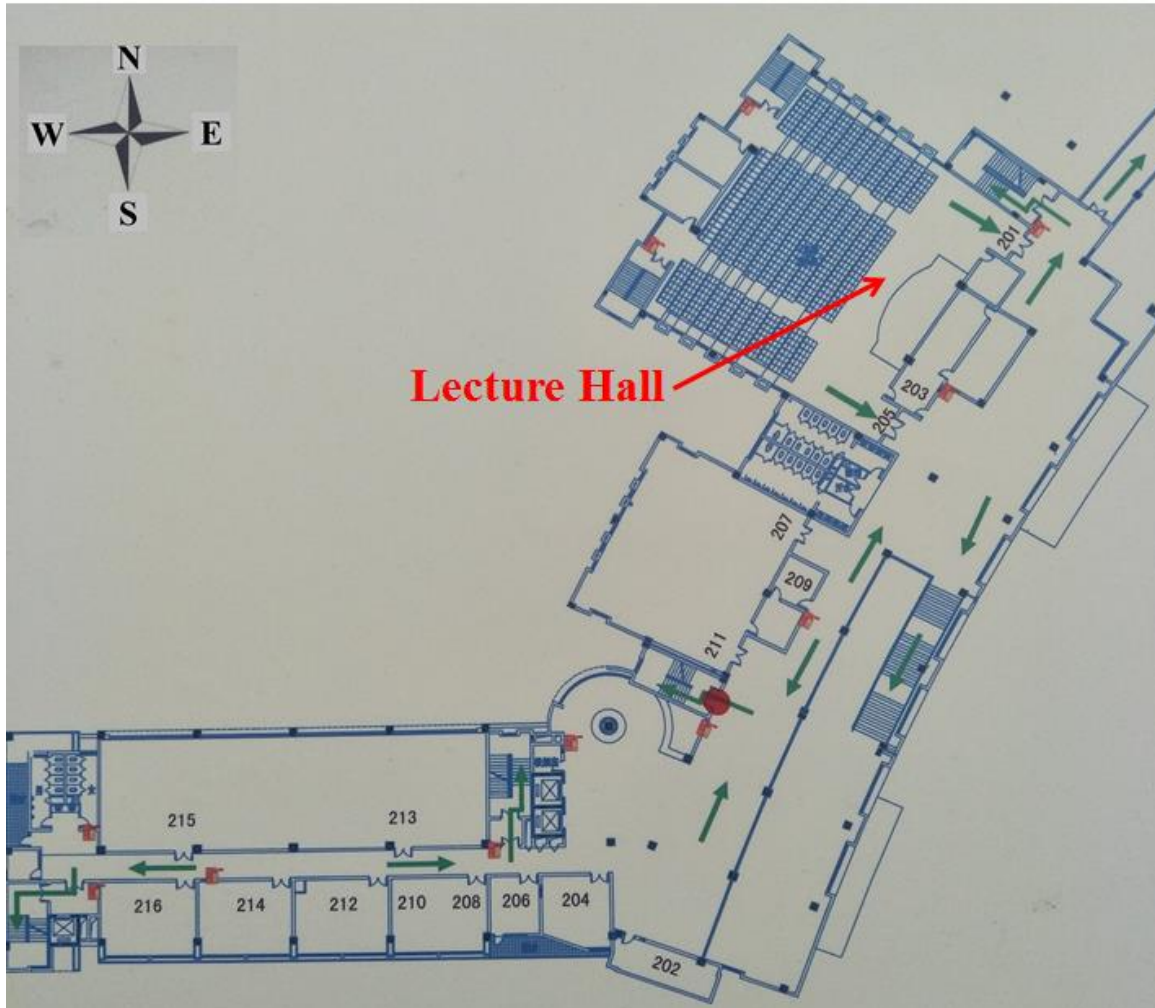
Room		Room A (309-311)	Room B (305-307)	Room C (326-328)	Room D (322-324)	Room E (338)	Floor 3 of Science & Technology Museum
Time							
Dec.4	08:30-09:20	Opening Ceremony (Venue: Lecture Hall, Floor 2 of Science & Technology Museum)					
	09:20-09:50	Group Photo (Venue: Square of Science & Technology Museum 科技馆前广场)					
	09:50-10:20	Coffee Break					
	10:20-12:00	Keynotes (Venue: Lecture Hall, Floor 2 of Science & Technology Museum)					
	13:30-17:00	Keynotes(Venue: Lecture Hall, Floor 2 of Science & Technology Museum)					
Dec.5	08:30-10:00	A1	B1	C1	D1	S	Poster and Exhibition
	10:30-12:00						
	13:30-15:00	A2	B2	C2	D2	F1	
	15:30-17:00						
Dec.6	08:30-10:00	A3	B3	C3	E1	F2	
	10:30-12:00						
	13:30-15:00	A4	B4	A5	E2	F3	
	15:30-17:00						

Lecture Hall (Floor 2 of Science & Technology Museum, Hangzhou Dianzi University)

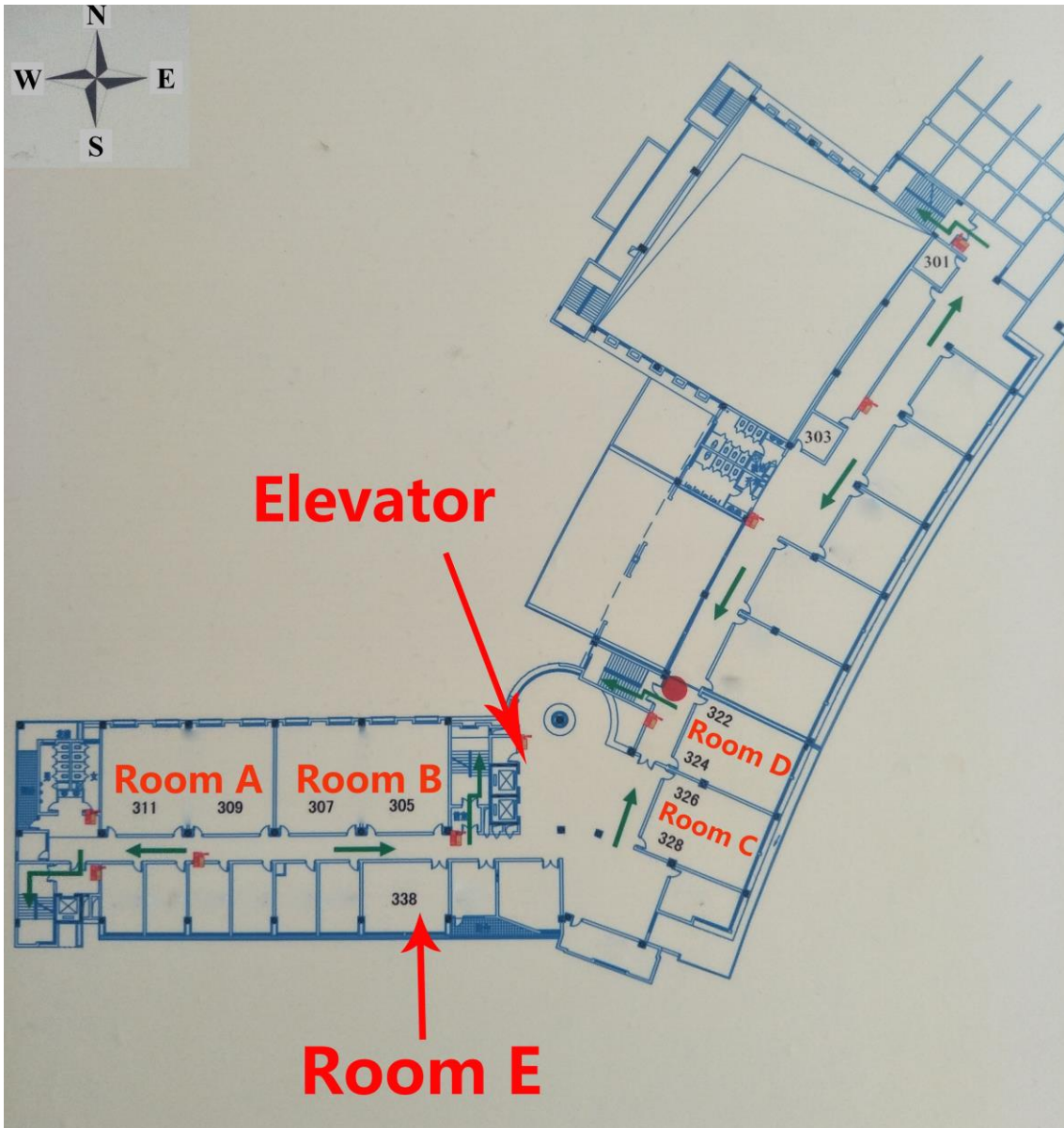
Room A, Room B, Room C, Room D, Room E (Floor 3 of Science & Technology Museum, Hangzhou Dianzi University)

Conference Venue

Tips: The Science & Technology Museum of Hangzhou Dianzi University is closely linked with Hangzhou Shujiang Hotel through the wind and rain bridge on the second floor.



Floor 2 of Science & Technology Museum, HDU



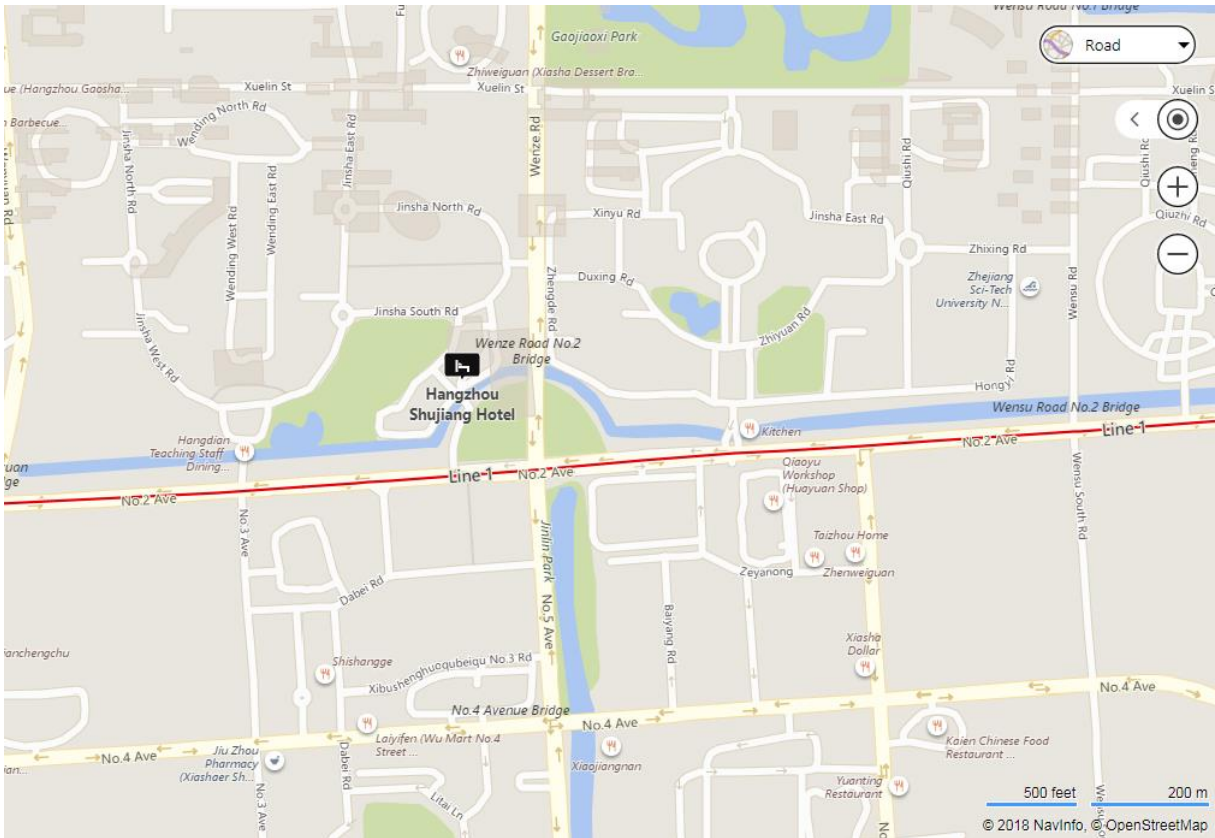
Floor 3 of Science & Technology Museum, HDU

Hangzhou Shujiang Hotel | Science & Technology Museum

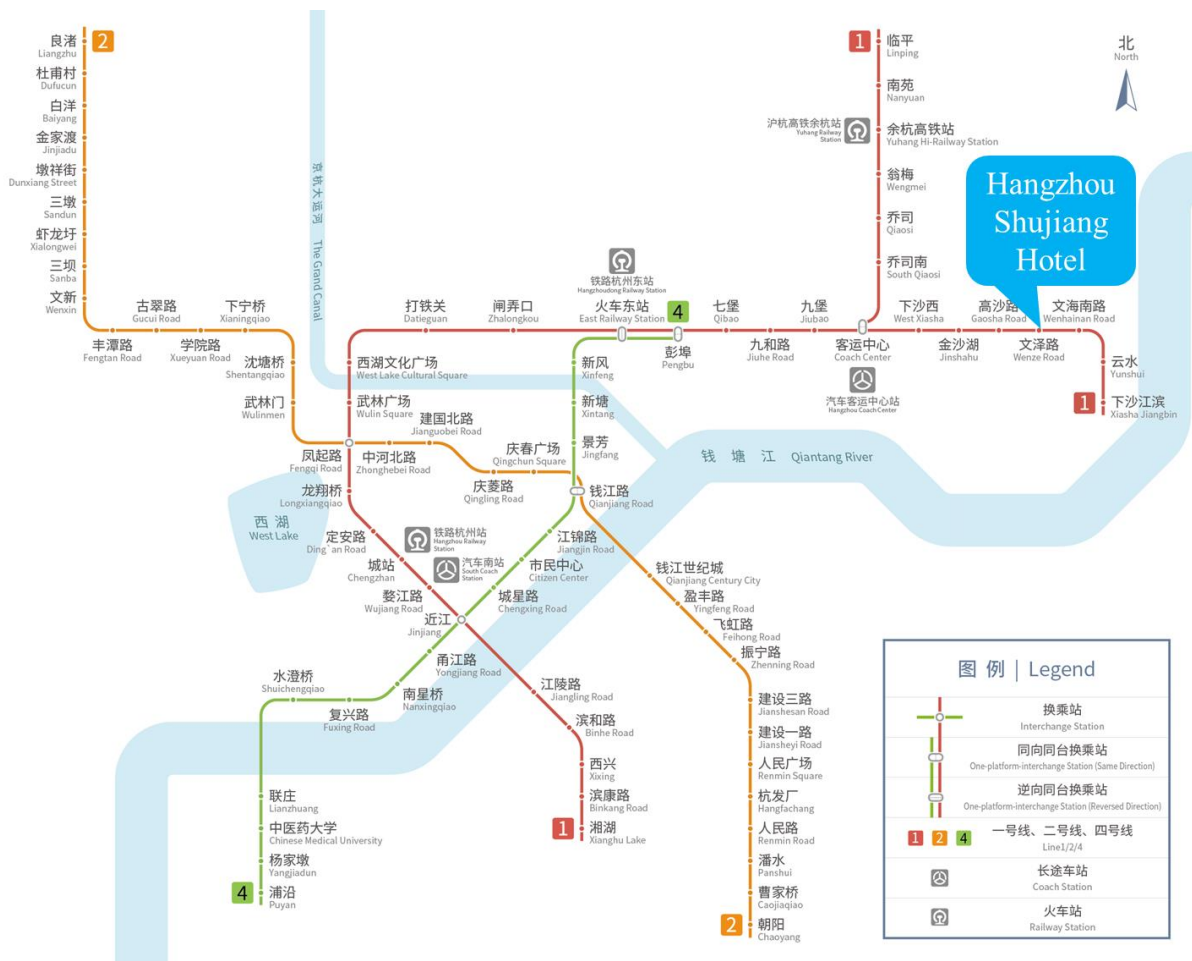
(杭州曙光大酒店 | 杭州电子科技大学科技馆)



Exterior of Hotel and Museum



Location of Hangzhou Shujiang Hotel



Hangzhou Metro System Map