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Part I SOPO 2021 Conference Schedule

Time: August 17-August 19, 2021
Location: Guilin Grand Link Hotel (桂林桂山华星酒店), China

Date	Time	Lobby, Guilin Grand Link Hotel, China
August 17	**14:00-17:00**	**Registration**
Date	Time	**TBD**
August 18	**08:30-08:40**	**Opening Ceremony** Chair: Prof. Zhiping Zhou
	08:40-12:00	**Plenary Speech Session I** Prof. Shengjun Zhou, Dr. Hairun Guo, Prof. Zefeng Wang, Prof. Yang Yue, Prof. Jin Li, Prof.Zhaoyang Zhang Chair: **Group Photo & Coffee Break** **10:25-10:40**
	12:00-13:30	**Lunch** [Whisper Garden Lounge [叮咛吧] Lobby]
	14:00-18:00	**Plenary Speech Session II** Prof. Harith Ahmad, Prof. Fran ̧ois Sanchez, Prof. Erol Sancaktar, Prof. Youxin (Linda) Mao, Prof. OLIVER H. HECKL, Prof. Jovana Petrovic Chair: **Coffee Break:15:40-15:50**
	18:00-19:30	**Dinner** [Whisper Garden Lounge [叮咛吧] Lobby]
Date	Time	**TBD**
August 19	**08:30-12:00**	**Plenary Speech Session III & Technical Session** Prof. Jingsong Li, Assoc. Prof. Ir. Ts. Dr. Mohamad Hafiz Mamat, Dr. A. Afroozeh **Chair:** **Coffee Break:10:00-10:15**
	12:00-13:30	**Lunch** [Whisper Garden Lounge [叮咛吧] Lobby]
August 20	**7:30 - 16:00**	**One Day Tour**

Part II Plenary Speeches

Plenary Speech Session I

Plenary Speech 1: Boosting efficiency of III-nitride light-emitting diodes

Speaker: Prof. Shengjun Zhou, Wuhan University, China
Time: 08:40-09:20, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Organic light-emitting devices (OLEDs) are expected as a high performance flat panel display, including the capability of flexible and transparent panels.Luminescent properties such as power efficiency and color purity have been improved by introducing vearious optical design technologies for the enhancement of light-extraction process. It will be shown that the external micro-cavity effect coupled with surface plasmon resonance is useful for the improvement of the color purity of the emission and out-coupling efficiency. In results, color coordinates of three primary color emission approaches to BT.2020 national standard and an external quantum efficiency becomes higher by a factor of about 1.5. The effect and behavior of optical intractionin waveguide and surface plasmonmodesin an OLED will be discussed from a viewpoint of multi-scale optical design analysis.

Plenary Speech 2: Fiber gas Raman lasers

Speaker: Prof. Zefeng Wang, National University of Defense Technology (NUDT), China
Time: 09:20-10:00, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Fiber lasers have wide potential applications, and are increasingly replacing traditional solid state and gas lasers in many applications due to their compactness, high efficiencies, excellent beam qualities and convenient heat management. However, due to the low damage threshold, solid-core fiber lasers lack the ability to provide the same power levels as conventional gas lasers, which can reach MW levels in chemical gas lasers; Because of nonlinear effects, the spectral linewidth of light generated in silica fibers will broaden at high powers; As the number of rare earth materials is limited, only certain laser wavelengths are available; Due to the strong infrared absorption of silica fibers, it is difficult to obtain laser wavelength beyond 3 μm. Gas stimulated Raman scattering (SRS) has been demonstrated to be an effective method to obtain

high-power narrow-linewidth lasers of otherwise unobtainable wavelengths, especially in the ultra-violet and mid-infrared spectral range. In traditional gas cells the effective interaction length is very short and the system can be bulky and cumbersome, limiting the applications of these lasers. The advent of anti-resonance hollow-core fibers and their properties of long effective interaction length, high optical confinement, and the possibility of control of the effective gain spectrum make it possible to develop a novel type of laser, named fiber gas Raman lasers (FGRL), which combines the advantages of both fiber and gas lasers. By properly designing the transmission bands of hollow-core fibers, selecting active gases and pump sources, FGRLs can potentially provide a wide range of emission wavelengths from the UV to the IR pumped with commercial 1μm lasers. Owing to the nature of transitions in atomic and molecular gases, FGRLs are spectrally narrow even without additional linewidth limiting measures. We have demonstrated efficient 1.1 μm, 1.5 μm, 1.7 μm, 2 μm and 3 μm FGRLs using hollow-core fibers filled with different gases, and are investigating on 4 μm band of FGRLs. Our work provides a potential simple and efficient way for high-power, narrow-linewidth fiber lasers operating at the range from visible to mid-IR by gas SRS in hollow-core fibers.

Plenary Speech 3: Multi-Ring-Core Chalcogenide Fiber Supporting >4000 OAM Modes Across C+L Bands

Speaker: Prof. Yang Yue, Nankai University, China
Time: 10:10-10:50, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

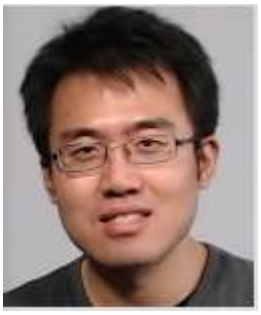
Abstract
Multiplexing, known as transmitting multiple signals such as time, wavelength, polarization, or space into one physical channel, is a technology for increasing the overall data-carrying capacity and efficiency. In recent years, space has been considered as the next dimension to overcome the capacity crunch of the current optical communication systems based on single-mode fibers (SMFs).

Orbital angular momentum (OAM) mode, which has the unique helical phase front and theoretically infinite topological charge value l, could be used as a different dimension to create an additional set of data carriers in optical transmission system. The complex multiplexing schemes of combining mode division multiplexing (MDM) technology based on OAM modes with dense space-division multiplexing (DSDM) in multi-core fibers (MCFs) can be utilized to further improve the data rate and spectral efficiency.

In this talk, we introduce a multi-OAM multi-ring air-core fiber, which has 37 high-index rings with each ring supporting 112 radially fundamental OAM modes across C and L bands from 1530 nm to 1625 nm, i.e. 4144 OAM modes in total. Moreover, the designed fiber features <-49 dB crosstalk at 1550 nm and <-20 dB crosstalk across C and L bands after 100-km fiber propagation.

Plenary Speech 4: TBD

Speaker: Prof. Hairun Guo, Shanghai University, China
Time: 10:50-11:30, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China



Abstract
TBD

Plenary Speech 5: Preparation and Experimental Studies on Microfiber Sensors

Speaker: Prof. Jin Li, Northeastern University, China
Time: 11:30-12:10, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
In this report, several kinds of microfiber sensors were proposed based on that the strong evanescent field of micron optical fiber is sensitive to the changes of the external environment. The related temperature, gas and load sensing performance has been experimentally demonstrated, studied and optimized. Here, the microfibers were fabricated by flame scanning-stretching method (based on traditional single-mode fiber) and sol-gel one-step stretching technique (based on polymer and organic solvent). Among them, silica microfiber taper can be used to prepare the S-type temperature sensor probe, whose sensitive area was extended by splicing a cut of dislocation optical fiber; or to fabricate the Fabry-Perot interferometer temperature probe by inserting and encapsulating it in the capillary; or it can be made into knot ring structure through micro-operation technology and PDMS package to improve its temperature sensing performance. Polymer microfiber can be obtained by one-step stretching method and used for sensing refractive index after being connected with single-mode microfiber taper using the low refractive index UV glue. By virtue of the easy doping property of polymer sol, metal micro/nano-materials and laser dye were doped to explore the functional microfibers, which were used for determining the refractive index, gas concentration and for developing micro-ring laser resonator.

Plenary Speech 6: Coherent control on novel dynamic behaviors of light in electromagnetically induced photonic lattices

Speaker: Prof.Zhaoyang Zhang, Xi'an Jiaotong University, China
Time: 12:10-12:50, Wednesday Morning, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Keywords: Electromagnetically induced transparency, Reconfigurable photonic lattices, Atomic coherence

Electromagnetically induced transparency (EIT) refers to the reduction of resonant absorption by quantum interference, so the medium becomes effectively transparent for the probe field (within a frequency width) under the action of a strong coherent (coupling) field on a linked transition. In the meanwhile, EIT can also greatly enhance and modulate the refractive index experienced by the probe field. With the intensity of the coupling field being spatially modulated in a periodic manner, the incident probe beam experience a periodically modified refractive index (indicating the formation photonic lattice) under the EIT condition. Owning to the immediate optical response of atomic medium to the modification on parameters operating EIT, such electromagnetically induced photonic lattices exhibit in situ tunability and reconfigurability.

Here, by taking advantages of the versatile nature of the coherently prepared multilevel atomic media, we experimentally demonstrate the novel dynamical behaviors of probe field travelling through spatially extended 1D and 2D electromagnetically induced photonic lattices established in coherently-prepared rubidium atomic vapors. The exhibited behaviors include parity-time symmetry breaking in a gain-loss waveguide array [1,2], evolution and interaction of optical vortices in wave packets aroud the Dirac point in photonic graphene [3,4], and nonlinear edge state in photonic graphene [5], ect.

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Plenary Speech Session II

Plenary Speech 7: An Ultrafast Method for Membrane Processing Using KrF Excimer Laser (Video)

Speaker: Prof. Erol SANCAKTAR, The University of Akron, Akron, USA
Time: 14:00-14:40, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract

Temperature and pH responsive membranes are widely used in controlled transport applications such as drug delivery. The constraints introduced by the grafted network inside the porous support membranes as well as the distribution of and non-uniformities in pores size which arise due to fabrication processes affect transport rate through such membranes. Photo-grafting is widely used to photo-polymerize a responsive monomer inside the pores, but it is slow and leads to undesirable surface polymerization on the membranes. To overcome these limitations, we developed a novel continuous two-step operation using 248 nm wavelength KrF excimer laser to fabricate Polyethylene terephthalate (PET) and polyimide (PI) support membranes (films) and the final membranes pore-filled using responsive hydrogel for responsive behavior. In the first step, membranes with uniform, ordered, and well-defined pores are fabricated using masked laser ablation of membrane carrier films. In the second step, responsive hydrogel is grafted in membrane pores through pulsed laser polymerization (PLP) at different grafting density values induced by different numbers of laser pulses.

In our proof-of-concept experiments, laser fluence (energy/area) and number of pulses were determined for different PET and PI film thicknesses and mesh sizes to obtain pores in the range of 600 nm to 35 μm. The surface and cross-sectional morphologies of the ablated support films were observed using optical microscopy and micro-CT. Optimum combinations of laser operational parameters (energy fluence, number of pulses, pulse frequency) and mesh size for each thickness membrane were determined based on full-perforation energy, average pore size and morphological observations. We then used the perforated support films to polymerize responsive hydrogel inside the pores using the same KrF excimer laser. Our results showed that the film thickness has little or no effect on kinetics of PLP for given laser operation parameters, when grafting polymerization is performed on the monomer pool at the bottom of the support membrane which is polymerized upwards through the pores using excimer laser irradiation directed from the top of the pores.

Our work establishes 248 nm KrF excimer laser as an extremely fast tool for combined laser ablation and polymerization during the same manufacturing process with the grafting time reduced to a few seconds. The hydrogel network isstrongly grafted to the pore walls and remains stable inside them under pressure. The grafting density of the hydrogel in the pores can be tuned by judicious selection of the laser parameters resulting in room temperature water permeabilities varying by 6 orders of magnitude due to hydrogel network swelling/deswelling inside the pores. Our results establish the

novel continuous twostep excimer laser-based operation as an efficient, fast, and economical method to fabricate responsive membranes.

Plenary Speech 8: Flexible all-PM NALM Yb:fiber laser design for low-noise frequency comb applications and single-cavity dual-comb generation (Video)

Speaker: Prof. Oliver H. Heckl, the University of Vienna, Austria
Time: 14:40-15:20, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
I present a versatile all-PM Yb:fiber-laser and demonstrate the impact of dispersion engineering on amplitude/phase noise and the carrier-envelope-offset frequency, showing single-digit-kHz values in free-running operation. Subsequently, I'll introduce our work on dual-comb generation from a single fiber laser via spectral subdivision producing a non-aliasing bandwidth of ~2.5 THz. I'll conclude this talk with our latest experiment demonstrating a simple approach for extending the ambiguity-free range of dual-comb ranging using an intrinsically modulated single-cavity dual-color fiber laser.

Plenary Speech 9: The Study of Pristine Transition Metal Dichalcogenides and its Alloys for Application as Saturable Absorber in Pulsed Laser System (Video)

Speaker: Prof. Harith Ahmad, University Malaya, Malaysia
Time: 15:20-16:00, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
The high-performance pulsed laser system is one of the research intents in the photonics community. The increasing research interest in a pulsed laser system is motivated by its wide range of applications in real-world systems such as material processing, optical communication, skin treatment, medical and scientific research. In the few recent years, nanomaterials arose as an alternative technology for pulsed laser generation. As such, many materials, including zero- (0D), one- (1D), and two-dimensional (2D) materials, have been explored for their viability as saturable absorbers. 2D transition metal dichalcogenides are particularly interesting for application as a saturable absorber in a pulsed laser system due to its layer-dependent optical properties and ultrafast carrier dynamics aside from low-cost fabrication. Despite intense research exploration, insufficient efforts have been given to select and optimize the most suitable TMD saturable absorber, leading to unclear research directions. In this research, steps

are given to process and compare different TMD materials such as pristine TMD and TMD alloy under the same experimental conditions and system settings to find the most suitable TMD saturable absorber potential alternative to the costly SESAM technology. From the experimental results, it can be deduced that the mechanically exfoliated MoWSe2 alloy can generate the highest pulse energy from the Q-switched laser operating at the C-band region.

Plenary Speech 10: Square-wave versus dissipative soliton resonance in passively mode-locked fiber lasers (Video)

Speaker: Prof. Fran ̧ois Sanchez, Laboratory of Photonics of Angers, the University of Angers, France
Time: 16:10-16:50, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
TBD

Plenary Speech 11: Semiconductor Quantum-Dash Mode-locked Lasers in Terabits/s Optical Communication and 5G & beyond Wireless Network Applications (Video)

Speaker: Prof. Youxin (Linda) Mao, National Research Council Canada, Canada
Time: 16:50-17:30, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Semiconductor-based monolithic mode-locked lasers (MLLs) with their ability to emit extremely stable, ultra-narrow and low noise optical pulse trains at high repetition rate are a promising technology for multi wavelength optical sources application in state of the art coherent optical communications and 5G & beyond wireless networks in millimeter-wave (mmW) bandwidths, in order to achieve ultrahigh data capacity and overcome the spectrum crunch [1]. Other advantages include compact size, low power consumption, low cost, simple fabrication, and the ability for hybrid integration with silicon substrates. MLLs utilizing quantum dots or dashes (QD) rather than quantum wells are particularly attractive due to the reduced amount of amplified spontaneous emission leading to lower intrinsic noise, narrower linewidth, and hence ultra-low timing jitter [2, 3]. We have previously demonstrated InAs/InP QD MLLs with various pulse repetition rates and a total output power up to 50 mW per facet at room temperature [4, 5]. In this presentation, we demonstrate InAs/InP C-band QD fabry-perot (passive) mode-locked lasers with extremely low RIN, phase noise, and ultra-low timing jitter developed in National Research Council Canada and their applications in coherent optical communication [6] and wireless networks [7] in the following sections:

1. Introduction
2. Theory
3. Material grown and device fabrication
4. Laser performance characterizations, such as LIV, RIN, phase noise and timing jitter.
5. Demonstrations of by using only a NRC QD MML achieved > 10 terabits/s data capacity with a double-polarization high order quadrature amplitude modulation (QAM) optical system through 100-km standard single mode fiber transmission.
6. Demonstrations of a millimeter-wave photonic-aided-radio-over-fiber broadband wireless networking system using only one NRC QD MML to replace over 60 conventional individual DFB lasers.
7. Conclusion
8. Acknowledgment: This work was supported by the High Throughput and Secure Networks (HTSN) Challenge Program at the National Research Council of Canada.

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Plenary Speech 12: High-density bend-free photonic integrated circuits (Video)

Speaker: Prof. Jovana Petrovic, Technische Universität Berlin, Germany/Vinca Institute of Nuclear Sciences, University of Belgrade, Serbia
Time: 17:30-18:10, Wednesday Afternoon, August 18, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
We challenge the current thinking and approach to design of photonic integrated circuits (PICs), which are marked as drivers of the future information processing.

Standard quantum PICs are composed of the unit cells based on directional couplers. The couplers typically consist of two waveguides bent to exhibit coupling in the proximity region. They conveniently produce the maximally entangled Bell state and have been used to construct functional optical quantum PICs [1]. However, their full exploitation faces the conceptual and technical challenges including the non-intrinsic scalability that requires waveguide branching, the radiation loss at waveguide bends and the therewith associated high-density packaging limit [2].

Arrays of linearly coupled parallel waveguides have been considered a viable alternative. However, the intricate inverse design of the corresponding Hamiltonians has limited their applications to the particular instances of the quantum logic gates obtained by numerical optimization procedures and machine learning [3, 4] and the simulators of the condensed matter systems, such as spin and Bloch arrays with the Wannier-Stark ladder spectrum [5]. A generic design solution based on a common physical and mathematical principle has not been reached.

We propose a new concept for the design of bend-free high-density PICs composed exclusively of the linearly coupled commensurable waveguide arrays. Their operation is based on the periodic continuous quantum walk of photons and leverages on the engineered waveguide coupling. We discuss the class of analytically accessible designs with the eigenspectra that randomly sample the Wannier-Stark ladder [6, 7]. The free choice of eigenfrequencies marks a clear distinction from the

current photonic simulators and provides a variety of novel circuit layouts and functionalities. In particular, we rework the designs of interconnects for qubits and qudits, multiport couplers, entanglement generators and interferometers. The analytical results are corroborated numerically. Finally, we test the robustness of the proposed building blocks to the random variations in design parameters, with a view to defining acceptable fabrication tolerances.

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Plenary Speech Session III

Plenary Speech 13: Development and applicaiton of miniature piezoelectric sensor

Speaker: Prof. Jingsong Li, Anhui University, China
Time: 08:30-09:10, Thursday Morning, August 19, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Quartz crystal tuning fork (QCTF) as a versatile sensor has been proven to be an attractive tool for spectroscopic applications in atmospheric environment monitoring, industrial process control, combustion diagnosis, clinical breath analysis, etc. In this paper, high sensitive QCTF based multi-gas sensing technique has been developed by combing with multi-frequency synchronous modulation strategy. To demonstrate the novel detection technique, three near-infrared continuous-wave (CW) distributed feedback (DFB) diode lasers and a mid-infrared (MIR) external cavity quantum cascade laser (ECQCL) have been employed for simultaneous detection of H2O, CO2, CH4, and N2O. Details of experimental design and results will be reported. Noting that, the proposed sensor architecture has the significant advantages of easier optical alignment, lower cost, and developing ultra-portable, multifunctional gas sensors compared with a conventional TDLAS sensor based on time-multiplexed gas sensing techniques.

Plenary Speech 14: Titanium Dioxide Nanorod Array Films for Ultraviolet Sensing Applications (Video)

Speaker: Prof. Mohamad Hafiz Mamat, Universiti Teknologi MARA (UiTM), Malaysia
Time: 09:10-09:50, Thursday Morning, August 19, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
In recent years, nanostructured materials particularly in film forms have attracted much attention particularly for optical device applications. The improvement of surface area and the induced confinement effects by the nanostructured materials are believed to significantly improve the device performance. Among of the many beneficial nanostructured materials, titanium dioxide (TiO2) nanomaterials are particularly very interesting to study and investigated to their unique and excellent physical & chemical characteristics. In addition, TiO2 nanostructured materials in nanorod array films have huge potentials for various applications including solar cells and optical sensors. TiO2 nanorod array films exhibit an interesting mixture of multifunctional properties in term of optical, structural, and electrical properties. In this research, these properties were investigated thoroughly to understand the TiO2 nanorod array film characteristics that are suitable for the ultraviolet (UV) sensing applications. In this talk, I would outline our efforts over past few years to fabricate TiO2 nanorod array films using solution immersion method and to develop these nanostructures into UV sensing devices.

Plenary Speech 15: CONTROL OF OPTICAL PULSE USING FIBER MICRORING RESONATORS (Video)

Speaker: Prof. A. Afroozeh, University of Larestan, Iran
Time: 09:50-10:30, Thursday Morning, August 19, 2021
Location: TBD, Guilin Grand Link Hotel, China

Abstract
Control of light is the propagation of optical pulse in a particular medium with a higher or less speed of group velocities than vacuum speed light. These are significant interest in the use of nonlinear optics to generate slow and fast light for many applications such as secured optical communications, radio over frequency and memory as optical buffer. In this work, micro ring resonator system based on a semiconductor structure is to generate slow, fast light and terahertz pulse using bright soliton and Gaussian pulse as an input pulse. By analysis mathematics and scattering matrix method, simulated the result by the Matlab program which is generally applicable to a broad class of fast and slow light

devices. In this research, micro ring structures which are built up by InGaAsP/InP, GaAlAs/GaAs and hydrogenated amorphous silicon structures. It will get extremely small optical buffers with dimensions delay time. The results will show the rate of delay time in the proposed waveguide and system. The results have shown of femtosecond generation from semiconductor materials which have been used to make MRR's. Therefore extremely narrow soliton pulse in the range of 98 to 8 fs as could be generated using three waveguides. We examine for the second time how slow light may be achieved in microring resonators while bright and Gaussian pulse propagates inside the ring. Delay time and FWHM have simulated within an optical link and have calculated. Finally terahertz pulse has presented using PANDA ring resonator for application in Rof and medical. The results obtained have shown that high channel of frequency can be obtained in the range of 170-250 THz for bright soliton and 75-360 THz for Gaussian beam. This enhancement of frequency band can provide the reliable high-speed between networks and computers. It has demonstrated a novel technique for improving performance by bright soliton pulse and Gaussian pulse at the input and then recompressing the pulse at the output.

To be Confirmed:

Prof. Elfed Lewis University of Limerick Ireland, Republic of Ireland

Prof. Yaguo Li Fine Optical Engineering Research Centre

Dr. THANIKAIKARASAN Saveetha School of Engineering, Saveetha University, Chennai, Tamil Nadu, India.

Prof. Young June Park Seoul National University , Nano systems institute

Prof. Mário F. S. Ferreira University of Aveiro, Portugal

Prof. David S. Citrin Georgia Institute of Technology, Atlanta, Georgia, USA

Prof. Evgueni MARTYNOVICH Irkutsk Branch of Laser Physics Institute of Siberian Branch of Russian Academy of Sciences

Prof. Jang-Joo Kim Seoul National University

Prof. S.Thanikaikarasan Saveetha University, Chennai, Tamil Nadu, India.

Prof. M. Maaza UNESCO UNISA ITL/NRF Africa Chair in Nanosciences & Nanotechnology

Part IV Technical Sessions

Plenary & Technical Session:

Session Chair:
TBD 08:30-12:00, Thursday Morning, August 19, 2021

No.	Paper Title	Author	Affiliation
Oral	Impacts of Transceiver Configuration on Ultraviolet Communication	Tao Shan	Department of Precision Instrument, Tsinghua University
	Influence Characteristics of Laser Transmission Amplitude Fluctuation Based on Turbulent Medium	Yang Xiaodong	Xi'an Technological University
Oral	Design and implementation of optical fiber test equipment	Li Shen	College of Intelligence Science and Technology, National University of Defense Technology, Changsha 410073, China
Oral	Bessel-Beam Photoacoustic Microscopical Simulation Platform Based on k-Wave	Xianlin Song	Nanchang University
Oral	Research and Application of Multi-target Tracking Based on GM-PHD Filter	Yanyi Li	Harbin Engineering University
Oral	Simulation study of DP-QPSK coherent detection transmission system based on Optisystem	Yue Yu	National University of Defense Technology
Oral	Research on multi-system ultra-high speed optical signal access system	Yao Bai	No.109 Deya Road, Kaifu District, Changsha City, Hunan Province
Oral	Application of Vacuum Photoelectric Detection Technology in Super-resolution System	Kai Gu	Nanjing University of Science and Technology
Oral	Improved polar decoder utilizing neural network in fast simplified successive-cancellation decoding	Jiaxin Fang	National University of Defense Technology
Oral	Research of Multi-Rate LDPC decoding in	Jin WenHao	National University of

	Optical Communication System		Defense Technology
Oral	A compact MEMS-based optical scanning system with large field of view for lidars	Yongjie Wang	Chongqing University of technology
Oral	Frequency Sweep Linearization for Semiconductor Laser Using a Feedback Loop Based on Amplitude-Frequency Response	Jianfang Zhu	Chongqing University of Technology
	COFFEE BREAK		
Oral	Design and Implementation of Indoor Visible Light Positioning System Based on MiniSTM32	Shuxuan Zhou	Chongqing University of Technology
Oral	Temperature compensated solution concentration measurement based on a cascaded SMS/LPFG fiber structure	Jin Wang	College of Physics and Optoelectronics, Faculty of Science, Beijing Universit of Technology, Beijing 100124, China
Oral	Simulation analysis of balance detection technique in coherent optical receiver	PiaoKun Zhang	Beijing Jiaotong University
Oral	Study on preparation and ns-laser damage of HfO2 single layers	Kesheng Guo	Ji Hua Laboratory
Oral	Numerical research on the ellipti-cal-air-hole polarization-maintaining fiber with all normal dispersion	Li Hongwei	Beijing Jiaotong University
Oral	Integrated Fourier transform spectrometer with broad bandwidth and ultra-high resolution	Ang Li	Nanjing Uni. of Aeronautics and Astronautics
Oral	Optimized Analytical Modeling and Precise Measurement of Thermal Loading in Laser Mediums	Yaoting Wang	Xi'an Technological University
Oral	Dynamic free-spectral-range measurement for fiber resonator based on digital-heterodyne optical phase-locked loop	Hongchen Jiao	Institute of remote sensing satellite, CAST
Oral	Surface shape measurement and system calibration technology based on optical flow method	Yuxin Tang	Shandong Normal University

Oral	Active control of electromagnetically induced transparency analogue based on meanderline structure	Quan Li	School of Electronic Engineering, Tianjin University of Technology and Education
Oral	Optical analogy of 2+1-dimensional rotating black holes	Ling Chen	China University of Geosiences (Wuhan)
Oral	Dynamic free-spectral-range measurement for fiber resonator based on digital-heterodyne optical phase-locked loop	Hongchen Jiao	Institute of remote sensing satellite, CAST
Video	Alternative development of depth sensing technology	Chih-Hsiung Lin	Ph.D. Program of Electrical and Communications Engineering, Feng Chia University
Poster	A power-over-fiber underwater camera prototype system	Huayong Zhang	Tianjin highideal technology Co., LTD
Poster	Remote laser powered ocean observation buoy	Huayong Zhang	Tianjin highideal technology Co., LTD
Poster	Development of 1.3 μm modulation p-doped InAs/GaAs quantum dot materials and ultrashort cavity Fabry−Perot lasers towards optical communication	Zhonghui Yao	Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences
Poster	Optical Funnel Effect of 1550 nm InAs/GaAs quantum dots and Quantum dots/Graphene vdW heterostructure towards ultrafast photonics	Cheng Jiang	Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, Suzhou
Poster	Thermomechanical diagnostics of thermoelectric module based on digital image correlation	Yiyuan Zhang	University of Science and Technology of China
Poster	Silicon-based Mode converter and demultiplexer for wavelength division multiplexing transmission by using multimode interference couplers	Yong Zhou	National Laboratory for Optoelectronics, School of Optical and Electronic Information,

			Huazhong University of Science and Technology
Poster	Coherent vortices properties of partially coherent elegant Laguerre-Gaussian beams in the free space	Miao Dong	University of Electronic Science and Technology of China

Part V Abstracts

Part V Instructions for Presentations

Oral Presentation

Devices Provided by the Conference Organizing Committee:

- Laptops (with MS-office & Adobe Reader)
- Projectors & Screen
- Laser pointer

Materials Provided by the Presenters:

- PowerPoint or PDF files

Duration of each Presentation:

- Regular Oral Session: 10-15 Minutes of Oral Presentation
- Keynote Speech: 40-45 Minutes of Keynote Speech

Poster Presentation

Materials Provided by the Conference Organizing Committee:

- X Racks & Base Fabric Canvases (60cm×160cm, see the figure below)
- Adhesive Tapes or Clamps

Materials Provided by the Presenters:

- Home-made Posters

Requirements for the Posters:

- Material: not limited, can be posted on the Canvases
- Size: smaller than 60cm×160cm
- Content: for demonstration of the presenter's paper

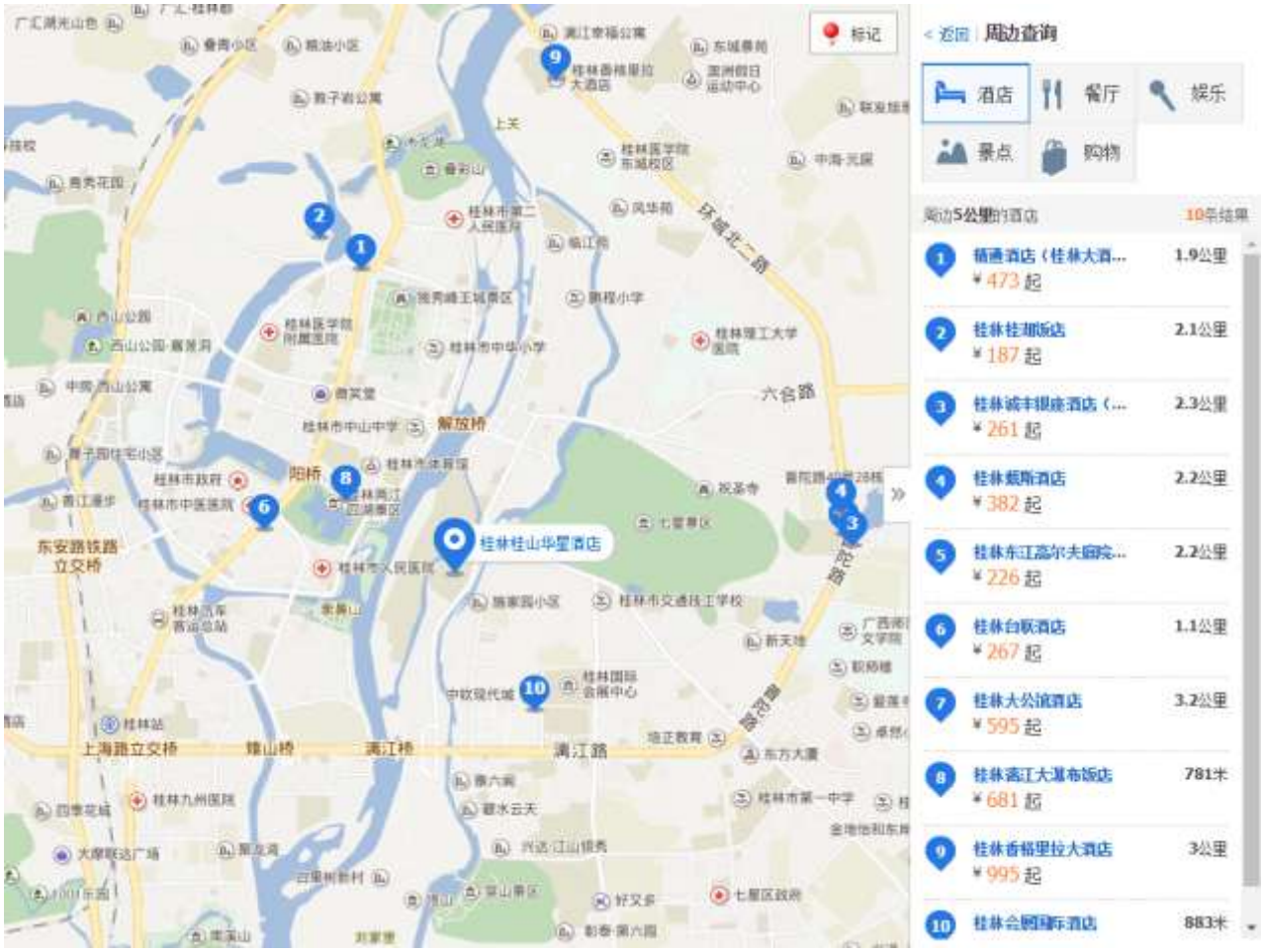
Part VII Hotel Information

About Hotel

Guilin Grand Link Hotel 桂林桂山华星酒店
Guilin Grand Link Hotel locates on the bank of Li River in the beautiful city of Guilin which enjoys the fame as “having the best scenery in China”. Facing the city badge the Elephant Trunk Hill across the river and adjacent to the Seven Star Park and ZiZhou Island Park. It is only 10 minutes’ ride to the downtown city, the railway station, the Hi-tech Industrial Zone and International Exhibition & Conference Center, 45 minutes to Guilin Liangjiang International Airport. It is the only luxury garden resort hotel on the Li River bank and near the gardens.

Address: No. 42 Chuanshan Road, Guilin City, Guangxi Zhuang Autonomous Region, China
Tel: +86-773-319 9999
Fax：+86-773-319 9998
Website: www.guishanhotel.com
E-mail：reservations@guishanhotel.com

For authors who do not understand Chinese, please show the following info to the driver if you take a taxi:
请送我到：中国广西壮族自治区桂林市穿山路42号，桂林桂山华星酒店



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