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Contents

ix	<i>Symposium Committee</i>
xi	<i>Conference Committee</i>
xiii	<i>Introduction</i>

SESSION 1 OPTOELECTRONIC DEVICES I

- 9043 02 **Periodically poled lithium niobate based ultra-wide bandwidth optical sampling oscilloscope (Invited Paper)** [9043-504]
A. Yang, L. Zuo, Beijing Institute of Technology (China); J. Zhou, Y. Qiao, Beijing Univ. of Posts and Telecommunications (China); Y. Sun, Beijing Institute of Technology (China)
- 9043 03 **All-optical buffering for DPSK packets** [9043-8]
G. Liu, C. Wu, L. Liu, F. Wang, Y. Mao, Z. Sun, Beijing Jiaotong Univ. (China)

SESSION 2 OPTOELECTRONIC DEVICES II

- 9043 04 **High-finesse F-P cavity external optical feedback narrow linewidth diode laser** [9043-80]
Y. Zhao, S. Wang, Z. Fang, T. Li, E. Zang, National Institute of Metrology (China)
- 9043 06 **Optimized design of 1×4 optical splitter based on annealed proton exchanged waveguides in LiNbO₃ crystal** [9043-98]
Z. Yang, D. Wang, D. Yang, Y. Wang, L. Rong, Beijing Univ. of Technology (China)
- 9043 07 **Modeling and design of terahertz filters based on the metallic mesh structures** [9043-67]
G. Zhao, C. Gu, K. Kou, X. Bu, Capital Normal Univ. (China), Beijing Key Lab. for Terahertz Spectroscopy and Imaging (China), and Key Lab. of Terahertz Optoelectronics (China)
- 9043 08 **High repetition rate passively mode-locked fiber laser with a composite cavity structure for repetition rate control** [9043-9]
S. Tao, L. Xu, G. Chen, C. Gu, X. Zhang, H. Song, X. Meng, H. Ming, Univ. of Science and Technology of China (China)

SESSION 3 OPTICAL SIGNAL PROCESSING

- 9043 09 **Slow light of periodic rectangle signal in the erbium-doped fiber** [9043-33]
F. Wang, C. Wu, Z. Wang, G. Liu, Y. Mao, Z. Sun, Beijing Jiaotong Univ. (China)
- 9043 0A **A novel algorithm of arbitrary gain spectrum for low-NF hybrid amplifier assisted with an optical fiber Raman amplifier** [9043-16]
K. Wang, X. Xin, Y. Wang, Q. Zhang, M. Li, B. Zhang, Beijing Univ. of Posts and Telecommunications (China)

SESSION 4 APPLICATIONS OF OPTOELECTRONIC DEVICES I

- 9043 0B **High efficiency 60nJ all-fiber Yb-doped passive mode locked laser** [9043-500]
H. Song, L. Xu, C. Gu, G. Chen, X. Meng, S. Tao, X. Zhang, H. Ming, Univ. of Science and Technology of China (China)
- 9043 0C **Wafer-level vacuum packaging for an optical readout bi-material cantilever infrared FPA** [9043-93]
S. Li, X. Zhou, X. Yu, Peking Univ. (China)
- 9043 0D **A new signal restoration method based on deconvolution of the Point Spread Function (PSF) for the Flat-Field Holographic Concave Grating UV spectrometer system** [9043-60]
H. Dai, Y. Luo, Yunnan Normal Univ. (China)

SESSION 5 APPLICATIONS OF OPTOELECTRONIC DEVICES II

- 9043 0E **Impact of nonlinearity phenomenon FWM in DWDM optical link considering dispersive fiber** [9043-7]
W. S. Puche, F. O. Amaya, J. E. Sierra, Univ. Pontificia Bolivariana (Colombia)
- 9043 0F **Performance comparison of a fiber optic communication system based on optical OFDM and an optical OFDM-MIMO with Alamouti code by using numerical simulations** [9043-36]
C. M. Serpa-Imbett, J. Marín-Alfonso, C. Gómez-Santamaría, L. Betancur-Agudelo, F. Amaya-Fernández, Univ. Pontificia Bolivariana (Colombia)
- 9043 0G **Performance of long-haul transmission 100Gb/s coherent detection PDM-QPSK system with high-precision optical inline dispersion compensation** [9043-503]
F. Xu, Y. Qiao, Y. Xu, H. Tian, Y. Ji, Beijing Univ. of Posts and Telecommunications (China)
- 9043 0H **Study of S-G filter based real-time OFDM-PON system** [9043-86]
C. Deng, Q. Zhang, Y. Wang, X. Xin, Beijing Univ. of Posts and Telecommunications (China)

POSTER SESSION

- 9043 0I **Trellis-coded pulse amplitude modulation for indoor visible light communication** [9043-10]
Y. Wang, A. Yang, Y. Wu, L. Feng, Y. Sun, Y. Li, Beijing Institute of Technology (China)
- 9043 0J **Pulse signal de-noising based on wavelet transform and coherent averaging method** [9043-15]
R. Zhao, L. Dong, Y. Zhao, M. Liu, L. Yang, D. Zhang, Beijing Institute of Technology (China); J. Zhao, 152 Central Hospital of the People's Liberation Army (China); J. Xing, State Intellectual Property Office of the People's Republic of China (China)
- 9043 0K **Ternary optical multiplier based on SOA's nonlinear polarization rotation** [9043-17]
Z. Huang, C. Wu, Z. Li, Z. Wang, Beijing Jiaotong Univ. (China)
- 9043 0L **A data processing method based on tracking light spot for the laser differential confocal component parameters measurement system** [9043-24]
R. Shao, L. Qiu, J. Yang, W. Zhao, X. Zhang, Beijing Institute of Technology (China)

- 9043 0M **Analysis of total harmonic distortion in phase generated carrier demodulation algorithm by digital arctangent approach** [9043-26]
H. Zhang, National Ocean Technology Ctr. (China); M. Zhang, Tsinghua Univ. (China)
- 9043 0N **Influence to 16-QAM of CATV using the third-order pumped distributed Raman amplifier** [9043-29]
Q. Wang, Y. Gao, S. Huang, J. Cao, Beijing Univ. of Posts and Telecommunications (China)
- 9043 0O **The intelligent fiber optic video surveillance system based on voice-leading** [9043-30]
J. Zhang, Y. Wang, Q. Zhang, X. Xin, Beijing Univ. of Posts and Telecommunications (China)
- 9043 0P **Effect of duty cycle on the electrical and optical properties of VOx film deposited by pulsed reactive magnetron sputtering** [9043-31]
X. Dong, Z. Wu, X. Xu, X. Wei, Y. Jiang, Univ. of Electronic Science and Technology of China (China)
- 9043 0Q **Photoresponse in tilted Bi₂Sr₂Co₂O_y thin films with nano-structured silver layer as the light absorber** [9043-34]
G. Yan, Hebei Univ. (China) and Hebei Univ. of Technology (China); Z. Bai, S. Yang, S. Wang, W. Yu, J. Wang, Hebei Univ. (China); G. Fu, Hebei Univ. (China) and Hebei Univ. of Technology (China)
- 9043 0R **Tunable optical delay line based on four-wave mixing wavelength conversion and dispersion in optical fibers** [9043-41]
J. Yang, D. Jia, T. Liu, C. Ge, W. Jia, Z. Wang, T. Yang, Tianjin Univ. (China)
- 9043 0S **Design of diffractive optical elements for beam shaping in near Fresnel diffraction domain** [9043-42]
W. Qu, H. Gu, Q. Tan, Tsinghua Univ. (China)
- 9043 0T **Analysis of bit error rate for modified T-APPM under weak atmospheric turbulence channel** [9043-44]
Z. Liu, Q. Zhang, Y. Wang, B. Liu, L. Zhang, K. Wang, F. Xiao, Beijing Univ. of Posts and Telecommunications (China); C. Deng, Zhangjiakou Vocational and Technical College (China)
- 9043 0U **Design on a photonic crystal fiber with high nonlinearity and flattened dispersion for Raman soliton self-frequency shift** [9043-47]
X.-M. Hu, J.-H. Yuan, C.-X. Yu, S. Wei, K.-R. Wang, X.-Z. Sang, B.-B. Yan, Beijing Univ. of Posts and Telecommunications (China)
- 9043 0V **The frequency selectivity of double H-shaped metallic structures** [9043-52]
X. Bu, G. Zhao, Capital Normal Univ. (China)
- 9043 0W **The coupling efficiency for different shape curve of specialty optical taper** [9043-54]
Q. Liu, Yanshan Univ. (China); X. Fu, Yanshan Univ. (China), Key Lab. for Special Fiber and Fiber Sensors (China), and Shanghai Univ. (China); G. Fu, W. Bi, Yanshan Univ. (China) and Key Lab. for Special Fiber and Fiber Sensors (China)

- 9043 0X **Thermal effect of diode-pumped solid state lasers based on composite crystals** [9043-55]
M. Hao, G. Lu, China Electronic Product Reliability and Environmental Testing Research Institute (China); H. Zhu, Changchun Institute of Optics, Fine Mechanics and Physics (China); Y. Huang, Y. En, China Electronic Product Reliability and Environmental Testing Research Institute (China)
- 9043 0Y **Analysis and modeling on noise factor of microchannel plate** [9043-61]
Y. Li, Beijing Institute of Technology (China), Science and Technology on Low-light-level Night Vision Lab. (China), and North Night Vision Technology Co. Ltd. (China); X. Chen, G. Ni, Beijing Institute of Technology (China)
- 9043 0Z **Application of MIMO technology in ultraviolet communication** [9043-65]
G. Huang, Y. Tang, G. Ni, H. Huang, X. Zhang, Beijing Institute of Technology (China)
- 9043 10 **Asymmetric wide-coupled waveguide 980nm laser diode with high power and low vertical divergence angle** [9043-71]
C. Xiong, Q. Qi, S. Liu, X. Ma, Institute of Semiconductors (China)
- 9043 11 **Principle study and numerical simulation of a new super-resolution optical structure** [9043-73]
X. Guo, Y. Zhao, B. Li, Y. Wu, Beijing Institute of Technology (China); W. Jia, Beijing Institute of Technology (China) and Typonteq Co. Ltd. (China)
- 9043 12 **BER performance analysis and simulation for NRZ/RZ shaped APM gamma-gamma turbulent free-space optical communication systems** [9043-76]
K. Wang, Q. Zhang, Y. Wang, L. Zhang, B. Liu, Z. Liu, Beijing Univ. of Posts and Telecommunications (China); C. Deng, Zhangjiakou Vocational and Technical College (China); J. Chu, X. Xin, Beijing Univ. of Posts and Telecommunications (China)
- 9043 13 **An automatic mode-locked system for passively mode-locked fiber laser** [9043-79]
S. Li, J. Xu, G. Chen, L. Mei, B. Yi, Univ. of Science and Technology of China (China)
- 9043 14 **Investigation on the channel model of mode multiplexing based on the dispersion compensating in few-mode fiber** [9043-82]
L. Cai, X. Xin, Y. Wang, Q. Zhang, X. Yin, H. Zhao, Beijing Univ. of Posts and Telecommunications (China)
- 9043 15 **The influence of fiber dispersion and crosstalk on multi-service transmission for C-RAN** [9043-83]
J. Shi, Q. Zhang, B. Li, Beijing Univ. of Posts and Telecommunications (China); C. Deng, Zhangjiakou Vocational and Technical College (China); L. Zhang, B. Liu, X. Xin, Beijing Univ. of Posts and Telecommunications (China)
- 9043 16 **Chatter identification using HHT for boring process** [9043-89]
W. Peng, Z. Hu, L. Yuan, P. Zhu, Hunan Univ. of Science and Technology (China)
- 9043 17 **Ultra-broadband multi-sized PbS quantum dots fiber amplifier based on a symmetric fiber coupler** [9043-91]
X. Sun, J. Chen, R. Dai, T. Wang, W. Zhou, Z. An, Shanghai Univ. (China)

- 9043 18 **An improved phase retrieval algorithm for optical anti-counterfeiting mask** [9043-97]
X. Wu, X. Li, W. Jiang, Dalian Maritime Univ. (China)
- 9043 19 **Characteristics in the calibration of the fiber spectroradiometer** [9043-99]
Z. Wu, C. Dai, Y. Wang, B. Chen, X. Li, National Institute of Metrology (China)
- 9043 1A **Passively mode-locked fiber laser based on single-walled carbon nanotube and graphene as co-saturable absorbers** [9043-100]
X. Wang, M. Sang, P. Zhu, Y. Bai, K. Liu, T. Yang, Tianjin Univ. (China)
- 9043 1B **Photonic time-stretch analog-to-digital converter employing phase-modulation and envelope removing** [9043-101]
X. Xie, X. Yin, J. Han, L. Li, X. Xin, C. Yu, Beijing Univ. of Posts and Telecommunications (China)
- 9043 1C **Research on illuminance distribution of LED spherical arrays for indoor visible light communication** [9043-104]
Y. Li, A. Yang, Y. Sun, Y. Wu, Y. Wang, Y. Hou, Beijing Institute of Technology (China)

Author Index

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Ming Tang, Huazhong University of Science and Technology (China)
- 5 Applications of Optoelectronic Devices II
Bo Liu, Beijing University of Posts and Telecommunications (China)

Introduction

With the development of optical communications and microelectronic computing, optoelectronic devices and optical signal processing has become more and more important in the field of optical measurement and fiber communication. The wide use of transmitters, receivers, and amplifiers in optical communication systems is also revolutionizing this industry. As the development of coherent communication progresses, advanced devices and signal processing technology have a profound effect on the system design and overall performance.

The Optoelectronic Devices and Optical Signal Processing Conference centered on some of the devices and signal processing technologies applied in optical communications and microelectronic computing. Additionally, the conference focused on both the optical and electrical development of devices and technologies including optical component and devices, all-optical information processing, and analytical technology. The conference provided potential concepts and optical technologies, which can be applied to current and future communication systems.

More than 40 papers are published in this proceedings volume of the 2013 International Conference on Optical Instruments and Technology Symposium. The papers cover a broad range of topics including optical devices and component design, fiber amplifier, laser technology, nonlinear effect processing, DSP-based network, and optical signal processing algorithm, etc. These papers reveal comprehensive research development of optoelectronic devices and signal processing.

Yi Dong

