2021 IEEE 9th International Conference on Information, Communication and Networks

2021 年 IEEE 第九届信息，通信和网络国际会议

Xi'an, China | November 25-28, 2021

(Onsite and Virtual)

Organized by	Shaanxi Normal University, China
Co-organized by	Xi`an Jiaotong University, China Northwestern Polytechnical University, China Xi`an University of Posts & Telecommunications, China
Technical Supported by	Macau University of Science and Technology, China Xi'an University of Technology, China Huazhong University of Science and Technology, China Shaanxi University of Science & Technology, China Liaocheng University, China

TABLE OF CONTENT

WELCOME ADDRESS

On behalf of the Organizing Committee, we warmly invite you to join the 2021 IEEE 9th International Conference on Information, Communication and Networks (ICICN 2021) which is to be held in Xi'an, China during November 25-28, 2021. ICICN 2021 is organized by Shaanxi Normal University, China, co-organized by Xi`an Jiaotong University, China, Northwestern Polytechnical University, China, Xi`an University of Posts & Telecommunications, China, technical supported by Macau University of Science and Technology, China, Xi'an University of Technology, China, Huazhong University of Science and Technology, China, Shaanxi University of Science & Technology, China, Liaocheng University, China etc. The conference gratefully acknowledges the support of K.C. Wong Education Foundation, Hong Kong.

More than 260 attendees will join and share the latest research. The conference has invited 6 Plenary Speakers to give plenary speeches, 160 invited speakers will discuss areas among Optical Communications and Networks, Space Communications, Navigation and Tracking, Wireless Network, Ultrafast Photonics, Optical Sensors, Advanced Optical Imaging (AOI), Quantum Information and Related Quantum Technologies, Photonics and Optoelectronic Devices of 2D Materials etc.

After several rounds of review procedures, the program committee accepted about 100 papers to be presented on ICICN 2021. More than 25 posters, two competition sessions and 46 technical sessions will be held. One best presentation will be selected from each session, evaluated from: originality; applicability; technical Merit; qualities of PPT; English. The best one will be announced at the end of each Session.

We express our sincere appreciation to all the individuals who have contributed to ICICN 2021 in various ways. Special thanks are extended to our colleagues in the program committee for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had delicate their time and efforts in planning, promoting, organizing and helping the conference.

Wish you have a nice day in Xi’an.

Yours sincerely,
Conference Organizing Committees

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西安天骊君廷大酒店
Grand Barony Hotel Xi'an

地址：西安市雁塔区太白南路 198 号
No.198 South Taibai Road ,Yanta District, Xi an City, Shanxi Province

Methods to get to the Venue.

- From the Xi'an Xianyang International Airport(西安咸阳国际机场)
  Taxi: About 50 Minutes to the venue

- From XI'AN north railway station (西安北站)
  Taxi: About 45 Minutes to the venue
  Metro: 西安北站地铁站上车 2 号线到小寨转 3 号线在太白南路站下车

Time UTC/GMT+8

Weather

The Weather Situation of Xi'an in China

Average daily minimum temperature	Average daily highest temperature
-1℃	8℃

*Part of the local information above comes from the network.

Notice

- Please take good care of your belongings on the conference site, so as to avoid the loss. You will be held personally responsible for any loss for your belongings.
  请随身携带贵重物品，以防丢失。您将对您的财物的任何损失承担个人责任。
- For participants' safety and participation needs, please wear your name card on the conference site and no entrance in conference room for no-wearing name card participants. It is not allowed to bring unrelated people to conference room.
  为了参会人员的安全和参会需要，请在会场佩戴代表证，不佩戴名片的参会人员不得进入会议室，不允许将与会议无关的人员带入会议室。
- Please ensure that you are from the low risk area and show the green code when you join the meeting. And Wear the Mask when you at the public Plac.
  请确保您来自低风险地区，参会出示健康绿码，在公共场合全程佩戴口罩
- Please return your name card to us if you do not need it but do not litter it.
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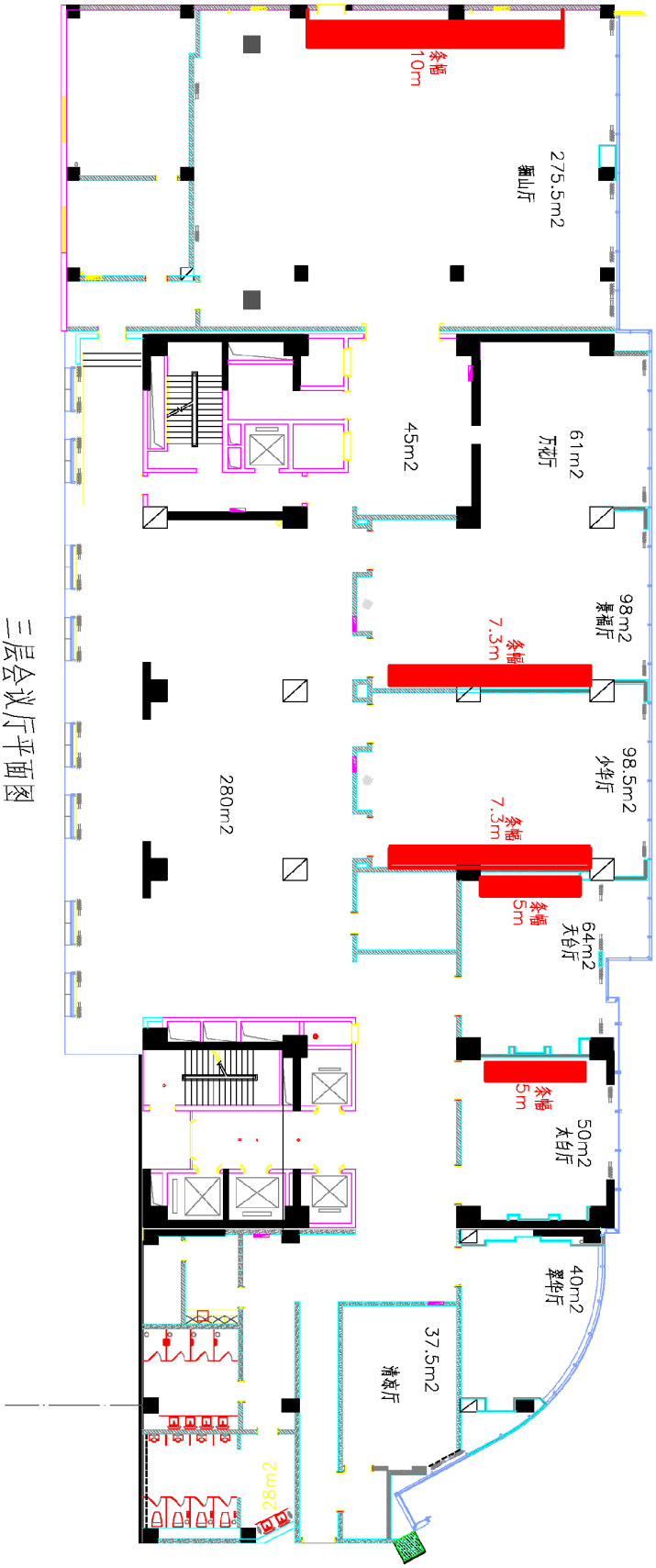
3RD FLOOR PLAN



GUIDELINE FOR ATTENDANCE

Onsite Oral Presentations

Onsite Presenter Including

1, Authors who will present their accepted papers onsite orally

2, Invited speakers who will attend onsite for tracks of the conference

Authors' oral presentations have been allocated 15 minutes of effective presentation time, and very invited speaker for tracks would have 20 minutes for oral presentations, including Q/A time between Session Chair and speakers.

Please be at the session room 15 minutes before session starts.

A video projector and a PC will be available in all conference rooms. Speakers suggested not use their own laptop computer.

Bring your presentation on a USB memory stick in MS-PowerPoint or Adobe PDF formats, and upload it in the Session Room computer no later than 10 minutes prior to your session start! You can also bring it earlier, during the coffee/lunch breaks before your presentation. Please upload your presentation in a right place in order to find it easily at the time of presentation.

Please wear formal clothes or national characteristics of clothing for participation.

PowerPoint Instructions. For MS-PowerPoint presentations, please use the following versions only: PP 97-2003 (*.ppt) or 2007, 2010 to guarantee that it will be opened successfully on the on-site PC

We recommend to the PPT/PPTX format instead of PPS. All videos or animations in the presentation must run automatically!

Pictures/Videos. We cannot provide support for embedded videos in your presentation; please test your presentation with the on-site PC several hours before your presentation.

In case your video is not inserted in MS-PowerPoint, it is possible to have it in other formats – MPEG 2,4, AVI (codecs: DivX, XviD, h264) or WMV. Suggested bitrate for all mpeg4 based codecs is about 1 Mbps with SD PAL resolution (1024x576pix with square pixels, AR: 16/9).

Fonts. Only fonts that are included in the basic installation of MS-Windows will be available (English version of Windows). Use of other fonts not included in Windows can cause wrong layout/style of your presentation.

Suggested fonts: Arial, Times New Roman.

If you insist on using different fonts, these must be embedded into your presentation by choosing the right option when saving your presentation:

Click on "File", then "Save As"

Check the "Tools" menu and select "Embed True Type Fonts"

Online Poster Presentations

Suggested Poster with size of 60cm*80cm (width*height), with conference short name and paper ID on right up corner.

Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.

During poster session, authors have about 5 Mins for the presentation, when attendees have questions about your poster, please .explain and answer the questions.

Online Presentation

Onsite Presenter Including

1, Authors who will present their accepted papers online

2, Invited speakers who will attend online for tracks of the conference

Tool

ZOOM (**zoom.com.cn or zoom.us**) will be used for the whole online event. On the buttom of the web page, you can choose download the app for free and then choose 'JOIN A MEETING ', then input room's ID.

As usual you could not creat an account now, so you can join in our conference as a visitor, ZOOM may ask you to input your phone number and the passwords they sent to your number to verify.

How to Use Zoom

https://support.zoom.us/hc/en-us/articles/206618765-Zoom-Video-Tutorials

Presentation Tips

1, Please prepare a digital device with **Microphone** (mandatory) and Webcam (optional), a **computer or laptop** is recommended; Andmake sure you are connected to a stable and **high-quality Wi-Fi network**, or 4G/5G or Internet if available.

2, Presentation Time: **Total 15 Mins** for online oral presenter and **20 Mins** for **invited speaker** from tracks including 5 Q&A time.

3, Read the detailed program, check the time and Zoom information of the session that you will do your presentation.

4, One best Presentation will be chosen from each presentation session and announced at the end of the session. The conference secretary will email you the certificates after the conference.

5, An **English PPT** must be prepared and use English during the presentation

6, Each Presentation will be recorded, if you don't want it, please inform our staff ahead of time.

7, Please enter in your session's room 10 Mins earlier of the start of sessions.

ROOM Information for the Test

TEST ROOM 1:

Meeting Link: https://zoom.us/j/96811821063

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TEST ROOM 2:

Meeting Link: https://zoom.us/j/93154025904

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TEST ROOM 3:

Meeting Link: https://zoom.us/j/93577664322

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Plenary Speakers

Plenary Speaker I

9:25-10:05, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. Zhiyi Wei

Institute of Physics (IOP) of the Chinese Academy of Sciences, China

Title: Progress of Ultra-Low Phase Noise Optical Frequency Comb and Coherent Frequency Transfer

Abstract:

The advent of femtosecond optical frequency comb (OFC) technology has led to endless applications, such as frequency metrology, precision spectroscopy, attosecond science etc. To pursue a stable OFC, one of the most challenge works is to precise control and lock f_{ceo}, the carrier-envelope phase shift frequency, result in a low phase noise. Recently, we achieved the first all-solid-state Kerr Lens Mode-locked Yb:CYA laser. Locking f_{ceo} with forward technology, resulting in a new all-solid-state OFC with ultra-low phase noise. In our experiment, the output power, pulse width and repetition frequency are 200mW, 57fs and 84MHz respectively. The f_{ceo} signal measured in-loop is fed back directly to an AOFS to control the drift, and the CEO signal measured in the out-loop is used to analyze the locking results. The CEO integral phase noise (1Hz-1mhz) of the optical frequency comb is 79.3mrad. This is also the lowest CEO phase noise in the 1um band based on all solid state lasers. In addition, through the analysis of the power spectral density of phase noise below 1Hz and the long-term frequency instability, it is shown that the scheme is more advantageous in the high-frequency phase noise suppression.

Locking the OFC to an ultrastable CW laser, we consisted of a perfect optical frequency synthesis. The AOFS forward feedback locking technology can also be used for the coherent connection between CW laser and optical frequency comb. We further used the pre-feedback technology to realize the coherent transmission of frequency stability. By measure the beat frequency signal between a CW 1064nm laser and the OFC, and then drive the AOFS, we locked the OFC to a stable CW 972 nm light source. Before locking, the frequency drift of the 1064nm cw laser is about tens of kHz per hour. After locking, the frequency drift deviation of the diffraction light at the next order in the integration time of 10000 s is only 4.1 mHz, corresponding to a frequency stability of 1.5×10^{-17}/s. The noise is greatly suppressed, and the long-term stability is also greatly improved.

Biography:

Prof. Wei Zhiyi is the group leader of ultrashort pulse laser technology and precision measurement at Institute of Physics, Chinese Academy of Sciences. He has been devoting this field since 1984 and made remarkable progresses in the generation, amplification, synchronization, frequency conversion and phase control of femtosecond laser pulses, broken the world records of the shortest laser pulse and the highest peak power of Ti:sapphire laser. In addition to, he generated the first attosecond laser pulse in China. Up to now, he published more than 400 peer review papers, invented more than 30 authorized patents, reported more than 80 invited talks at international conferences. As the first contributor, he won the second prize of National Technology Invention Award and the second prizes of Science and Technology Progress Award of Chinese Academy of Sciences. He also obtained the awards of Young Scientist of the Chinese Academy of Sciences and

Hu Gangfu Physics Award. Due to his contributions in ultrafast photonics and ultrahigh intensity laser, he was supported by National Science Fund for Distinguished Young Scholars in 2002, and elected as Optica Fellow in 2017 and Chinese Optical Society (COS) fellow in 2020 respectively.

Plenary Speaker II

10:05-10:45, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. Xianbin Wang

Fellow of Canadian Academy of Engineering and IEEE Fellow

Western University, Canada

Title: From 5G to 6G: Wireless Evolution in a Hyper-Connected World

Abstract:

The dramatic evolution of wireless communication technologies from 1G to 6G and their rapid convergence with diverse applications signify the ongoing industrial and societal transformation. With the significantly growing data traffic, massive connected devices and diverse services to be supported, the future success of our hyper-connected society relies heavily on 5G/6G enabled vertical industries in empowering a smart world and addressing the evolving needs of people and society.

The fundamental challenge of wireless evolution from 5G to 6G is how to support tailored application/service requirements, dynamic knowledge exchange and distributed capability integration by intelligent operation and orchestration of future vertical systems with constrained communication and computing resources. The talk starts with a brief overview of wireless evolution from 1G to 5G and 6G. The focus of this presentation is to analyze the need for intelligent 6G communications, identify the essential key enabling technologies, and present the related ongoing research activities and future development directions. Specifically, this talk will cover: i) Need and challenges of the intelligent wireless communications for 5G/6G, e.g. diverse QoS provisioning, application-oriented communication and networking, and integration of data, knowledge and capabilities; ii) Key technical aspects of intelligent 6G communications, including intelligent resource utilization/network slicing, machine learning algorithm design, situational-aware network operation, and iii) Intelligent integration/orchestration of 5G/6G systems in vertical applications and open research problems.

Biography:

Dr. Xianbin Wang is a Professor and Tier-1 Canada Research Chair at Western University, Canada. He received his Ph.D. degree in electrical and computer engineering from the National University of Singapore in 2001.

Dr. Wang is a Fellow of Canadian Academy of Engineering, a Fellow of Engineering Institute of Canada, a Fellow of IEEE and an IEEE Distinguished Lecturer. His current research interests include 5G/6G technologies, Internet-of-Things, communications security, machine learning and intelligent communications. Dr. Wang has over 450 highly cited journal and conference papers, in addition to 30 granted and pending patents and several standard contributions.

He has received many awards and recognitions, including Canada Research Chair, CRC President's Excellence Award, Canadian Federal Government Public Service Award, Ontario Early Researcher Award and six IEEE Best Paper Awards. He currently serves/has served as an Editor-in-Chief, Associate Editor-in-Chief, Editor/Associate Editor for over 10 journals. He was involved in many IEEE conferences including GLOBECOM, ICC, VTC, PIMRC, WCNC, CCECE and CWIT, in different roles such as general chair, symposium chair, tutorial instructor, track chair, session chair, TPC co-chair and keynote speaker. He has been nominated as an IEEE Distinguished Lecturer several times during the last ten years. Dr. Wang is currently serving as the Chair of IEEE London Section and the Chair of ComSoc Signal Processing and Computing for Communications (SPCC) Technical Committee.

Plenary Speaker III

11:00-11:40, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. Lingyang Song

IEEE Fellow

Beijing University, China

Title: MetaEverything: Intelligent MetaMaterial aided Sensing and Communications

Abstract:

Intelligent MetaMaterial recently stands out as a novel approach to improve the quality of communication links. The talk will provide the state-of-the-art of research on meta-surface assisted sensing and communications from the perspectives of physical, MAC, network, and application layers. It focuses on two main types of meta-surface based applications, i.e., cellular communications and RF sensing. It will discuss the meta-surface hardware design as well as machine learning techniques for different sensing applications. Technical issues related to communications will also be addressed including beamforming scheme design, phase shift optimization, and MAC layer protocol design.

Biography:

Lingyang Song received his PhD from the University of York, UK, in 2007, where he received the K. M. Stott Prize for excellent research. He worked as a research fellow at the University of Oslo, Norway until rejoining Philips Research UK in March 2008. In May 2009, he joined the School of Electronics Engineering and Computer Science, Peking University, and is now a Boya Distinguished Professor. He is the co-author of a number of best paper awards, including IEEE ComSoc Leonard G. Abraham Prize in 2016, IEEE ICC 2014, IEEE ICC 2015, IEEE Globecom 2014. He has served as a Distinguished Lecturer of IEEE Communications Society, an Area Editor of IEEE Transactions on Vehicular Technology, an Editor of IEEE Transactions on Communications. He is a Fellow of IEEE, and a Clarivate Analytics Highly Cited Researcher in 2018.

Plenary Speaker IV

11:40-12:20, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. Feifei Gao

IEEE Fellow

Tsinghua University, China

Title: Deep Learning for Physical Layer Communications: An Attempt towards 6G

Abstract:

Merging artificial intelligence in to the system design has appeared as a new trend in wireless communications areas and has been deemed as one of the 6G technologies. In this talk, we will present how to apply the deep neural network (DNN) for various aspects of physical layer communications design, including the channel estimation, channel prediction, channel feedback, data detection, and beamforming, etc. We will also present a promising new approach that is driven by both the communications data and the communication models. It will be seen that the DNN can be used to enhance the performance of the existing technologies once there is model mismatch. More interestingly, we will show that applying DNN can deal with the conventionally unsolvable problems, thanks to the universal approximation capability of DNN. With the well-defined propagation model in communication areas, we also attempt to explain the DNN under the scenario of channel estimation and reach a strong conclusion that DNN can always provide the asymptotically optimal channel estimations. We have also build test-bed to show the effectiveness of the AI aided wireless communications. In all, DNN is shown to be a very powerful tool for communications and would make the communications protocols more intelligently. Nevertheless, as a new born stuff, one should carefully select suitable scenarios for applying DNN rather than simply spreading it everywhere.

Biography:

Prof. Gao's research interest include signal processing for communications, array signal processing, convex optimizations, and artificial intelligence assisted communications. He has authored/ coauthored more than 150 refereed IEEE journal papers and more than 150 IEEE conference proceeding papers that are cited more than 10000 times in Google Scholar. Prof. Gao has served as an Editor of IEEE Transactions on Wireless Communications, IEEE Journal of Selected Topics in Signal Processing (Lead Guest Editor), IEEE Transactions on Cognitive Communications and Networking, IEEE Signal Processing Letters, IEEE Communications Letters, IEEE Wireless Communications Letters, and China Communications. He has also served as the symposium co-chair for 2019 IEEE Conference on Communications (ICC), 2018 IEEE Vehicular Technology Conference Spring (VTC), 2015 IEEE Conference on Communications (ICC), 2014 IEEE Global Communications Conference (GLOBECOM), 2014 IEEE Vehicular Technology Conference Fall (VTC), as well as Technical Committee Members for more than 50 IEEE conferences.

Plenary Speaker V

13:30-14:10, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. Alexey Kavokin

Headliner Award

Westlake University, China

Title: Qubits Based on Liquide Light: A Polarition Platform for Quantum Computation

Abstract:

Superconducting flux qubits are based on a superposition of clock-wise and anti-clockwise currents formed by millions of Cooper pairs. In order to excite the system in a superposition state, the half-quantum flux of magnetic field is passed through the superconducting circuit containing one or several Josephson junctions. The system is forced to generate a circular current to either reduce the magnetic flux to zero or to build it up to a full-quantum flux. We argue that a valuable alternative to superconducting flux qubits may be offered by qubits based on superfluid currents of quasiparticles of liquid light: exciton-polaritons, propagating in plane of semiconductor microcavities [1]. Circular currents of exciton-polaritons mimic the superconducting flux qubits being composed by a large number of bosonic quasiparticles that compose a single quantum state of a many-body condensate. The essential difference comes from the fact that polaritons are electrically neutral, and the magnetic field would not have a significant effect on a polariton current. We note however, that the phase of a polariton condensate must change by an integer number of 2π, when going around the ring. If one introduces a π-phase delay line in the ring, the system is obliged to propagate a clockwise or anticlockwise circular current to reduce the total phase gained over one round-trip to zero or to build it up to 2π. We show that such a π-delay line can be provided by a dark-soliton embedded into a ring condensate and pinned to a potential well created by the C-shape non-resonant pumpspot. The physics of resulting split-ring polariton condensates is essentially similar to the physics of flux qubits. In particular, they exhibit pronounced Bloch oscillations passing periodically through clockwise and anticlockwise current states. We argue that qubits based on split-ring polariton condensates may be characterized by a very high figure of merit due to the topological protection of superfluid circular currents. Moreover, as the Bose-Einstein condensation and superfluidity of exciton-polaritons were observed at the room temperature [2], quantum networks based on polariton qubits would not require cryogenic operation temperatures. This makes them a valuable alternative to superconducting qubits [3].

1. A.Kavokin, J.J. Baumberg, G. Malpuech and F.P. Laussy, Micorcavities, Oxford Science Publications, Oxford, 2017, ISBN: 9780198782995

2. "Room-Temperature Spin Polariton Diode Laser", Bhattacharya A, Baten MZ, Iorsh I, Frost T, Kavokin A, Bhattacharya P, Phys. Rev. Lett. 119, 6, 67701 (2017)

3. “Split-ring polariton condensates as macroscopic two-level quantum systems”, Y. Xue, I. Chestnov, E. Sedov, X. Ma, S. Schumacher, A. Fedorov and A. Kavokin, Physical Review Research, 2021, in press.

Biography:

Prof. Alexey Kavokin has received his PhD in Physics from the Ioffe Institute of Russian Academy of Sciences in 1993. In 1998 he has become a Professor of the Blaise Pascal University, Clermont-Ferrand, France. In 2005 he has joined the University of Southampton, United Kingdom, as a Chair of Nanophysics and Photonics. In 2018 he has moved to China where he now works as a Chair Professor and Director of the International Center for Polaritonics at the Westlake

university, Hangzhou. The track record of Prof. Kavokin includes over 400 publications mostly devoted to the physics of strongly coupled light-matter systems. He authored the monographs “Cavity polaritons” (Elsevier, 2003) and “Microcavities” (Oxford University Press, 2007, 2013). His awards include the Marie Curie Chair of Excellence in Rome (2006), the Megagrant of the Government of Russian Federation (2011) and the Established Career Fellowship of the EPSRC (United Kingdom, 2013). Main research achievements include the theory of Polariton lasing, the predictions of Optical Spin Hall and Spin Meissner effect and the series of works toward observation of the Light Induced Superconductivity. Getting more here.

Plenary Speaker VI

14:10-14:50, November 26th, 2021
君誉宴会厅 (27F) | ZOOM ID: 96811821063

Prof. John C.S. Lui

ACM, IEEE and HKAES Fellow

The Chinese University of Hong Kong, China

Title: Optimizing Mixture Importance Sampling and Online Learning for Network Simulations

Abstract:

Importance sampling (IS) is widely used in rare event simulation, but it is costly to deal when there are many simultaneous rare events For example, a rare event can be the failure to provide the quality-of-service guarantee for a critical network flow. Since network providers often need to deal with many critical flows (i.e., rare events) simultaneously, if using IS alone, providers have to simulate each rare event with its customized importance distribution individually. To reduce such cost, we propose an efficient mixture im- portance distribution for multiple rare events, and formulate the mixture importance sampling optimization problem (MISOP) to select the optimal mixture. We first show that the "search direction" of mixture is computationally expensive to evaluate, making it challenging to locate the optimal mixture. We then formulate a "zero learning cost" online learning framework to estimate the "search direction", and learn the optimal mixture from simulation samples of events. We develop two multi-armed bandit (MAB) online learning algorithms to: (1) Minimize the sum of estimation variances with a regret of (lnT)2/T; (2) Minimize the simulation cost with a regret of □ln(T)/T , where T denotes the number of simulation samples. We demonstrate our method on a realistic network and show that it can reduce the cost measures (i.e., sum of estima tion variances and simulation cost) by as high as 61.6% compared with the uniform mixture IS.

Biography:

John C.S. Lui is currently the Choh-Ming Li Chair Professor in the Department of Computer Science & Engineering (CSE) at The Chinese University of Hong Kong (CUHK). He received his Ph.D. in Computer Science from UCLA. His current research interests are in online learning algorithms and applications (e.g., multi-armed bandits, reinforcement learning), machine learning on network sciences and networking systems, large scale data analytics, network/system security, network economics, large scale storage systems and performance evaluation theory. John is currently the senior editor in the IEEE/ACM Transactions on Networking, and has been serving in the editorial board of ACM Transactions on Modeling and Performance Evaluation of Computing Systems , IEEE Transactions on Network Science & Engineering, IEEE Transactions on Mobile Computing, IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, Journal of Performance Evaluation, Journal of Network Science and International Journal of Network Security. John is an elected member of the IFIP WG 7.3, Fellow of ACM, Fellow of IEEE, Senior Research Fellow of the Croucher Foundation, Fellow of the Hong Kong Academy of Engineering Sciences (HKAES), and was the past chair of the ACM SIGMETRICS (2011-2015). His personal interests include films and general reading. (more)

Conference Agenda

November 25th, 2021

Onsite Participants (3F)	
10:00-17:00	Onsite registration (Collection conference materials)

*Note: Collecting materials is available on November 26 and 27.

Online Test			
	ZOOM ID: 968 1182 1063	**ZOOM ID: 931 5402 5904**	**ZOOM ID: 935 7766 4322**
9:30-10:30	Online Plenary Speakers	Session 1 & 2	Session 3 & 4
10:30-11:00	Morning Break		
11:00-12:00	Session 5 & 6	Session 7 & 8	Session 9 & 10
12:00-13:30	Lunch Break		
13:30-14:30	Session 11 & 12	Session 13 & 14	Session 15 & 16
14:30-15:00	Break		
15:00-16:00	Session17 & 18	Session 19 & 20	Session 21 & 22
16:00-16:30	Break		
16:30-17:30	Session 23 & 24	Session 25	

November 26th, 2021

Time	Arrangements	Venue
	Chair: Prof. Hairong Zheng, Shaanxi Normal University. China (General Chair)	君誉宴会厅 (27F) **ZOOM ID: 96811821063**
8:30-8:50	**Opening Ceremony** **Welcome Address: Prof. Guian Li,** Shaanxi Normal University, China (**Member of the Standing Committee of the School Party Committee**) **Opening Remarks: Prof. Perry Ping Shum,** South University of Science and Technology, China (OSA Fellow, SPIE Fellow) (**General Chair**) **Program Address: Prof. Xiaohui Li**, Shaanxi Normal University, China (**General Co-chair**)	
8:50-9:25	**Group Photo**	
	Chair: Prof. Xiaohui Li, Shaanxi Normal University, China (General Co-chairs)	
9:25-10:05	**Plenary Speaker I** **Prof. Zhiyi Wei,** Institute of Physics (IOP) of the Chinese Academy of Sciences, China **Title:** Progress of Ultra-low Phase Noise Optical Frequency Comb and Coherent Frequency Transfer	
10:05-10:45	**Plenary Speaker II** **Prof. Xianbin Wang,** Western University, Canada **Title:** From 5G to 6G: Wireless Evolution in a Hyper-Connected World	
10:45-11: 00	Coffee Break	

	Chair: Prof. Liyong Ren, Shaanxi Normal University, China	
11:00-11:40	**Plenary Speaker III** **Prof. Lingyang Song,** Beijing University, China **Title:** MetaEverything: Intelligent MetaMaterial aided Sensing and Communications	
11:40-12:20	**Plenary Speaker IV** **Prof. Feifei Gao,** Tsinghua University, China **Title:** Deep Learning for Physical Layer Communications: An Attempt towards 6G	
12:20-13:30	Lunch Break (西餐厅: 2F)	
	Chair: Prof. Pei Zhang, Xi'an Jiaotong University, China	
13:30-14:10	**Plenary Speaker V** **Prof. Alexey Kavokin,** Westlake University, China **Title:** Qubits Based on Liquide Light: A Polarition Platform for Quantum Computation	
14:10-14:50	**Plenary Speaker VI** **Prof. John C.S. Lui,** The Chinese University of Hong Kong, China **Title:** Optimizing Mixture Importance Sampling and Online Learning for Network Simulations	
14:50-15:05	Coffee Break	

15:05-16:35	**Best Paper Competition I (君誉宴会厅: 27F)** **Zoom ID: 968 1182 1063**	**Best Paper Competition II (Online)** **Zoom ID: 931 5402 5904**
	C1004, C1044 (Online), C1089(Online), C1094, C1127(Online), C1150 (Online)	C1055, C1010, C1020, C14004, C1128, C1101
16:35-16:50	Break	
16:50-17:50	**Poster Session (Online) &Exhibition** **Zoom ID: 968 1182 1063 (Attendees can Watch in room 君誉宴会厅: 27F)** **Link for all the poster: http://icicn.org/poster.html**	
	C1015, C1024, C1025, C1032, C1034, C1039, C1042, C1047, C1054, C1057, C1060, C1069, C1081, C1095, C1119, C1123-A, C1125-A, C1143, C1144, C1145, C1147, C14002, C14003	

18:00-19:00	**Award Banquet**

November 27th, 2021
(Online and Onsite)

	Room: 景福厅 (3F) Zoom ID 968 1182 1063	Room: 天台厅 (3F) Zoom ID 931 5402 5904	Room: 太白厅 (3F) Zoom ID 935 7766 4322	Room: 万花厅 (3F) Zoom ID 851 5181 0856	Online Zoom ID 915 8899 7268
9:00-10:25	**Session 1-A** Optical Communications and Networks Xuwei Xue (Online) Wang Qian (Online) Jiayi Yu Yang Yue (Online)	**Session 2** Machine Learning and Artificial Intelligence Jun Qin Zaidao Wen C1008 (Online) C1156 C1098	**Session 3-A** Simultaneous Detection Technology of Multiple Gases Chaotan Sima (Online) Wenjun Ni Ke Chen (Online) Wei Chen (Online)	**Session 4-A** Photonics and Optoelectronic Devices of 2D Materials Bobo Tian (Online) Feng Li Zhenxing Wang (Online)	**Session 5-A** Quantum Information and Related Quantum Technologies Jietai Jing (Online) Kai Sun (Online) Chao-Yuan Jin (Online) Yong Zhang (Online)
10:25-10:35	Morning Break				
10:35-12:15	**Session 6-A** Fiber-based Devices and Applications Yaofei Chen Dapeng Zhou (Online) Kun Liu (Online) Jiangming Xu Wentao Zhang	**Session 5-B** Quantum Information and Related Quantum Technologies Yongquan Zeng Xiaolong Su (Online) Zhi-Han Zhu Guo-Yong Xiang (Online) Chen Dong	**Session 7-A** Advanced Optical Imaging (AOI) Wei Liu Dan Dan Haofeng Hu Jian Liang Peng Gao C1050-A	**Session 4-B** Photonics and Optoelectronic Devices of 2D Materials Xingwang Zhang (Online) Lin Wang Xinlong Xu Zegao Wang (Online) Jing Ning	**Session 8** Mobile Communications and Wireless Networks C1096 (Online) C1030 (Online) C1118 (Online) C1124 (Online) C1001 (Online) C1036 (Online)
12:20-13:30	Lunch Break (西餐厅: 2F)				
13:30-15:30	**Session 9-A** Ultrafast Photonics Luming Zhao (Online) Ruohui Wang Weiqing Gao Meisong Liao Dong Mao (Online) Jiaqi Zhou (Online) C1122-A	**Session 10-A** Wireless Network Jianhua Tang Mingxiong Zhao (Online) Rui Chen Ronghui Hou Liang Wang Howard Hao Yang	**Session 11** Computer and Intelligent Communication System C1009 (Online) C1029 (Online) C1086 (Online) C1108 C1109 C1157 C15003	**Session 4-C** Photonics and Optoelectronic Devices of 2D Materials Jinying Zhang Jian Zhou Liang Li (Online) Jie Jiang (Online) Bo Peng (Online)	**Session 12-A** Optical Sensors Weili Zhang (Online) Zhang Xia (Online) Nan-Kuang Chen (Online) Yanhong Wang (Online) Hongyan Yang (Online) Chunying Guan (Online)
15:45-16:00	Afternoon Break				
16:00-18:00	**Session 9-B** Ultrafast Photonics Wenjun Liu Lu Li Anhui Liang Yufeng Song Zhichao Luo (Online) Zhijun Yan(Online)	**Session 13-A** Optoelectronic Devices Li Pei (Online) Xiangchen Cui Yani Zhang Xiaobo Xing Yapei Peng (Online) Jiajie Chen (Online)	**Session 12-B** Optical Sensors Chen Li Changrui Liao Yuan Shi Weijun Ling Xiaobei Zhang Jun He	**Session 14-A** High Power Laser Source Wenlong Tian Yongguang Zhao (Online) Youjian Song (Online) Tianfu Yao (Online) Yanlong Wang (Online) Yannan Tan (Online)	**Session 15** Optoelectronic Technology and Optical Communication C1031 (Online) C1043-A (Online) C1064-A (Online) C1065-A (Online) C1074 (Online) C1083 (Online) C1110-A (Online)
18:30-19:30	Dinner (西餐厅: 2F)				

November 27th, 2021 (Online)

Time	ZOOM ID: 862 8532 6181	ZOOM ID: 916 0951 1303
10:00-11:30	**Session 16** Signal Theory and Analysis	**Session 17** Advanced Information Network and Security
	C1103, C1104, C1061, C1112, C1076, C1053	C1035-A, C1049, C1080, C1007, C1013, C1006
11:30-13:30	**Lunch Break**	
13:30-15:30	**Session 18** Optical Communication and Wireless Communication Technology	**Session 19** Mobile Communication and Data Transmission
	C1002, C1016, C1088, C1158, C1023, C1126, C1114, C1136	T1003, T1018, T1023, T1002, T1005, T1014, T1026
15:30-15:45	**Afternoon Break**	
15:45-17:15	**Session 20** Intelligent Image Analysis and Processing	**Session 21** Intelligent Control System and Information Management
	C1067, C1071, C1072, C1090, C1151, C1105	C1048, C1005, C1033, C1070, C1093, C1146

November 28th, 2021 (Online)

	Zoom ID 968 1182 1063	Zoom ID 931 5402 5904	Zoom ID 935 7766 4322	Zoom ID 851 5181 0856
9:00-10:40	**Session 10-B** Wireless Network	**Session 5-C** Quantum Information and Related Quantum Technologies	**Session 3-B** Simultaneous Detection Technology of Multiple Gases	**Session 14-B** High Power Laser Source
	Daquan Feng (Online) Zhengchuan Chen (Online) Yi Zhong (Online) Chao Xu (Online)	Xiao-Qi Zhou (Online) Yu-Ming He(Online) Qiongyi He (Online) Xin-Zhong Li (Online)	Huayao Li (Online) Rubao Wang (Online) Limin Xiao(Online) Fan Yang (Online) Xiao Liang (Online)	Man Jiang (Online) Wei Liu (Online) Jingui Ma (Online) Zhenxu Bai (Online) Yaoyao Qi (Online)
10:40-10:50	Morning Break			
10:50-12:50	**Session 1-B** Optical Communications and Networks	**Session 5-D** Quantum Information and Related Quantum Technologies	**Session 12-C** Optical Sensors	**Session 6-B** Fiber-based Devices and Applications
	Weigang Hou(Online) Chen Chen(Online) Jing Zhang(Online) Xiaoxue Gong(Online) Paikun Zhu(Online)	Peng Xue (Online) Bi-Heng Liu (Online) Yongheng Huo (Online) Ruifang Dong (Online)	Xinghua Yang (Online) Xuping Zhang (Online) Shuqin Lou (Online) Ye Chen (Online) Mingjiang Zhang (Online) Xiaoguang Zhang (Online)	Jianzhong Zhang (Online) Lingzhen Yang (Online) Baoquan Jin (Online) Junhui Hu (Online) Guolu Yin (Online)
12:30-13:30	Lunch Break			
13:30-15:30	**Session 1-C** Optical Communications and Networks	**Session 9-C** Ultrafast Photonics	**Session 7-B** Advanced Optical Imaging (AOI)	**Session 22-A** Space Communications, Navigation and Tracking
	Xiang Li (Online) Fan Zhang (Online) Qi Yang (Online) Fan Li (Online) Meng Xiang (Online)	Qian Li (Online) Qiannan Cui (Online) Zhixu Jia (Online) Kan Wu (Online) Chengbo Mou (Online) Xianglong Zeng (Online)	Junle Qu (Online) Kai Guo (Online) Linbo Liu (Online) Zhengjun Liu (Online) Chengbo Liu (Online)	Yi Lei (Online) Huiqin Wang (Online) Minghua Cao (Online) Xiang Yi (Online) Yueying Zhan (Online) Chunyi Chen (Online)
15:30-16:00	Afternoon Break			

16:00-18:00	**Session 1-D**	**Session 13-B**	**Session 7-C**	**Session 22-B**
	Optical Communications and Networks	Optoelectronic Devices	Advanced Optical Imaging (AOI)	Space Communications, Navigation and Tracking
	Hui Yang (Online) Lixia Xi (Online) Tianshu Wang (Online) Fangzheng Zhang(Online) Ning Jiang (Online) Xianfeng Tang (Online)	Yunqi Liu (Online) Weifeng Jiang (Online) Liqiang Zhang (Online) Chun-Nien Liu (Online) Zhiting Ye (Online)	Yasuo Tomita (Online) Haibo Luo (Online) Xiaowei Li (Online) Fengying Xie (Online) Shuo Chen (Online) Yidong Tan (Online)	Yi Wang (Online) Yejun Liu (Online) Xinning Huang (Online) Jiahao Huo (Online)

November 28th, 2021 (Online)

Time	ZOOM ID: 915 8899 7268
10:00-12:00	**Session 23:** Future Communication Technology and Development
	C1077, C1078, C1079, C15002, C1045, C1059, C1003, C1155
12:00-13:30	**Lunch Break**
13:30-15:15	**Session 24:** Internet of Things and Communication Engineering
	T1004, T1001, T1009, T1013, T1010, T1021, T1019
15:15-15:45	**Afternoon Break**
15:45-17:30	**Session 25:** Artificial Intelligence and Information Technology
	T1020, T1015, T1016, T13001, T2002, T1008, T1006

November 28th, 2021
10:00-16:00: Onsite Activity

Technical Sessions

Best Paper Competition I

November 26 15:05-16:35	君誉宴会厅: 27F | ZOOM ID: 968 1182 1063 (Online & Onsite)	
	Chair: Yani Zhang, Shaanxi University of Science and Technology, China Chen Li, Shanxi University of Science and Technology, China Zhanqiang Hui, Xi'an University of Posts and Telecommunications, China	
15:05-15:20	C1004	Improving EEG-Based Motor Imagery Classification using Hybrid Neural Network **Cong Li**, Xia Wu, Honghong Yang, Yumei Zhang Shaanxi Normal University, China
15:20-15:35	C1044 (Online)	Inversion of Orbital-Angular-Momentum Light Field based on A Diffuser Xiaoli Yin, Di Hu, Huan Chang, **Zhaoyuan Zhang**, Tong Zheng Beijing University of Posts and Telecommunications, China
15:35-15:50	C1089 (Online)	Speckle-free Imaging Using a High-power Multimode Random Fiber Laser **Shanshan Wang**, Weili Zhang, Ning Yang, Yandong Mou, Yunjiang Rao University of Electronic Science and Technology of China, China
15:50-16:05	C1094	Reinforcement Learning for Suppressing Eavesdroppers in Wireless Communication System **Jiachen Wang**, Xiao Ma, Dan Li, Weijia Han Shaanxi Normal University, China
16:05-16:20	C1127 (Online)	Deep Reinforcement Learning Based Autonomous Exploration under Uncertainty with Hybrid Network on Graph **Zhiwen Zhang**, Chenghao Shi, Zhiwen Zeng, Hui Zhang National University of Defense Technology, China
16:20-16:35	C1150 (Online)	RAN Enhancement to Support Propagation Delay Compensation of TSN **Hua Xu**, Jincan Xin, Sen Xu, Hua Zhang China Telecom Research Institute, China

Best Paper Competition II

November 26 15:05-16:35	ZOOM ID: 931 5402 5904 (Online)	
	Chair: Wei Liu, Harbin Institute of Technology, Shenzhen, China Haibo Luo, Shenyang Institute of Automation (SIA), Chinese Academy of Sciences, China	
15:05-15:20	C1055	Research and Implementation of a Network based on SDN and Multi Area OSPF Protocol Jun Tao, Renbin Yuan, Qingqing Liu, **Qinghuan Xia** Anhui Institute of Information Technology, China
15:20-15:35	C1010	Performance Analysis of Mixed MIMO-RF/MIMO-FSO DF Relaying using Globally Coupled Low Density Parity Check (GC-LDPC) Codes and Diversity Techniques **Ibrahima Gueye**, Idy Diop, Ibra Dioum, Papis Ndiaye Ecole Superieur Polytechnique (ESP) de Dakar, Senegal
15:35-15:50	C1020	Positioning Performance based on Integrated GNSS Network of Vehicles **Lei Zhang**, Duo Hou, Jiacheng Zhang Tongji University, China
15:50-16:05	C14004	Light-field 3D Image Encryption using Dynamic Cellular Automata Zhiqing Ren, Jianzhong Li, Dahai Li, **Xiaowei Li** Sichuan University, China
16:05-16:20	C1128	The Text-Dependent Chinese Speaker Recognition System based on the Universal Individual Identification **Lili Wang**, Zhihua Li, Kai Chen Hohai University, China
16:20-16:35	C1101	An Extended Computer Aided Diagnosis System for robust BCI Applications Xiaojun Yu, **M. Zulkifal Aziz**, Yiyan Hou, Haopeng Li, Jialin Lv, Mudasir Jamil Northwestern Polytechnical University, China

Session 1

November 27 9:00-10:20	**Session 1-A:** **Optical Communications and Networks** 景福厅 (3F) | ZOOM ID: 968 1182 1063
	Chair: Xiaoguang Zhang, Beijing University of Posts and Communications, China
9:00-9:20	**Xuwei Xue (Invited)** (Online) Beijing University of Posts and Telecommunications, China
9:20-9:40	An Overview on Constellation Optimization with Laser Phase Noise for Coherent Optical Communications **Wang Qian (Invited)** (Online) Shenzhen University, China
9:40-10:00	**Jiayi Yu (Invited)** Shandong Normal University, China
10:00-10:20	Key Technology and Challenge to Achieve High-Baud-Rate Coherent Optical Communication Systems **Yang Yue (Invited)** (Online) Nankai University, China

November 28 10:50-12:30	**Session 1-B:** **Optical Communications and Networks** ZOOM ID: 968 1182 1063
	Chair: Xiaoguang Zhang, Beijing University of Posts and Communications, China
10:50-11:10	Applying a Passively Field-Programmable Metasurface to Intra-DC Wireless Optical Switching **Weigang Hou (Invited)** (Online) Chongqing University of Posts and Telecommunications, China
11:10-11:30	Digital pre-equalization for OFDM-based bandlimited VLC systems: Centralized or distributed? **Chen Chen (Invited)** (Online) Chongqing University, China
11:30-11:50	Key Enabled Technologies For High-speed Optical Data Center Interconnects **Jing Zhang (Invited)** (Online) University of Electronic Science and Technology of China, China
11:50-12:10	Optical Layer Security based on Optical Signal Processing Techniques **Xiaoxue Gong (Invited)** (Online) Chongqing University of Posts and Telecommunications, China
12:10-12:30	Analog-to-digital compression Radio-over-fiber (ADX-RoF) for Outdoor and Indoor Radio Access in 5G and Beyond **Paikun Zhu (Invited)** (Online) National Institute of Information and Communications Technology (NICT), Japan

November 28 13:30-15:10	**Session 1-C:** **Optical Communications and Networks** ZOOM ID: 968 1182 1063
	Chair: Jianping Li, Guangdong University of Technology, China
13:30-13:50	Low-complexity High-Speed Coherent Passive Optical Network **Xiang Li (Invited)** (Online) University of Cambridge, UK
13:50-14:10	**Fan Zhang (Invited)** (Online) Peking University, China
14:10-14:30	**Qi Yang (Invited)** (Online) Huazhong University of Science and Technology, China
14:30-14:50	**Fan Li (Invited)** (Online) Sun Yat-sen University, China
14:50-15:10	O-band CWDM Systems Enabled Power-efficient Short-reach Datacenter Optical Interconnections **Meng Xiang (Invited)** (Online) Guangdong University of Technology, China

November 28 16:00-18:00	**Session 1-D:** **Optical Communications and Networks** ZOOM ID: 968 1182 1063
	Chair: Jianping Li, Guangdong University of Technology, China
16:00-16:20	Social-aware Cross-chain Authentication Strategy in Mobile Edge Computing **Hui Yang (Invited)** (Online) Beijing University of Posts and Telecommunications, China
16:20-16:40	Applications of Machine Learning on Nonlinear Frequency Division Multiplexing Optic-Fiber Communication Systems **Lixia Xi (Invited)** (Online) Beijing University of Posts and Telecommunications, China
16:40-17:00	Atmospheric Communication using 2μm Laser **Tianshu Wang (Invited)** (Online) Changchun University of Science and Technology, China
17:00-17:20	Convolutional Neural Network Assisted Signal Recovery for Radar over Fiber Networks **Fangzheng Zhang (Invited)** (Online) Nanjing University of Aeronautics and Astronautics, China
17:20-17:40	Wideband Complex Chaos Generations with Semiconductor Lasers **Ning Jiang (Invited)** (Online) University of Electronic Science and Technology of China (UESTC), China
17:40-18:00	A Security Enhanced Physical Layer Scheme in CO-OFDM System based on CIJS Encryption and 3D-LSCM Chaos **Xianfeng Tang (Invited)** (Online) Beijing University of Posts and Telecommunications, China

Session 2

November 27 9:00-10:25	**Session 2:** **Machine Learning and Artificial Intelligence** 天台厅 (3F) | ZOOM ID: 931 5402 5904
	Chair: Ganchao Liu, Northwestern Polytechnical University, China
9:00-9:20	Context-intensive and Attention-aware UNet for Medical Image Segmentation **Jun Qin (Invited)** Changchun University of Science and Technology, China
9:20-9:40	Learning for Open World: Contrastive Feature Disentanglement for noncooperative SAR Target Recognition **Zaidao Wen (Invited)** Northwestern Polytechnical University, China
9:40-9:55	C1008 (Online)- Classical and Deep Learning Methods for Speech Command Recognition **Jie Xie**, Qijing Li, Kai Hu Jiangnan University, China
9:55-10:10	C1156-Object Detection and Image Segmentation for Autonomous Vehicles **Bin Liu**, Li Cong, Chengbin Huang, Chao Zhang, Jia Li, Peiqi Yang Xidian University, China
10:10-10:25	C1098-A two-step Filtering Mechanism for Speckle Noise Reduction in OCT Images Xiaojun Yu, Chenkun Ge, Zixuan Fu, **Muhammad Zulkifal Aziz**, Linbo Liu Northwestern Polytechnical University, China

Session 3

November 27 9:00-10:20	**Session 3-A:** **Simultaneous Detection Technology of Multiple Gases** 太白厅 (3F) | ZOOM ID: 935 7766 4322
	Chair: Ping Lu, Huazhong University of Science and Technology, China
9:00-9:20	Advanced Photoacoustic Spectroscopy Trace Gas Sensing Instrument **Chaotan Sima (Invited)** (Online) Huazhong University of Science and Technology, China
9:20-9:40	**Wenjun Ni (Invited)** South-Central University for Nationalities, China
9:40-10:00	Fiber-optic Photoacoustic Gas Sensor **Ke Chen (Invited)** (Online) Dalian University of Technology, China
10:00-10:20	Leaking Gas Detection Technology based on Infared Imaging in Chemical Industry Park **Wei Chen (Invited)** (Online) Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China

November 28 9:00-10:40	**Session 3-B:** **Simultaneous Detection Technology of Multiple Gases** ZOOM ID: 935 7766 4322
	Chair: Ping Lu, Huazhong University of Science and Technology, China
9:00-9:20	**Huayao Li (Invited)** (Online) Huazhong University of Science and Technology, China
9:20-9:40	**Rubao Wang (Invited)** (Online) Beijing Duke Technologies Co. Ltd., China
9:40-10:00	**Limin Xiao (Invited)** (Online) Fudan University, China
10:00-10:20	**Fan Yang (Invited)** (Online) European Molecular Biology Laboratory, Germany
10:20-10:40	Requirements of Optical Portable Sulfur Dioxide and Nitrogen Oxide Measuring Instruments in Environmental Monitoring **Xiao Liang (Invited)** (Online) China National Environmental Monitoring Centre, China

Session 4

November 27 9:00-10:00	**Session 4-A:** **Photonics and Optoelectronic Devices of 2D Materials** 万花厅 (3F) | ZOOM ID: 851 5181 0856
	Chair: Kai Zhang, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China
9:00-9:20	**Bobo Tian (Invited)** (Online) East China Normal University,China
9:20-9:40	Spin-orbit Coupling and Topological Effects in 2D Photonic Structures **Feng Li (Invited)** Xi'an Jiaotong University, China
9:40-10:00	Neromorphic Devices based on Ferroelectric Semiconductors **Zhenxing Wang (Invited)** (Online) National Center for Nanoscience and Technology (NCNST), China

November 27 10:35-12:15	**Session 4-B:** **Photonics and Optoelectronic Devices of 2D Materials** 万花厅 (3F) | ZOOM ID: 851 5181 0856
	Chair: Hua Xu, Shaanxi Normal University, China
10:35-10:55	Atomically Thin Resonant Photonics **Xingwang Zhang(Invited)** (Online) Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), CAS, China
10:55-11:15	**Lin Wang (Invited)** The Shanghai Institute of Technical Physics of the Chinese Academy of Sciences, China
11:15-11:35	Terahertz Emission from Two-Dimensional Mateirals **Xinlong Xu (Invited)** Northwestern University, China
11:35-11:55	Manipulate the Photoelectrical Effect for Tunable Photodetector **Zegao Wang (Invited)** (Online) Sichuan University, China
11:55-12:15	GaN heterojunction: Dimensional Modulation and Optoelectronic Applications **Jing Ning (Invited)** Xidian University, China

November 27 13:30-15:30	**Session 4-C:** **Photonics and Optoelectronic Devices of 2D Materials** 万花厅 (3F) | ZOOM ID: 851 5181 0856
	Chair: Hua Xu, Shaanxi Normal University, China
13:30-13:50	Violet Phosphorus and Phosphorene **Jinying Zhang (Invited)** Xi'an Jiaotong University, China
13:50-14:10	Terahertz Optomechanics Induced Phase Transition in 2D Materials **Jian Zhou (Invited)** Xi'an Jiaotong University, China
14:10-14:30	**Liang Li (Invited)** (Online) Anhui University, China
14:30-14:50	Vertical Ion-modulated Transistor for Neuromorphic Photoelectronics **Jie Jiang (Invited)** (Online) Central South University, China
14:50-15:10	Multi-wavelength Magnetic Coding of Helical Luminescence in Ferromagnetic 2D Layered CrI_3 **Bo Peng (Invited)** (Online) University of Electronic Science and Technology of China, China

Session 5

November 27 9:00-10:20	**Session 5-A:** **Quantum Information and Related Quantum Technologies** Online | ZOOM ID: 915 8899 7268
	Chair: Feng Li, Xi'an Jiaotong University, China
9:00-9:30	**Jietai Jing (Keynote)** (Online) East China Normal University, China
9:30-9:50	Simulating quantum characters of Majorana zero modes with photons **Kai Sun (Invited)** (Online) University of Science and Technology of China, China
9:50-10:10	In-situ Laser Interference for Site-Controlled Quantum Dot Epitaxy and Microcavity Photonic Devices **Chao-Yuan Jin (Invited)** (Online) Zhejiang University, China
10:10-10:30	Fabrication and applications of 3D nonlinear photonic crystal **Yong Zhang (Invited)** (Online) Nanjing University, China

November 27 10:35-12:15	**Session 5-B:** **Quantum Information and Related Quantum Technologies** 天台厅 (3F) | ZOOM ID: 931 5402 5904
	Chair: Feng Li, Xi'an Jiaotong University, China
10:35-10:55	Electrically Pumped Topological Laser with Valley Edge States **Yongquan Zeng (Invited)** Wuhan University, China
10:55-11:15	Sudden Death and Revival of Gaussian Quantum Steering in Noisy Channels **Xiaolong Su (Invited)** (Online) Shanxi University, China
11:15-11:35	Structured Nonlinear Optics: Generation and Manipulation of Spatially Structured Photons **Zhi-Han Zhu (Invited)** Harbin University of Science and Technology, China
11:35-11:55	**Guo-Yong Xiang (Invited)** (Online) University of Science & Technology of China, China
11:55-12:15	High-Dimensional Quantum Network **Chen Dong (Invited)** National University of Defense Technology, China

November 28 9:00-10:20	**Session 5-C:** **Quantum Information and Related Quantum Technologies** ZOOM ID: 931 5402 5904
	Chair: Yin Cai, Xi'an Jiaotong University, China
9:00-9:20	Direct Fidelity Estimation of Quantum States Using Machine Learning **Xiao-Qi Zhou (Invited)** (Online) Sun Yat-Sen University, China
9:20-9:40	Towards Optimal Single-Photon Sources and Applications **Yu-Ming He (Invited)** (Online) University of Science & Technology of China, China
9:40-10:00	Remote Generation of Magnon Schrödinger Cat State Via Magnon-Photon Entanglement **Qiongyi He (Invited)** (Online) Peking University, China
10:00-10:20	Optical vortex Lattice: a Rediscovery of Orbital Angular Momentum **Xin-Zhong Li (Invited)** (Online) Henan University of Science and Technology, China

November 28 10:50-12:20	**Session 5-D:** **Quantum Information and Related Quantum Technologies** ZOOM ID: 931 5402 5904
	Chair: Yin Cai, Xi'an Jiaotong University, China
10:50-11:20	Quantum Simulations with Photonic Quantum Walks **Peng Xue (Keynote)**(Online) Beijing Computational Science Research Center (CSRC), China
11:20-11:40	High-Dimensional Quantum Network **Bi-Heng Liu (Invited)** (Online) University of Science & Technology of China, China
11:40-12:00	Quantum Light Sources using Solid State Semiconductor Quantum Dots **Yongheng Huo (Invited)** (Online) University of Science & Technology of China, China
12:00-12:20	Quantum-enhanced Time Transfer and Synchronization **Ruifang Dong (Invited)** (Online) National Time Service Center, Chinese Academy of Sciences, China

Session 6

November 27 10:35-12:15	**Session 6-A:** **Fiber-based Devices and Applications** 景福厅 (3F) | ZOOM ID: 968 1182 1063
	Chair: Mingjiang Zhang, Taiyuan University of Technology, China
10:35-10:55	Magnetic Field Sensing based on Optical Fibers **Yaofei Chen (Invited)** Jinan University, China
10:55-11:15	Compressed-Sensing Fiber-Optic White Light Interferometry **Dapeng Zhou (Invited)** (Online) Dalian University of Technology, China
11:15-11:35	Theoretical and Experimantal Resarch of Hte Optical Fiber SPR Sensing based on The Sensitivity Enhancement of Film Structrure and Materials **Kun Liu (Invited)** (Online) Tianjin University, China
11:35-11:55	High Power Random Fiber Laser with Flexible Spectral Manipulation Property **Jiangming Xu (Invited)** National University of Defense Technology, China
11:55-12:15	High-speed Railway Ballastless Track Slab Monitoring based on Optical Fiber Accelerometer **Wentao Zhang (Invited)** Institute of Semiconductors,Chinese Academy of Sciences, China

November 28 10:50-12:30	**Session 6-B:** **Fiber-based Devices and Applications** ZOOM ID: 851 5181 0856
	Chair: Yahui Wang, Taiyuan University of Technology, China
10:50-11:10	Chaotic Brillouin Dynamic Grating for Distributed Fiber Sensing **Jianzhong Zhang (Invited)** (Online) Taiyuan University of Technology, China
11:10-11:30	Chaotic Correlation Fiber Loop Ring Down Sensing **Lingzhen Yang (Invited)** (Online) Taiyuan University of Technology, China
11:30-11:50	Performance Improvement of Coherent Optical Time Domain Reflectometer **Baoquan Jin (Invited)** (Online) Taiyuan University of Technology, China
11:50-12:10	Fiber-optic Sensors for Dual Parameters Measurement **Junhui Hu (Invited)** (Online) Guangxi Normal University, China
12:10-12:30	Optical Fiber Distributed Shape Sensing Technology **Guolu Yin (Invited)** (Online) Chongqing University, China

Session 7

November 27 10:35-12:30	**Session 7-A:** **Advanced Optical Imaging (AOI)** 太白厅 (3F) | ZOOM ID: 935 7766 4322
	Chair: Xiaojun Yu, Northwestern Polytechnical University, China
10:35-10:55	**Wei Liu (Invited)** Harbin Institute of Technology, Shenzhen, China
10:55-11:15	Super-resolution and Optical Sectioning Integrated Structured Illumination Microscopy **Dan Dan (Invited)** Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China
11:15-11:35	Vision Enhancement in Complex Environments Via Polarimetric Imaging **Haofeng Hu (Invited)** Tianjin University, China
11:35-11:55	**Jian Liang (Invited)** Shaanxi Normal University, China
11:55-12:15	Super-resolution Optical Microscopy: Techniques and Applications **Peng Gao (Invited)** Xidian University, China
12:15-12:30	C1050-A Image Registration Method for Full-Stokes-Vector Division-Of-Aperture Polarimetric Camera **Jin Zhang**, Feiya Ma, Jian Liang, Liyong Ren Shaanxi Normal University, China

November 28 13:30-15:10	**Session 7-B:** **Advanced Optical Imaging (AOI)** ZOOM ID: 935 7766 4322
	Chair: Xiaojun Yu, Northwestern Polytechnical University, China
13:30-13:50	Optimize Stimulated Emission Depletion (STED) Imaging by Optical Methods And Probes **Junle Qu (Invited)** (Online) Shenzhen University, China
13:50-14:10	Advanced on Polarization Imaging and Polarization-Detection based on Metasurfaces **Kai Guo (Invited)** (Online) Hefei University of Technology, China
14:10-14:30	**Linbo Liu (Invited)** (Online) Nanyang Technological University, Singapore
14:30-14:50	Computational Imaging by using Changed Optics Path **Zhengjun Liu (Invited)** (Online) Harbin Institute of Technology, China
14:50-15:10	High Speed Photoacoustic Imaging **Chengbo Liu (Invited)** (Online) Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China

November 28 16:00-18:00	**Session 7-C:** **Advanced Optical Imaging (AOI)** ZOOM ID: 935 7766 4322
	Chair: Liyong Ren, Shaanxi Normal University, China
16:00-16:20	Panchromatic Recording Capability of Photopolymerizable Organic Nanoparticle-Dispersed Nanocomposite Materials for Volume Bragg Gratings to be used in Wearable AR/MR Displays **Yasuo Tomita (Invited)** (Online) University of Electro-Communications, Japan
16:20-16:40	Implementation of Cooled Staring LWIR Polarimeter **Haibo Luo (Invited)** (Online) Shenyang Institute of Automation (SIA), Chinese Academy of Sciences, China
16:40-17:00	Light-field 3D Image Encryption using Dynamic Cellular Automata **Xiaowei Li (Invited)** (Online) Sichuan University, China
17:00-17:20	Dermoscopy Image Computer Aided Diagnosis Technology **Fengying Xie (Invited)** (Online) Beihang University, China
17:20-17:40	Programmable Hyperspectral Microscopy for High-Contrast Biomedical Imaging in a Snapshot **Shuo Chen (Invited)** (Online) Northeastern University, China
17:40-18:00	**Yidong Tan (Invited)** (Online) Tsinghua University, China

Session 8

November 27 10:35-12:05	**Session 8:** **Mobile Communications and Wireless Networks** Online | ZOOM ID: 915 8899 7268	
	Chair: Qiong Wu, Jiangnan University	
10:35-10:50	C1096 (Online)	An Activatable DDoS Defense for Wireless Sensor Networks **Lijia Xie**, Xin Xiao, Yiming Shi, Cheng Zhang, Xiao Zhang Beihang University, China
10:50-11:05	C1030 (Online)	Statistical Channel and Resource Allocation Analysis for a Two-AP VLC System with Cell Overlap and Uniform User Distribution **Yiming Zhou**, Baoping Cheng, Jun Lei, Nan Wu, Zhengyuan Xu University of Science and Technology of China, China
11:05-11:20	C1118 (Online)	A Point-to-Point Security Communication System: Artificial Noise Jamming Insertion **Dan Li**, Xiao Ma, Weijia Han Shaanxi Normal University, China
11:20-11:35	C1124 (Online)	Dirty Paper Coding Based Weighted Throughout Maximization for UAV-Mounted Wireless Systems Luya Wang, **Yanjie Dong**, Ying He, Jianqiang Li, Victor C. M. Leung Shenzhen University, China
11:35-11:50	C1001 (Online)	Performance Analysis of CPM in Multi-Cell Massive MIMO System **Guowei Lei**, Wenliang Liao Jimei University, China
11:50-12:05	C1036 (Online)	Dragonfly-of-Torus: A Reconfigurable Network Topology for High-performance Computing **Zuoqing Zhao**, Bingli Guo, Shanguo Huang, Xuwei Xue Beijing University of Posts and Telecommunications, China

Session 9

November 27 13:30-15:45	**Session 9-A:** **Ultrafast Photonics** 景福厅 (3F) | ZOOM ID: 968 1182 1063
	Chair: Wenlong Tian, Xidian University, China
13:30-13:50	**Luming Zhao (Invited)** (Online) Huazhong University of Science and Technology, China
13:50-14:10	Two Dimensional Accelerometers based on Femtosecond Laser Written Specialty Fiber Bragg Gratings **Ruohui Wang (Invited)** Northwestern University, China
14:10-14:30	Passively Mode-Locked Thulium-Doped Fiber Laser with the Saturable Absorber based on SnSe Nanoparticles **Weiqing Gao (Invited)** Hefei University of Technology, China
14:30-14:50	**Meisong Liao (Invited)** Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
14:50-15:10	Soliton Metamorphosis Dynamics in Ultrafast Fiber Lasers **Dong Mao (Invited)** (Online) Northwestern Polytechnical University, China
15:10-15:30	Development of Optical Frequency Comb for Spaceborne Application **Jiaqi Zhou (Invited)** (Online) Shanghai Institute of Optics and Fine Mechanics (SIOM), Chinese Academy of Sciences (CAS) , China
15:30-15:45	C1122-A Femtosecond Dissipative Soliton based on Hydrazone Organics and Pulse Control **Chenxi Zhang**, Xiaohui Li, Haoran Liu Shaanxi Normal University, China

November 27 16:00-18:00	**Session 9-B:** **Ultrafast Photonics** 景福厅 (3F) | ZOOM ID: 968 1182 1063
	Chair: Wenjun Ni, South-Central University for Nationalities, China
16:00-16:20	Application of Femtosecond Fiber Laser in Attosecond Laser System **Wenjun Liu (Invited)** Beijing University of Posts and Telecommunications, China
16:20-16:40	Nonlinear Optical Properties of 2D Materials and the Application in Ultrafast Lasers **Lu Li (Invited)** Xi`an University Of Posts & Telecommunications, China
16:40-17:00	Biological Transistors, Biological Diodes and Biological Optical Fibers in Animal Bodies **Anhui Liang (Invited)** Shandong University of Science and Technology, China
17:00-17:20	Spatiotemporal Dynamics of Soliton Pulsation in Passively Mode-Locked Fiber Lasers **Yufeng Song (Invited)** Shenzhen University, China

17:20-17:40	Real-time Dynamics of Soliton Pulsation in Fiber Lasers **Zhichao Luo (Invited)** (Online) South China Normal University, China
17:40-18:00	Radiation Mode of 45 Tilted Fiber Grating and its Applications **Zhijun Yan (Invited)** (Online) Huazhong University of Science and Technology (HUST), China

November 28 13:30-15:30	**Session 9-C:** **Ultrafast Photonics** ZOOM ID: 931 5402 5904
	Chair: Wenlong Tian, Xidian University, China
13:30-13:50	**Qian Li (Invited)** (Online) Peking University Shenzhen Graduate School, China
13:50-14:10	Resolve and Manipulate Ultrafast Photo-Physical Processes of Interfaces **Qiannan Cui (Invited)** (Online) Southeast University, China
14:10-14:30	All-solid Fluorotellurite Glass Fibers and Their Applications **Zhixu Jia (Invited)** (Online) Jilin University, China
14:30-14:50	**Kan Wu (Invited)** (Online) Shanghai Jiaotong University, China
14:50-15:10	**Chengbo Mou (Invited)** (Online) Shanghai University, China
15:10-15:30	**Xianglong Zeng (Invited)** (Online) Shanghai University, China

Session 10

November 27 13:30-15:30	**Session 10-A:** **Wireless Network** 天台厅 (3F) | ZOOM ID: 931 5402 5904
	Chair: Liang Wang, Shaanxi Normal University, China
13:30-13:50	**Jianhua Tang (Invited)** South China University of Technology, China
13:50-14:10	Fairness-Aware Task Scheduling and Cache-Aided Computation Offloading in UAV-Enabled MEC Networks **Mingxiong Zhao (Invited)** (Online) Yunnan University, China
14:10-14:30	**Rui Chen (Invited)** Xidian University, China
14:30-14:50	The Multi-link Transmissions: The Key Technology for IEEE 802.11be Extremely High Throughput **Ronghui Hou (Invited)** Xidian University, China
14:50-15:10	Resource Allocation in Vehicular Networks: A Deep Reinforcement Learning Approach **Liang Wang (Invited)** Shaanxi Normal University, China
15:10-15:30	Rethinking Inference in Wireless Machine Learning: Lucifer or Angela? **Howard Hao Yang (Invited)** ZJU-UIUC Institute of Zhejiang University, China

November 28 9:00-10:20	**Session 10-B:** **Wireless Network** ZOOM ID: 968 1182 1063
	Chair: Chao Xu, Northwest A&F University, China
9:00-9:20	**Daquan Feng (Invited)** (Online) Shenzhen University, China
9:20-9:40	Delay-Aware Massive Random Access Design: Adaptive Framing and Successive Decoding **Zhengchuan Chen (Invited)** (Online) Chongqing University, China
9:40-10:00	Time and Frequency Repetition Transmission for URLLC in Large-scale Wireless Networks **Yi Zhong (Invited)** (Online) Huazhong University of Science and Technology, China
10:00-10:20	**Chao Xu (Invited)** (Online) Northwest A&F University, China

Session 11

November 27 13:30-15:15	Session 11: Computer and Intelligent Communication System 太白厅 (3F) | ZOOM ID: 935 7766 4322	
	Chair: Bo Zheng, Air Force Engineering University, China	
13:30-13:45	C1009 (Online)	Modeling Movement Behavior of Stock Price Using Neural Hawkes Model **Kai Hu**, Xiang Ji, Jie Xie, Jingmin Yu Jiangnan University, China
13:45-14:00	C1029 (Online)	A Method of Soft-Sensing Log-Likelihood Ratios Based on Broad Learning System for NAND Flash Memories **Kainan Ma**, Tao Li, Yibo Yin, Sitao Zhang, Ming Liu Institute of Semiconductors, Chinese Academy of Sciences, China
14:00-14:15	C1086 (Online)	Novel Feature Fusion for Infrared Small Target Detection Feature Pyramid Networks **Xiaozhong Tong**, Bei Sun, Junyu Wei National University of Defense Technology, China
14:15-14:30	C1108	On the Design of Embedded Smart Home System Based on Internet of Things **Wei Yang**, Qiaojie Jiang, Dongliang Xie, Xiaojun Jing Guangdong Southern Planning & Designing Institute of Telecom Consultation Co., Ltd., China
14:30-14:45	C1109	A Routing Strategy Based on the betweenness Centrality for Multi-layers Complex Networks **Yue Zhuo**, Yu Liang, Yi Cao, Jinfeng Nie, Yun Qi, Yu Huang China Southern Power Grid, China
14:45-15:00	C1157	Multi-priority Queueing Mechanism for Channel Threshold based Multiple Access in FANET **Bo Zheng**, Kun Zhuo, Huaxin Wu Air Force Engineering University, China
15:00-15:15	C15003	Building Energy Management and Control Platform Based on Multi-Source Data Integration Yan Qi, **Kun Wang**, Sen Wang, Zhiyong Gan, Jiang Bian, Guochao Yang, Zhaowen Yang, Delu Li Tianjin Electric Power Science & Research Institute, China

Session 12

November 27 13:30-15:30	**Session 12-A:** **Optical Sensors** Online | ZOOM ID: 915 8899 7268
	Chair: Xiaobo Xing, South China Normal University, China
13:30-13:50	Multimode Fiber Mediate Lasers for Imaging Applications **Weili Zhang (Invited)** (Online) University of Electronic Science and Technology of China, China
13:50-14:10	**Zhang Xia** (Online) Liaocheng University, China
14:10-14:30	**Nan-Kuang Chen (Invited)** (Online) Liaocheng University, China
14:30-14:50	Single Molecule Sensor Based on Plasmonic Devices **Yanhong Wang (Invited)** (Online) North University of China, China
14:50-15:10	Biodetection of Graphene Photonic Crystal Fiber Based on Defect Coupling **Hongyan Yang (Invited)** (Online) Guilin University of Electronic Technology, China
15:10-15:30	Fiber Devices Based on Hole-Assisted Dual-Core Fiber and Applications **Chunying Guan (Invited)** (Online) Harbin Engineering University, China

November 27 16:00-18:00	**Session 12-B:** **Optical Sensors** 太白厅 (3F) | ZOOM ID: 935 7766 4322
	Chair: Yani Zhang, Shaanxi University of Science and Technology, China
16:00-16:20	Research on Integrated Pressure and Temperature Sensor based on Laser-Induced Graphene on Wood **Chen Li (Invited)** Shanxi University of Science and Technology, China
16:20-16:40	Femtosecond Laser 3D Printed Optical Fiber Microstructured Sensors **Changrui Liao (Invited)** Shenzhen University, China
16:40-17:00	Sweeping Wavelength Laser Diodes For FMCW Coherent Lidar **Yuan Shi (Invited)** Allwave Lasers Devices Inc., China
17:00-17:20	Research Progress of 2 μm Ultrashort Pulse All Solid State Tm- Doped Oscillator **Weijun Ling (Invited)** Tianshui Normal University, China
17:20-17:40	Capillary and Microsphere based Ultrahigh-Sensitivity Displacement Sensing Enabled by the Vernier Effect **Xiaobei Zhang (Invited)** Shanghai University, China
17:40-18:00	Ultrafast Laser-Induced Fiber Bragg Grating Sensors for Extreme Environments **Jun He (Invited)** Shenzhen University, China

November 28 10:50-12:50	**Session 12-C:** **Optical Sensors** ZOOM ID: 935 7766 4322
	Chair: Chen Li, Shanxi University of Science and Technology, China
10:50-11:10	Optofluidic In-Fiber Optical Fiber Sensors Based on Hollow Optical Fibers **Xinghua Yang (Invited)** (Online) Harbin Engineering University, China
11:10-11:30	Xuping Zhang **(Invited)** (Online) Nanjing University, China
11:30-11:50	Optical Fiber Sensor Based on Microstructured Fiber **Shuqin Lou (Invited)** (Online) Beijing Jiaotong University
11:50-12:10	All-fiber Multifunction-Integrated Optoelectronic Device **Ye Chen (Invited)** (Online) Nanjing University, China
12:10-12:30	Chaos distributed fiber sensing **Mingjiang Zhang (Invited)** (Online) Taiyuan University of Technology, China
12:30-12:50	**Xiaoguang Zhang (Invited)** (Online) Beijing University of Posts and Telccommunications, China

Session 13

November 27 16:00-18:00	**Session 13-A:** **Optoelectronic Devices** 天台厅 (3F) | ZOOM ID: 931 5402 5904
	Chair: Nan-Kuang Chen, Liaocheng University, China
16:00-16:20	Rare-Earth Ions Doped Nanomaterials for Optoelectronic Devices Applications **Li Pei (Invited)** (Online) Beijing Jiaotong University, China
16:20-16:40	**Xiangchen Cui (Invited)** Dalian University of Technology, China
16:40-17:00	High Sensitivity Bio-Sensor in Terahertz Regime for Cancer Cell Detection based on Microstructure Polymer **Yani Zhang (Invited)** Shaanxi University of Science and Technology, China
17:00-17:20	Optical Sensors Based on Quantum Dots Nanocomposite Film **Xiaobo Xing (Invited)** South China Normal University, China
17:20-17:40	Rare-earth Ions Doped Up-Conversion Nanomaterials for Optoelectronic Devices Applications **Yapei Peng (Invited)** (Online) Shenzhen Technology University, China
17:40-18:00	Active and Passive Ways for Surface Plasmon Resonance Sensing Enhancement **Jiajie Chen (Invited)** (Online) Shenzhen University, China

November 28 16:00-17:40	**Session 13-B:** **Optoelectronic Devices** ZOOM ID: 931 5402 5904
	Chair: Nan-Kuang Chen, Liaocheng University, China
16:00-16:20	Recent Development of Helical Long-Period Fiber Gratings **Yunqi Liu (Invited)** (Online) Shanghai University, China
16:20-16:40	Subwavelength Grating based on-chip Mode (de) Multiplexer And Mode Splitting **Weifeng Jiang (Invited)** (Online) Nanjing University of Posts and Telecommunications, China
16:40-17:00	Pulse Dynamics of an Fiber Laser under Different Pulse Regimes **Liqiang Zhang (Invited)** (Online) Liaocheng University, China
17:00-17:20	**Chun-Nien Liu (Invited)** (Online) NCHU, China
17:20-17:40	**Zhiting Ye (Invited)** (Online) NCCU, China

Session 14

November 27 16:00-18:00	**Session 14-A:** **High Power Laser Source** 万花厅 (3F) | ZOOM ID: 851 5181 0856
	Chair: Jingwei Guo, Dalian Institute of Chemical Physics, Chinese Academy of Science, China
16:00-16:20	High Power Kerr-lens mode-locked Yb Solid-state Laser **Wenlong Tian (Invited)** Xidian University, China
16:20-16:40	**Yongguang Zhao (Invited)** (Online) Jiangsu Normal University
16:40-17:00	**Youjian Song (Invited)** (Online) Tianjin University, China
17:00-17:20	**Tianfu Yao (Invited)** (Online) National University of Defense Technology, China
17:20-17:40	**Yanlong Wang (Invited)** (Online) Dalian institute of chemical physics, CAS, China
17:40-18:00	**Yannan Tan (Invited)** (Online) Dalian institute of chemical physics, CAS, China

November 28 9:00-10:40	**Session 14-B:** **High Power Laser Source** ZOOM ID: 851 5181 0856
	Chair: Jingwei Guo, Dalian Institute of Chemical Physics, Chinese Academy of Science, China
9:00-9:20	**Man Jiang (Invited)** (Online) National University of Defense Technology, China
9:20-9:40	Unified Model for Spectral and Temporal Properties of Quasi-CW Fiber Lasers **Wei Liu (Invited)** (Online) National University of Defense Technology, China
9:40-10:00	Quasi-parametric Chirped-Pulse Amplification (QPCPA) for High Peak-Power Lasers **Jingui Ma (Invited)** (Online) Shanghai Jiaotong University, China
10:00-10:20	**Zhenxu Bai (Invited)** (Online) Hebei University of Technology, China
10:20-10:40	High-energy, Nanosecond Orange Laser based on Pr:YLF Crystal at Room Temperature **Yaoyao Qi (Invited)** (Online) Hebei University of Technology, China

Session 15

November 27 16:00-17:45		**Session 15:** **Optoelectronic Technology and Optical Communication** Online | ZOOM ID: 915 8899 7268
	Chair: Francois Ouellette, Chengdu University, China	
16:00-16:15	C1031 (Online)	Comparation of Nonlinear Trellis-Coded-Modulation, Duobinary and QAM Modulation Formats in Visible Light Communication System **Jie Wang**, Yinaer Ha, Rui Chen, Peng Zou, Nan Chi Fudan University, China
16:15-16:30	C1043-A (Online)	Improved scanning methods for stability control in tunable diode laser absorption spectroscopy **Botao Deng**, Chaotan Sima, Yangfan Xiao, Xuefang Wang, Deming Liu Huazhong University of Science and Technology, China
16:30-16:45	C1064-A (Online)	Passive Harmonic Mode-Locked Erbium-Doped Fiber Laser based on ZrTe3 Nanoparticle-Based Saturable Absorber Zhanqiang Hui, **Niping Shen**, Yuanhong Wang Xi'an University of Posts and Telecommunications, China
16:45-17:00	C1065-A (Online)	Few-layer ZrTe3 Nanosheets for Ultrashort Pulse Mode-Locked Laser in 1.55um Region Zhanqiang Hui, **Yuanhong Wang**, Niping Shen Xi'an University of Posts and Telecommunications, China
17:00-17:15	C1074 (Online)	Measurement of Tilted Fiber Bragg Grating Sensors with Femtometer Resolution using Dual-Wavelength Differential Detection **Francois Ouellette**, Jin Huang, Shucheng Liu, Jianfeng Li Chengdu University, China
17:15-17:30	C1083 (Online)	High-Repetition-Rate Pulsed Yb-Doped Fiber Laser Based on Hybrid Plasmonic Microfiber Resonator **Zi-xuan Ding**, Ying-qing Ma, Kang-hu Zhou, Fei Xu Nanjing University, China
17:30-17:45	C1110-A (Online)	Dual-core Anti-resonant Fiber-based Terahertz Polarization Beam Splitter with Ultra-low Loss and Wide Bandwidth **Liming Gao**, Zhanqiang Hui Xi'an University of Posts and Telecommunications, China

Session 16

November 27 10:00-11:30	**Session 16:** **Signal Theory and Analysis** ZOOM ID: 862 8532 6181	
	Chair:	
10:00-10:15	C1103	An Underwater Neural Network DOA Estimation Model with Fast Convergence and Strong Robustness **Jingyao Zhang**, Shibao Li, Haihua Chen, Yucheng Zhang, Xuerong Cui, Rongrong Zhou China University of Petroleum, China
10:15-10:30	C1104	A New DOA Estimation Algorithm Based on PSO-Gauss-Newton **Xuerong Cui**, Rongrong Zhou, Haihua Chen, Yucheng Zhang,Shibao Li, Jingyao Zhang China University of Petroleum, China
10:30-10:45	C1061	Research on Single Observation Station Target Tracking based on UKF Algorithm Lieping Zhang, **Mingyang Tan**, Shenglan Zhang, Yanlin Yu, Wei Liu, Zuqiong Zhang Guilin University of Technology, China
10:45-11:00	C1112	Research on the Algorithm of Nonuniform Compressive Sensing in DOA Xuerong Cui , **Bai Guo** , Haihua Chen , Yucheng Zhang , Shibao Li, Xiaochen Lian China University of Petroleum, China
11:00-11:15	C1076	Entities and Relations Aware Graph Convolutional Network for Knowledge Base Completion **Kun Yang**, Haipeng Gao, Yuxue Yang, Ke Qin University of Electronic Science and Technology, China
11:15-11:30	C1053	All-fiber Frequency Shifter with a lower Frequency Shift for the Coherent Detection **Zhengwei Zhang**, Jiangtao Xu, Xianglong Zeng, Longkun Zhang, Jianfeng Sun Shanghai University, China

Session 17

November 27 10:00-11:30		**Session 17:** **Advanced Information Network and Security** ZOOM ID: 916 0951 1303
		Chair: Tianshu Wang, Changchun University of Science and Technology, China
10:00-10:15	C1035-A	A Traffic and Energy Based Detection and Prevention of DDoS Attacks on Nodes to in WSN **Taehwa Lee**, Taeho Cho Sungkyunkwan University, South Korea
10:15-10:30	C1049	Analysis of Scientific Research Cooperation Network in Cyberspace Security **Shanshan Pei** Shan Dong University of Political science and Law, China
10:30-10:45	C1080	Research on Malicious URL Detection Technology Based on BERT Model **Weiling Chang**, Fei Du, Yijing Wang National Internet Emergency Center, CNCERT/CC, China
10:45-11:00	C1007	Comparative Analysis of Software Performance on Web Based Application Sana Mazhar, **Shawwal Rashed**, Saleem Zubair Superior University, Pakistan
11:00-11:15	C1013	Detection of GPS Spoofing Attacks Based on Isolation Forest Shenzheng Zuo, Yinan Liu, **Tianxin Liu**, Pengpeng Xin, Dongmei Zhang Beijing University of Posts and Telecommunications, China
11:15-11:30	C1006	Group Public Key Encryption With Equality Test for Dynamic Membership **Ru Xiang**, Sha Ma, Xinjie Liu South China Agricultural Universary, China

Session 18

November 27 13:30-15:30	**Session 18:** **Optical Communication and Wireless Communication Technology** ZOOM ID: 862 8532 6181
	Chair: Zhanqiang Hui, Xi'an University of Posts and Telecommunications, China
13:30-13:45	C1002	The Research of Photovoltaic Module Based on Simulink **Xuefang Xiao**, Shiliang Feng, Zewang Zhang Xiamen University of Technology, China
13:45-14:00	C1016	Intelligent Relay Selection with Predicted Link States for Relay-Assisted Free Space Optical Network **Tianming Xu**, Song Song, Yahe Yang, Shuyu Xiao, Yejun Liu, Lei Guo Northeastern University, China Chongqing University of Posts and Telecommunications, China
14:00-14:15	C1088	A New Temporal and Spectral Evolution Polarization Mode Dispersion Model in Broadband Fiber Channel **Bingzheng Zhang**, Nan Cui, Zhihao Li, Can Cao, Xiuwei Mao, Xianfeng Tang, Xiaoguang Zhang Beijing University of Posts and Telecommunications, China
14:15-14:30	C1158	High Speed Underwater Wireless Optical Communication with High Receiver Sensitivity and Large Dynamic Range **Kaiqiao Yang**, Guanjun Gao, Jie Ning, Jialiang Zhang, He Peng Beijing University of Posts and Telecommunications, China
14:30-14:45	C1023	Performance Perusal of Multiuser MC-CDMA System for Nakagami-m, Rayleigh and Rician Fading Channel with Spreading Codes **Mohammad Nizamul Haque**, Manik Kumar Shil Rajshahi University of Engineering & Technology, United States
14:45-15:00	C1126	Timely Status Updating over Markov Channels in Downlink Wireless Networks with Stochastic Arrivals Yanzhi Huang, **Xijun Wang**, Xinghua Sun, Xiang Chen Sun Yat-sen University, China
15:00-15:15	C1114	Analysis of a Multi-Directional Data Access Control System for Underwater Wireless Network using UAN MAC protocols **Mohammad Nizamul Haque** The University of Texas Rio Grande Valley (UTRGV) , United States
15:15-15:30	C1136	Mode-locked Vortex Fiber Lasers based on High-Order Mode Conversion **Haocun Wu**, Jiangtao Xu, Longtao Wang, Linping Teng, Si Lv, Fufei Pang, Xianglong Zeng Shanghai University, China

Session 19

November 27 13:30-15:15		**Session 19:** **Mobile Communication and Data Transmission** ZOOM ID: 916 0951 1303
		Chair: Kokkonis George,University of Western Macedonia, Greece
13:30-13:45	T1003	A Joint Blocklength And Location Optimization Scheme For UAV-assisted Smart Port Communication **Jianhua Pei**, Zeping Li, Peng Jiang, Suchen Li, Renhai Feng Tianjin University, China
13:45-14:00	T1018	An L-Strip Double-band and Triple-band Antenna for WiFi, WiMax and 5G Applications **Rida Gadhafi**, Mahesh Kannath, Husameldin Mukhtar, Wathiq Mansoor University of Dubai, UAE
14:00-14:15	T1023	Narrowband Jamming Mitigation in OFDM Systems using Time Domain Interleaving T. Nazzal, B. AlQassab, M. Alblooshi, F. Salman, H. Almarzooqi, **H. Mukhtar** University of Dubai, UAE
14:15-14:30	T1002	Traffic Forecasting of Core Network Based on Improved Logistic Regression Song xin, **Xue Yuanbiao**, Zhang Qijia, Lai Zhimao, Feng Renhai Tianjin University, China
14:30-14:45	T1005	Optimising Decision Making on Communication Systems The Federated Learning Approach **Konstantinos Stergiou**, Konstantinos Psannis ,Manos Roumeliotis,Georgios Kokkonis, Yutaka Ishibashi University of Macedonia, Greece
14:45-15:00	T1014	Neural Networks Applied for Broadcast Channels **Mohammad Abuabdoh** University of South Florida, US
15:00-15:15	T1026	Improved Design and Realization of Pulsed BPSK, QPSK, Barker Encoded, CW and Chirp Signal Generation in LabVIEW PXI 5644R Zarrar Haider, Malik Muhammad Zohaib , **Furqan Haider** Innopolis University, Russia

Session 20

November 27 15:45-17:15	**Session 20:** **Intelligent Image Analysis and Processing** ZOOM ID: 862 8532 6181	
	Chair:	
15:45-16:00	C1067	Design and Development of On-Site Automatic Inspection System based on Machine Vision Technology **Bo Liu**, Hang Yin, Wangchang Miao, Aihua Zhang Zhangjiakou Cigarette Factory Limited, China
16:00-16:15	C1071	Surface Defect Detection Method of Aluminum Based on Improved Faster RCNN **Lu Li**, Zhanjun Jiang, Yanneng Li Lanzhou Jiaotong University, China
16:15-16:30	C1072	Dual External Contextual Attention Network for Pseudomyxoma Peritonei Segmentation in CT Images **Gao Jingran** Institute of Computing Technology, Chinese Academy of Sciences; University of Chinese Academy of Sciences, China
16:30-16:45	C1090	MLBDNet and MLBSNet: Joint Detection Models Based on Muti-Lateral Branch of Early Fire Images in Ship Engine Room Meng Joo Er, **Yuhong Zheng**, Guanlin Yi Dalian Maritime University, China
16:45-17:00	C1151	Non-uniform Illumination Document Image Binarization Using K-Means Clustering Algorithm **Xingxin Yang**, Yi Wan LanZhou University, China
17:00-17:15	C1105	Transacting Multiple Mother Wavelets in Continuous Wavelet Transform for Epilepsy EEG Classification via CNN Xiaojun Yu, Zeming Fan, Mudasir Jamil, **Muhammad Zulkifal Aziz**, Yiyan Hou, Haopeng Li, Jialin Lv Northwestern Polytechnical University, China

Session 21

November 27 15:45-17:15		**Session 21:** **Intelligent Control System and Information Management** ZOOM ID: 916 0951 1303
		Chair: Zaidao Wen, Northwestern Polytechnical University, China
15:45-16:00	C1048	A Novel Embedding Model for Knowledge Graph Completion Based on Quaternion **Haipeng Gao**, Kun Yang, Yuxue Yang, Ke Qin University of Electronic Science and Technology of China, China
16:00-16:15	C1005	Continuous Authentication Based on Keystroke and Mouse Dynamics in Video Private Network **Shuyu Wang**, Huixiang Zhang, Quanjun Pei, Pengfei Wang, Xiaohui Li Northwestern Polytechnical University, China
16:15-16:30	C1033	Design of Greenhouse Control System Based on Edge Computing **Wenlong Han**, Ansong Feng, Jinchao Xiao, Shuangfei Zi Shenyang University of Chemical Technology, China Shenyang Institute of Automation. Guangzhou. Chinese Academy of Sciences, China
16:30-16:45	C1070	A Scalable Hybrid Network for Agriculture Environment Monitoring **Susheng Ding**, Junbao Zheng, Lurong Jiang, Meng Li, Fengcheng Mei, Wei Li Zhejiang Sci-Tech University, China
16:45-17:00	C1093	Span-based Joint Extracting Subjects and Objects and Classifying Relations with Multi-head Self-attention **Xuanang Zheng**, Lingli Zhang, Wei Zheng, Wenxin Hu East China Normal University, China
17:00-17:15	C1146	Registration and Login Scheme of Charity Blood Donation Dystem Based on Blockchain Zero-Knowledge Proof Qingshui Xue, **Yue Sun**, Haifeng Ma, Zongyang Hou, Tianhao Zhang Shanghai Institute of Technology, China

Session 22

November 28 13:30-15:30	**Session 22-A:** **Space Communications, Navigation and Tracking** ZOOM ID: 851 5181 0856
	Chair: Qinghua Tian, Beijing University of Posts and Telecommunications, China
13:30-13:50	Hard-Decision Coded Modulation for High-Speed and Low-Cost Optical Communications **Yi Lei (Invited)** (Online) Hefei University of Technology, China
13:50-14:10	**Huiqin Wang (Invited)** (Online) Lanzhou University of Technology, China
14:10-14:30	A Low-Complexity Sub-block Transmission Algorithm for Faster-Than-Nyquist Optical Wireless Communications **Minghua Cao (Invited)** (Online) Lanzhou University of Technology, China
14:30-14:50	**Xiang Yi (Invited)** (Online) Xidian University, China
14:50-15:10	Demonstration of 100Gbit/s Real-Time Ultra High Definition Video Transmission Over Free Space Optical Communication Links **Yueying Zhan (Invited)** (Online) Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China
15:10-15:30	Characterization of Random Fluctuations in Received Signals for Turbulent Optical Channels using Coherent Spatial-Mode Reception **Chunyi Chen (Invited)** (Online) Chanchun University of Science and Technology, China

November 28 16:00-17:20	**Session 22-B:** **Space Communications, Navigation and Tracking** ZOOM ID: 851 5181 0856
	Chair: Qinghua Tian, Beijing University of Posts and Telecommunications, China
16:00-16:20	Satellite-terrestrial Laser Communication Technology and Development **Yi Wang (Invited)** (Online) China Jiliang University, China
16:20-16:40	AI-assisted Free-Space Optical Communications **Yejun Liu (Invited)** (Online) Chongqing University of Posts and Telecommunications, China
16:40-17:00	All-optical Processing in Free Space Optical Communication Networks **Xinning Huang (Invited)** (Online) Yangzhou University, China
17:00-17:20	**Jiahao Huo (Invited)** (Online) University of Science & Technology Beijing, China

Session 23

November 28 10:00-12:00	**Session 23:** **Future Communication Technology and Development** ZOOM ID: 915 8899 7268	
	Chair:	
10:00-10:15	C1077	Graph Theory based Resource Allocation Algorithm in Terahertz Communication Networks **Chaoyang Wang**, Feng Yan Southeast University, China
10:15-10:30	C1078	Vulnerability Analysis of High-Performance Transmission and Bearer Network of 5G Smart Grid based on Complex Network **Fuquan Huang**, Zhiwei Liu, Jianyong Zhou, Guoyi Zhang, Likuan Gong Shenzhen Power Supply Bureau Power Dispatching and Control Center, China
10:30-10:45	C1079	Research and Application of Clustering Optimization Algorithm based on Fuzzy Logic in 5G Transmission Line Natural Disaster Monitoring **Yanzhi Sun**, Yuming Liu, Long Chen, Chen Cui, Cheng Fu Yunnan Power Dispatching and Control Center, China
10:45-11:00	C15002	108 W Diode Pumped Rubidium Vapor Laser with Brewster Angle Structure **Yannan Tan**, Dongdong Xu, Yimin Li, Chunyan Jia, Shutong He, Wanfa Liu Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
11:00-11:15	C1045	Minimum Delay Allocation Strategy for Distribution Internet of Things Xiang Wang, Qingyang Liu, **Meiming Fu**, Zhiying Tang, Kang Wang China Gridcom Co., Ltd, China Shenzhen Smartchip Microelectronics Technology Co., Ltd., China
11:15-11:30	C1059	A Cloud-Edge Collaboration Framework for Power Internet of Things Based on 5G Network Libin Zheng, Jing Chen, Tonglei Liu, Bingnan Liu, Jianan Yuan, **Ganghong Zhang** Beijing Smart Chip Microelectronics Technology Company Limited, China
11:30-11:45	C1003	Optimization the effects of Asphalt and soil on Underground Magneto-Inductive Communication and Localization **Menghao Chu**, Shuqin Geng, Ronghao Zhu, Xi Li Beijing University of Technology, China
11:45-12:00	C1155	Modeling and Performance Analysis of OPNET-based Routing Protocols for Mobile Ad Hoc Networks **Dandan Ding**, Bu Fanliang, Bowen Wang People's Public Security University of China, China

Session 24

November 28 13:30-15:15		**Session 24:** **Internet of Things and Communication Engineering** ZOOM ID: 915 8899 7268
		Chair: Sarigiannidis Panos-University of Western Macedonia, Greece
13:30-13:45	T1004	Efficient Big Data Delivery over IoT networks **Andreas P. Plageras**, Kostas E. Psannis, Kokkonis George, Yutaka Ishibashi University of Macedonia, Greece
13:45-14:00	T1001	Maritime Target Tracking algorithm based on Visible Light Communication Zhimao Lai, **Zhaolin Zhang**, Youjun Wu, Renhai Feng Tianjin University, China
14:00-14:15	T1009	Artificial Intelligence ANTi-Attack System (AIANTAS) for IoT Cyberspace: An Upcoming Cloud-based Security Architecture for Police Authorities **Vasileios A. Memos**, Konstantinos E. Psannis, Yutaka Ishibashi University of Macedonia, Greece
14:15-14:30	T1013	On the Performance Evaluation of 5G MIMO Networks Employing NOMA via System-Link Level Simulations **Panagiotis Gkonis**, Panagiotis Trakadas, Lambros Sarakis, Anastasios Giannopoulos, Sotirios Spantideas, Nikolaos Kapsalis National and Kapodistrian University of Athens, Greece
14:30-14:45	T1010	Efficient Integration of XR with Haptic Feedback and 5G Networks **Georgios Minopoulos**, Konstantinos Psannis, Sotirios Goudos, Spiridon Nikolaidis, Georgios Kokkonis, Yutaka Ishibashi University of Macedonia, Greece
14:45-15:00	T1021	Proposed Distributed System Architecture and Preliminary Measurements for the Detection of Trapped Individuals inside Motorway Tunnels **Sotirios Kontogiannis**, Anestis Kastellos, George Kokkonis,Theodosios Gkamas ,Christos Pikridas University of Ioannina, Greece
15:00-15:15	T1019	Protecting Minors' Personal Data in IoT-based Smart Homes According to GDPR **Stavroula Rizou**, Eugenia Alexandropoulou-Egyptiadou, Yutaka Ishibashi, Konstantinos E. Psannis University of Macedonia, Greece

Session 25

November 28 15:45-17:30		**Session 25:** **Artificial Intelligence and Information Technology** ZOOM ID: 915 8899 7268
		Chair: Goudos Sotiris -Aritostle University of Thessaloniki, Greece
15:45-16:00	T1020	An Improved Method for Red Segmentation based Traffic Sign Detection **Manal El Baz**, Taher Zaki, and Hassan Douzi Ibn Zohr University, Agadir, Morocco
16:00-16:15	T1015	Effect of Neural Network on Robot Position Control Using Force Information **Yifei Zhang**, Pingguo Huang, Yutaka Ishibashi, Takashi Okuda, Kostas E.Psannis Nagoya Institute of Technology, Japan
16:15-16:30	T1016	Smartphone Haptic Applications for Visually Impaired Users **Georgios Voutsakelis**, Athina Diamanti, Georgios Kokkonis University of Western Macedonia, Greece
16:30-16:45	T13001	Diverse Implementations Of The Lorenz System for Teaching Non-Linear Chaotic Circuits Maria S. Papadopoulou, Volodymyr Rusyn, Achilles D. Boursianis, Panagiotis Sarigiannidis, Konstantinos Psannis, **Sotirios K. Goudos** Aristotle University of Thessaloniki, Greece
16:45-17:00	T2002	A Phase Noise Measurement System with Frequency Drift Compensation **Ziye Wang**, Chun Yang, En Zhu, Weijie Xu Southeast University, China
17:00-17:15	T1008	Enhanced Robot Position Control Using Force Information for Mobile Robots: Influences of Obstacles on Cooperative Work **Yutaka Ishibashi**, Pingguo Huang, Kostas Psannis Nagoya Institute of Technology, Japan
17:15-17:30	T1006	Communication and Security Issues in Online Learning during theCOVID-19 Pandemic **Chrysi Metallidou Chrysi**, Kostas E. Psannis ,Sotirios Goudos, Panagiotis Sarigiannidis ,Yutaka Ishibashi University of Macedonia, Greece

Poster Session &Exhibition

November 26 16:50-17:50	ZOOM ID: 968 1182 1063 (Online)	
	Chair: Xiaojun Yu, Northwestern Polytechnical University, China	About 5 Minutes for every presentation
C1015	Theoretical Analyses of Pulse Evolution in a Passively Mode-Locked Laser **Shoushan Wang**, Guobin Pu, Chuan Jin, Tao Zhang The First Research Institute of the Ministry of Public Security, China	
C1024	Application of A Variable Step Size Adaptive Equalization Algorithm **Li Xi**, Kai Li, Cheng Ma Chinese Flight Test Establishment, China	
C1025	Load Balancing Algorithm for Heterogeneous Wireless Networks Based on Motion State Estimation **Shiwei Guo** Chinese Flight Test Establishment, China	
C1032	Indoor Location Algorithm Based on Beetle Antenna Search Optimized Radial Basis Function Neural Network Yenan Liu, **Xiangqian Zhou**, Feng Zhang, Li Zhao, Mengyang Zhang Xi'an Technological University, China	
C1034	Enterprise's Credit Information Sharing Model Based on Consortium Blockchain **Xiaoqing Feng** Zhejiang University of Finance & Economics, China	
C1039	A 40Gbit/s Alternate Mark Inversion Encoded Free Space Optical System **Jie Yang**, Yufeng Shao, Anrong Wang, Zhuang Wang, Qinzheng Hu, Qiming Yang, Ni Yu Chongqing Three Gorges University, China	
C1042	A Parameter Optimization Based on Equivalent Circuit Model for High-speed DFB Laser Xiaojuan Wang, Xudong Cheng, **Qing-An Ding**, Lijun Zhang, Huixin Liu, Li Zheng, Kun Zhang Shandong University of Science and Technology, China	
C1047	Optimal Adjustment of UCRNs in Cooperative Engagement System Based on GDMPC–MOABC **Yun Zhong**, Lu Jun Wan Air Force Engineering University, China	
C1054	Evaluation Model of Data Consistency Mechanism in Decentralized Network Application **Ruibo Cao**, Kun Meng, Kai Sun, Ziqiang Zheng Beijing Information Science and Technology University, China	
C1057	A Microwave Photonics System with 16QAM-OFDM based on Direct Modulation and Subcarrier Multiplexing **Zhen Liu**, Shukai Xin, Xuguang Huang, Jianqing Li, Guang Li South China Normal University, China	
C1060	Measuring Drift Velocity by Diffusion-based Molecular Communication System Shengfa Xu, Ming Yan, Jingyi Xing, **Xiaodong Yang** Xidian University, China	
C1069	Recursive Compressed Sensing of Doubly-selective Sky-wave Channel in Shortwave OFDM Systems **Wang Kai**, Ren Zhenge, Zhang Jianxin, Chen Jing Army Engineering University of PLA, China	

C1081	Multi-mode Interferometer Enabled Stable Dual-Wavelength Mode-Locked Fiber Laser **Dazhong Zhang**, Chaoyu Xu, Zhichao Wu, Tianye Huang China University of Geosciences (Wuhan), China
C1095	Physical Layer Encryption Scheme based on Reservoir DNA and Index Scrambling in the CO-OFDM system Yunzhi Yang, Shuo Chen, **Le Liu**, Jiang Huang, Julong Chen, Xin Jiang, Hailong Zhu, Xianfeng Tang Beijing University of Posts and Telecommunications, China
C1119	Indoor Navigation System based on Foot-Mounted IMUand map Information Fusion **Yushuai Zhang**, Jianxin Guo, Xiang Ji, Rui Zhu Xijing University, China
C1123-A	Photoacoustic Spectroscopy based Trace NO Detection using Distributed Feedback Quantum Cascade Laser with Second Harmonic Signal **Xiao Hanping**, Zhao Jinbiao, Lu Ping Huazhong University of Science and Technology, China
C1125-A	Constructing Gigahertz Opto-Acoustic Transducers with Two-Dimensional Semiconducting Multilayers **Xu Wenxiong**, Chuansheng Xia, Qiannan Cui, Chunxiang Xu Southeast University, China
C1143	Design and Optimization of Ku-band Large-Loop-Spiral Towed Antenna for the Unmanned Underwater Vehicle Shimin Feng, Tianhui Fu, Yongkang Yang, Menglei Xiu, **Shiyu Wang** Chengfei Naval University of Engineering
C1144	Dual-Band and Dual-Circularly Polarized Shared-Aperture antenna Based on UAV Communication **Chuang Wang**, Wenquan Cao, Rentang Hong, Wenyu Ma Army Engineering University of PLA, China
C1145	Multi-agent Competitive Spectrum Handoff based on Improved MADDPG Algorithm **Shufeng Li**, Wei Shao, Yunfei Peng, Min Zhou Army Engineering University of PLA, China
C1147	An Unknown Protocol Clustering Analysis Method based on Spectral Clustering **Lulin Ni**, Yu Shi, Jie Luo, Qingbing Ji Science and Technology on Communication Security Laboratory, China
C14002	A Wireless Resource Management and Virtualization Method for Integrated Satellite-Terrestrial Network Chunfeng Wang, **Hao Zhang** Beijing Institute of Spacecraft Environment Engineering, China
C14003	An Efficient Spectrum Mobility and Handover Method for Cognitive Satellite Networks **Chunfeng Wang**, Naijin Liu China Academy of Space Technology, China

Onsite Activity

November 28, 2021
10:00-16:00-----Optional Academic Visit in Xi'an City

Attention:
Gathering Place: Lobby of Grand Barony Hotel Xi'an (西安天骊君廷大酒店大厅)

Gauthering Time(集合时间): 10:00 A.M (上午十点)

Visit Route:
明城墙→钟鼓楼广场→大慈恩寺大雁塔广场→历史博物馆

If you are interested in joining this visit, please contact conference secretary.