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[We-P1] (Paper No. 10323-15)

Calibration and Uncertainty of a Fibre Optic Measurement System for Fresnel Reflectometer Sensors

Jonathan Oelhafen¹, Tobias Mayr¹, Konstantinos Moutzouris², Johannes Roths³, and Klaus Drechsler¹

¹Technical University of Munich, Germany, ²Technological Educational Institute of Athens, Greece,

³Munich University of Applied Sciences, Germany

[We-P2] (Paper No. 10323-18)

Research on Multi-Physics Field Factors and Data Driven Model of Giant Magnetostrictive Actuator based on FBG Sensors

Ping Han and GuanLin Du

Wuhan University of Technology, China

[We-P3] (Paper No. 10323-22)

Phase-Sensitive Optical Time-Domain Reflectometry with Heterodyne Demodulation

Xiangge He¹, Fei Liu¹, Mengzhe Qin¹, Shan Cao¹, Lijuan Gu², Xiaoping Zheng¹, and Min Zhang²

¹Tsinghua University, China, ²Peking University, China

[We-P4] (Paper No. 10323-24)

Distributed Brillouin Optical Fiber Sensing for Dynamic Strain with Frequency-Agility based on Dual-Modulation

Dexin Ba¹, Dengwang Zhou¹, Benzhang Wang¹, Mingjing Yin², Yongkang Dong¹, Zhiwei Lu¹, and Zhigang Fan¹

¹Harbin Institute of Technology, China, ²Harbin Medical University, China

[We-P5] (Paper No. 10323-30)

Ultrasonic Imaging of Seismic Physical Models Using Fiber Bragg Grating Fabry-Perot Probe

Ruixiang Zhou¹, Xunli Yin², and Xueguang Qiao¹

¹Northwest University, China, ²Xi'an Shiyou University, China

[We-P6] (Paper No. 10323-36)

A Novel Orthogonal Grating Inscribed over Inner Cladding of a Multi-Cladding Fiber

Weijia Bao, Xueguang Qiao, and Qiangzhou Rong

College of Physics, Northwest University, China

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[We-P7] (Paper No. 10323-47)

Optofluidic Microring Flowmeter based on Heat Transfer Effect

Yuan Gong^{1,2}, Minglei Zhang¹, Chaoyang Gong¹, Yu Wu¹, Yunjiang Rao¹, and Xudong Fan²

¹University of Electronic Science and Technology of China, China, ²University of Michigan, USA

[We-P8] (Paper No. 10323-48)

Simultaneous Temperature and Vibration Monitoring Using an All-PM Fiber Loop Mirror Interferometer

D. Leandro and M. Lopez-Amo

Universidad Pública de Navarra, Spain

[We-P9] (Paper No. 10323-49)

Code Length Limit in Phase-Sensitive OTDR Using Ultralong (>1M bits) Pulse Sequences due to Fading Induced by Fiber Optical Path Drifts

H. F. Martins¹, K. Shi², B. C. Thomsen², S. Martin-Lopez³, M. Gonzalez-Herraez³, S. J. Savory⁴

¹FOCUS S. L., C/ Orellana, Spain, ² University College London, UK, ³Universidad de Alcalá, Spain,

⁴University of Cambridge, UK

[We-P10] (Paper No. 10323-50)

Quasiperiodic Nanohole Array Plasmonic Sensors on Optical Fibers

P. Jia¹, Z. Yang², J. Yang², and H. Ebendorff-Heidepriem¹

¹The University of Adelaide, Australia, ²Western University, Canada

[We-P11] (Paper No. 10323-53)

Simplex Coded Polarization Optical Time Domain Reflectometry System

Chaodong Wang^{1,2}, Lihai Liu¹, Wenbo Chen², Ruolin Liao², Ming Tang², and Songnian Fu²

¹China Railway Siyuan Survey and Design Group CO.,LTD., China, ²Huazhong University of Science and Technology, China

[We-P12] (Paper No. 10323-56)

Slope-Assisted BOTDR for Pipeline Vibration Measurements

Damien Maraval¹, Renaud Gabet², Yves Jaouën², and Vincent Lamour¹

¹Cementys, France, ²Université Paris Saclay, France

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[We-P13] (Paper No. 10323-58)

Dynamic 3D Strain Measurements with Embedded Micro-Structured Optical Fiber Bragg Grating Sensors during Impact on a CFRP Coupon

Sidney Goossens¹, Thomas Geernaert¹, Ben De Pauw¹, Alfredo Lamberti¹, Steve Vanlanduit¹, Geert Luyckx², Gabriele Chiesura², Hugo Thienpont¹, and Francis Berghmans¹

¹Vrije Universiteit Brussel (VUB), Belgium, ²Universiteit Gent (UGent), Belgium

[We-P14] (Paper No. 10323-61)

Distributed Photothermal Measurements of Gas Presence along Holey Optical Fibers

Andres Garcia-Ruiz¹, Juan Pastor-Graells¹, Hugo F. Martins², Kenny Hey Tow³, Luc Thévenaz³, Sonia Martin-Lopez¹, and Miguel Gonzalez-Herraez¹

¹University of Alcalá, Spain, ²FOCUS S.L., C/ Orellana, Spain, ³EPFL Swiss Federal Institute of Technology, Switzerland

[We-P15] (Paper No. 10323-72)

Embedded Fabry-Perot Based Sensor Using Three-Dimensional Printing Technology

Catarina S. Monteiro^{1,2}, Bruno F. Santos³, Susana O. Silva^{1,2}, Paulo Abreuc, Maria T. Restivo³, and Orlando Fraz~ao^{1,2}

¹INESC-TEC, Portugal, ²Faculty of Sciences of Porto University, Portugal, ³University of Porto, Portugal

[We-P16] (Paper No. 10323-74)

Tunable Liquid Crystal Fibre Optic Filter

Joanna E. Mos, Mariusz Florek, Katarzyna Garbat, Karol A. Stasiewicz, Nouredine Bennis, and Leszek R. Jaroszewicz

¹Military University of Technology, Poland

[We-P17] (Paper No. 10323-78)

High Density Distributed Strain Sensing of Landslide in Large Scale Physical Model

L. Schenato¹, M. Camporese², S. Bersan², S. Cola², A. Galtarossa³, A. Pasuto¹, P. Simonini², P. Salandin², and L. Palmieri³

¹National Research Council, Italy, ²University of Padua, Italy, ³University of Padova, Italy

[We-P18] (Paper No. 10323-80)

Rayleigh-based Distributed Temperature Sensing and Fiber Bragg Grating Point Temperature Sensing with a Single Optical Fiber on High Electrical Potential of 1 MV

T. Ringel, M. Willsch, and T. Bosselmann

Siemens AG, Germany

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[We-P19] (Paper No. 10323-82)

Performance Improvement of BOTDR System Using Wavelength Diversity Technique

Nageswara Lalam, Wai Pang Ng, Xuewu Dai, Qiang Wu, and Yong Qing Fu
Northumbria University, UK

[We-P20] (Paper No. 10323-87)

Multiwavelength Erbium-Doped Fiber Laser based on an All-Fiber Polarization Interference Filter

Hushan Wang^{1,3}, Zhijun Yan^{1,2}, Kaiming Zhou¹, Jiazheng Song¹, Ye Feng¹, and Yishan Wang¹
¹*Chinese Academy of Sciences, China*, ²*Huazhong University, China*, ³*University of Chinese Academy of Sciences, China*

[We-P21] (Paper No. 10323-101)

BOCDA System Enhanced by Concurrent Interrogation of Multiple Correlation Peaks with a 10 km Sensing Range

Gukbeen Ryu^{1,2}, Gyu-Tae Kim², Kwang Yong Song³, Sang Bae Lee¹, and Kwanil Lee¹
¹*Korea Institute of Science and Technology, Korea*, ²*Korea University, Korea*, ³*Chung-Ang University, Korea*

[We-P22] (Paper No. 10323-103)

Skew Rays Analysis to Determine Radial Position of Defects within Optical Fibers

George Y. Chen, Tanya M. Monro, and David G. Lancaster
University of South Australia, Australia

[We-P23] (Paper No. 10323-104)

Study of γ -Ray Radiation Effects on TW-COTDR Optical Fiber Sensors

Planes^{1,2}, S. Girard¹, A. Boukenter¹, E. Marin¹, S. Delepine-Lesoille², A. Gusarov³, and Y. Ouerdane¹.
¹*National Radioactive Waste Management Agency, France*, ²*Universite Lyon, France*, ³*SCK-CEN, Belgium*

[We-P24] (Paper No. 10323-105)

Fibre-Optic Gyroscope as Instrumental Challenge for Rotational Seismology

Anna Kurzych¹, Leszek R. Jaroszewicz¹, Zbigniew Krajewski¹, Bartosz Sakowicz², Jerzy K. Kowalski³, and Paweł Marć¹
¹*Military University of Technology in Warsaw, Poland*, ²*M-Soft Ltd, Poland*, ³*Lodz University of Technology, Poland*

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[We-P25] (Paper No. 10323-107)

Few Mode Fibers based Quasi-Single Mode Raman Distributed Temperature Sensor

Hao Wu¹, Meng Wang¹, Tongqing Liu², Chen Yang², Weijun Tong², Songnian Fu¹, and Ming Tang¹

¹Huazhong University of Science and Technology, China, ²Yangtze Optical Fiber and Cable Joint Stock Limited Company, China

[We-P26] (Paper No. 10323-115)

Sweep Free BOTDA based on DD-OOFDM Channel Estimation

Can Zhao, Jiadi Wu, Hao Wu, Zhiyong Zhao, Yunli Dang, Songnian Fu, and Ming Tang

Huazhong University of Science and Technology, China

[We-P27] (Paper No. 10323-117)

Safe and Private Pedestrian Detection by a Low-Cost Fiber Optic Specklegram

A. Rodriguez-Cuevas¹, L. Rodriguez-Cobo^{1,2}, M. Lomer^{1,2}, and J.M. Lopez-Higuera^{1,2}

¹University of Cantabria, Spain, ²Instituto de Salud Carlos III, Spain

[We-P28] (Paper No. 10323-119)

Compared Performances of Rayleigh Raman and Brillouin Distributed Temperature Measurements during Concrete Container Fire Test

S. Delepine-Lesoille, I. Planes, M. Landolt, G. Hermand, and O. Perrochon

Parc de la Croix Blanche, France

[We-P29] (Paper No. 10323-125)

Model-based Compressed Sensing of Fiber Bragg Grating Arrays in the Frequency Domain

Stefan Werzinger, Michael Gottinger, Sandra Gussner, Sven Bergdolt, Rainer Engelbrecht, and Bernhard Schmauss

Friedrich-Alexander University Erlangen-Nürnberg, Germany

[We-P30] (Paper No. 10323-128)

Performance Characteristics of Continuously Grated Multicore Sensor Fiber

Paul S. Westbrook¹, Tristan Kremp¹, Kenneth S. Feder¹, Wing Ko¹, Eric. M. Monberg¹, Hongchao Wu¹, Debra A. Simoff², Scott Shenk², and Roy. M. Ortiz¹

¹OFS Labs, USA, ²OFS, Fitel, USA

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[We-P31] (Paper No. 10323-129)

Application of Bridge Continuous Shape Measurement System based on Optical Fiber Sensing Technology in Bridge Post-Seismic Detection

Yan YANG, Fang LIU, Jinghua FU, and Dandan YANG
Wuhan University of Technology, China

[We-P32] (Paper No. 10323-135)

High-Speed Identical Weak Fiber Bragg Grating Interrogation System Using DFB Laser

Zhang Chun, Liu Siqi, Wang Yiming, Liu Jiawei, Wang Honghai, and Li Zhengying
Wuhan University of Technology, China

[We-P33] (Paper No. 10323-136)

Resonant Wavelength Thermal Stability of Femtosecond FBGs

Tiago Paixão¹, Francisco Araújo², Luís Ferreira², and Paulo Antunes^{1,3}
¹University of Aveiro, Portugal, ²HBM FiberSensing, Portugal, ³Instituto de Telecomunicações, Portugal

[We-P34] (Paper No. 10323-138)

Fiber Bragg Grating-based Detection of Cross Sectional Irregularities in Metallic Pipes

Pabitro Ray, Balaji Srinivasan, Krishnan Balasubramaniam, and Prabhu Rajagopal
Indian Institute of Technology Madras, India

[We-P35] (Paper No. 10323-142)

Magnetic Field Measurement by Using a Multilongitudinal Mode Fiber Laser

Ming Deng, Danhui Liu, Yong Zhao, and Tao Zhu
Chongqing University, China

[We-P36] (Paper No. 10323-143)

Transient Brillouin Optical Correlation Domain Analysis

Eyal Preter¹, Dexin Ba^{1,2}, Orel Shlomi¹, Yosef London¹, and Avi Zadok¹
¹Bar-Ilan University, Israel, ²Harbin Institute of Technology, China

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[We-P37] (Paper No. 10323-144)

Impact of the Probe Pulse Shape on the Performance of Phase-Sensitive Optical Time-Domain Reflectometry Sensors

María R. Fernández-Ruiz¹, Hugo F. Martins², Juan Pastor-Graells¹, Sonia Martin-Lopez¹, and Miguel Gonzalez-Herraez¹

¹Universidad de Alcalá, Spain, ²FOCUS S.L., Spain

[We-P38] (Paper No. 10323-146)

Distributed Hydrostatic Pressure Sensor Using a Thin-Diameter and Polarization-Maintaining Photonics Crystal Fiber based on Brillouin Dynamic Gratings

Lei Teng¹, Yongkang Dong¹, Dengwang Zhou¹, Xiaoyi Bao², and Liang Chen²

¹Harbin Institute of Technology, China, ²University of Ottawa, Canada

[We-P39] (Paper No. 10323-151)

A Liquid Level Sensing System based on High Attenuation Fiber and DPP-BOTDA

Hongying Zhang¹, Ziyi Liu¹, Zhijun Yuan¹, Wei Gao¹, and Yongkang Dong²

¹Harbin University of Science and Technology, China, ²Harbin Institute of Technology, China

[We-P40] (Paper No. 10323-153)

Laser Brazing Metallic Embedding Technique for Fiber Optic Sensors

Tania Grandala², Sergio Fraga¹, Gemma Castro¹, Esteban Vazquez¹, and Ander Zornoza¹

¹AIMEN technology center, Spain, ²City University London, UK

[We-P41] (Paper No. 10323-154)

A Temperature Compensated Fibre Bragg Grating (FBG)-based Sensor System for Condition Monitoring of Electrified Railway Pantograph

Ye Chen¹, Miodrag Vidakovic¹, Matthias Fabian¹, Martin Swift², Lee Brun², Tong Sun¹, and Kenneth T. V. Grattan¹

¹City University London, UK, ²Brecknell Willis, UK

[We-P42] (Paper No. 10323-156)

Numerical Study on Refractive Index Sensor based on Hybrid-Plasmonic Mode

Jeong-Geun Yun, Joonsoo Kim, Kyookeun Lee, Yohan Lee, and ByoungHo Lee

Seoul National University, Korea

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[We-P43] (Paper No. 10323-159)

An in-Fiber Mach-Zehnder Interferometer based on Dual Side-Hole Fiber for Highly Sensitive Measurement of Curvature

Xiaowei Ouyang, Huiyong Guo, Zhou Zheng, Liyun Ding, and Ai Zhou
Wuhan University of Technology, China

[We-P44] (Paper No. 10323-161)

Dual-Mode Optofluidic Flow Rate Sensor

Yuan Gong¹, Liming Qiu¹, Chenlin Zhang¹, Yu Wu¹, Yun-Jiang Rao¹, and Gang-Ding Peng²
¹University of Electronic Science and Technology of China, China, ²University of New South Wales, Australia

[We-P45] (Paper No. 10323-163)

Monitoring on Internal Temperature of Composite Insulator with Embedding Fiber Bragg Grating for Early Diagnosis

Wen Chen and Ming Tang
Huazhong University of Science and Technology, China

[We-P46] (Paper No. 10323-168)

Guided Acoustic Waves Brillouin Scattering in Multi-Core Fibers

H. Hagai Diamandi, Yosef London, and Avi Zadok
Bar-Ilan University, Israel

[We-P47] (Paper No. 10323-169)

Combined Sagnac and Intermodal Interferences for Discrimination of Strain and Temperature Variations

Guoyong Sun¹, Yingxin Cen¹, Liyan Zhao¹, Chuliang Wei¹, and Youngjoo Chung²
¹Shantou University, China, ²Gwangju Institute of Science and Technology, Korea

[We-P48] (Paper No. 10323-173)

Mechanical Strain Amplifying Transducer for Fiber Bragg Grating Sensors with Applications in Structural Health Monitoring

Urszula Nawrot¹, Thomas Geernaert¹, Ben De Pauw¹, Dimitrios Anastasopoulos², Edwin Reynders², Guido De Roeck², and Francis Berghmans¹
¹Vrije Universiteit Brussel, Belgium, ²University of Leuven, Belgium

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[We-P49] (Paper No. 10323-174)

Temperature Sensitivity Enhancement in a Standard Optical Fiber with Double Coatings at Low Temperature

Xin Lu, Marcelo A. Soto, and Luc Thévenaz
Institute of Electrical Engineering, Switzerland

[We-P50] (Paper No. 10323-181)

High Sensitivity Curvature Sensor with a Cascaded Fiber Interferometer

Shandong Dong^{1,2}, Bo Dong¹, and Changyuan Yu³
¹National University of Singapore, Singapore, ²National University of Singapore (Suzhou) Research Institute, China, ³Hong Kong Polytechnic University, Hong Kong

[We-P51] (Paper No. 10323-185)

Low Cost Portable Sensor for Real-Time Monitoring of Lower Back Bending

Wern Kam¹, Kieran O'Sullivan¹, Waleed S. Mohammed², and Elfed Lewis¹
¹University of Limerick, Ireland, ²Bangkok University, Thailand

[We-P52] (Paper No. 10323-188)

A Novel Fiber Michelson Interferometer based on Cascaded Twin Core Fiber and Side Hole Fiber

Yujia Zhao^{1,2}, Huiyong Guo¹, Zhou Zheng¹, Lina Yue¹, Yimin Xu¹, Ai Zhou¹, and Libo Yuan²
¹Wuhan University of Technology, China, ²Harbin Engineering University, China

[We-P53] (Paper No. 10323-192)

Simultaneous Measurement of Temperature and Bend by Using an Eccentric Core Fiber Bragg Grating Cascaded with a Fabry-Perot Cavity

Yang Ouyang¹, Jing Kong^{2,1}, Yimin Xu¹, Ai Zhou^{1*}, and Libo Yuan²
¹Wuhan University of Technology, China, ²Harbin Engineering University, China

[We-P54] (Paper No. 10323-196)

Textile Carbon Reinforcement Structures with Integrated Optical Fibre Sensors Designed for SHM Applications

L.S.M. Alwis¹, K. Bremer², F. Weigand³, M. Kuhne², R. Helbig³, and B. Roth²
¹Edinburgh Napier University, UK, ²Leibniz University Hannover, Germany, ³Saxon Textile Research Institute, Germany, ⁴Materialforschungs- und prüfanstalt, Germany

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[We-P55] (Paper No. 10323-199)

Asymmetrical Twin-Core Fiber based Michelson Interferometer for Environmental Refractive Index Sensing

Shaoxian Zhang, Tingting Yuan and Libo Yuan*

¹Harbin Engineering University, China

[We-P56] (Paper No. 10323-200)

Simultaneous Strain and Directional Bending Sensor based on Eccentric-Core Fiber Bragg Grating

Jing Kong^{1,3}, Xiaowei Ouyang², Ai Zhou², and Libo Yuan¹

¹Harbin Engineering University, China, ²Wuhan University of Technology, China, ³Heilongjiang Institute of Technology, China

[We-P57] (Paper No. 10323-202)

Memristor-Capacitor Passive Filters to Tune Both Cut-off Frequency and Bandwidth

Shawkat Ali, Arshad Hassan, Gul Hassan, Jinho Bae, and Chong Hyun Lee

Jeju National University, Korea

[We-P58] (Paper No. 10323-204)

Effective Mode-Field Diameter Measurement for Few-Mode Fibers

Takashi Matsui, Taiji Sakamoto, and Kazuhide Nakajima

Nippon Telegraph and Telephone Corporation, Japan

[We-P59] (Paper No. 10323-208)

In-Fiber Mach-Zehnder Interferometer Inscribed with Femtosecond Laser for High Temperature Sensing

D. Pallar es-Aldeiturriaga¹, L. Rodriguez-Cobo^{1,2}, A. Quintela^{1,2}, and J.M. Lopez-Higuera^{1,2}

¹University of Cantabria, Spain, ²Instituto de Salud Carlos III, Spain

[We-P60] (Paper No. 10323-216)

A Comparison of Clinic based Dosimeters based on Silica Optical Fibre and Plastic Optical Fibre for In-Vivo Dosimetry

Lingxia Chen¹, Sinead O'Keeffe¹, Peter Woulfe^{1,2}, and Elfed Lewis¹

¹University of Limerick, Ireland, ²Galway Clinic, Ireland

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[We-P61] (Paper No. 10323-219)

Enhancement of Signal-to-Noise Ratio in Brillouin Optical Time Domain Analyzers by Dual-Probe Detection

Haritz Iribas¹, Alayn Loayssa¹, Florian Sauser², Miguel Llera², and S ebastien Le Floch²

¹Universidad P ublica de Navarra, Spain, ²HE-ARC, Switzerland

[We-P62] (Paper No. 10323-222)

Second Order Non-Local Effects Mitigation in BOTDA Sensors by Tracking the BFS Profile

Juan Jos e Momp o, Haritz Iribas, Javier Urricelqui, and Alayn Loayssa

Universidad P ublica de Navarra, Spain

[We-P63] (Paper No. 10323-223)

Simultaneous Strain and Temperature Measurements Using Dual-Wavelength BOTDA

E Catalano, R. Laiso¹, R. Bernini², L.Zeni¹, and A.Minardo¹

¹Second University of Naples, Italy, ²Istituto per il Rilevamento Elettromagnetico dell'Ambiente, Italy

[We-P64] (Paper No. 10323-225)

Novel Railway-Subgrade Vibration Monitoring Technology Using Phase-Sensitive OTDR

Zhaoyong Wang^{1,2}, Bin Lu^{1,2}, Hanrong Zheng^{1,2}, Qing Ye¹, Zhengqing Pan¹, Haiwen Cai¹, Ronghui Qu¹, Zujie Fang¹, and Howell Zhao³

¹Chinese Academy of Sciences, China, ²University of Chinese Academy of Sciences, China, ³Shanghai Bandweaver Communication Technologies Co. Ltd., China

[We-P65] (Paper No. 10323-229)

Distributed Birefringence Dispersion Measurement for Polarization Maintaining Fiber based on Optimization Method

Zhangjun Yu, Haoliang Zhang, Jun Yang, Yonggui Yuan, Feng Peng, Hanyang Li, Changbo Hou, and Libo Yuan

Harbin Engineering University, China

[We-P66] (Paper No. 10323-243)

Temperature Properties and Potential Temperature Sensor based on the Bismuth/ Erbium Co-Doped Optical Fibers

Yushi Chu¹, Jianan Hao¹, Jianzhong Zhang¹, Jing Ren¹, Gang-Ding Peng², and Libo Yuan¹

¹Harbin Engineering University, China, ²University of New South Wales, Australia

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[We-P67] (Paper No. 10323-250)

Distributed Fiber-Optic Vibration Sensor with Enhanced Response Bandwidth and High Signal-to-Noise Ratio

Dian Chen, Qingwen Liu, Xinyu Fan, and Zuyuan He
Shanghai Jiao Tong University, China

[We-P68] (Paper No. 10323-257)

Sweep BOTDA for Fast Distributed Sensing

A. Minardo, E. Catalano, A. Coscetta, and L. Zeni
Second University of Naples, Italy

[We-P69] (Paper No. 10323-260)

Coherent-Detection-Assisted BOTDA System without Averaging Using Single-Sideband Modulated Local Oscillator Signal

Nan Guo¹, Liang Wang², Chao Jin¹, Tao Gui¹, Kangping Zhong¹, Xian Zhou¹, Jinhui Yuan¹, Changyuan Yu¹, Hwa-Yaw Tam¹, and Chao Lu¹
¹*The Hong Kong Polytechnic University, Hong Kong*, ²*The Chinese University of Hong Kong, Hong Kong*

[We-P70] (Paper No. 10323-261)

1.5 μ m Low Threshold, High Efficiency Erbium-Raman Random Fiber Laser

H. Wu, Z. N. Wang, W. Sun, Q. H. He, and Y. J. Rao
University of Electronic Science & Technology of China, China

[We-P71] (Paper No. 10323-268)

Polarization Extinction Ratio Measurement for Multi-Functional Integrated Optic Chip against Birefringence Dispersion and Noise

Chengcheng Hou, Zhangjun Yu, Jun Yang, Yonggui Yuan, Feng Peng, Hanyang Li, Changbo Hou, and Libo Yuan
Harbin Engineering University, China

[We-P72] (Paper No. 10323-269)

Light-Induced Au Surface Modification

Chunyang Han^{1,2}, John Canning¹, Kevin Cook¹, and Md. Arafat Hossain¹
¹*The University of Sydney, University of Technology, Australia*, ²*Xi'an Jiaotong University, China*

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[We-P73] (Paper No. 10323-273)

Broadband Supercontinuum Light Source Seeded by Random Distributed Feedback Fiber Laser

R. Ma, Y. J. Rao, W. L. Zhang, H. Wu, and X. Zeng

University of Electronic Science & Technology of China, China

[We-P74] (Paper No. 10323-274)

Simultaneous Measurement of Dynamic Strain and Temperature Distribution Using High Birefringence PANDA Fiber Bragg Grating

Mengshi Zhu and Hideaki Murayama

The University of Tokyo, Japan

[We-P75] (Paper No. 10323-277)

Fiber Optic Sensor based on Polarization-Dependent Absorption of Graphene

Liyun Ding, Chuang Xu, Zhilin Xia, Bing Xu, and Jun Huang

Wuhan University of Technology, China

[We-P76] (Paper No. 10323-283)

An Arm Wearable Haptic Interface for Impact Sensing on Unmanned Aerial Vehicles

Yunshil CHOI, Seung-Chan Hong, and Jung-Ryul LEE

Korea Advanced Institute of Science and Technology, Korea

[We-P77] (Paper No. 10323-285)

Modelling Non-Uniform Strain Distributions in Aerospace Composites Using Fibre Bragg Gratings

Aydin Rajabzadeh, Roger M. Groves, Richard C. Hendriks, and Richard Heusdens

Delft University of Technology, Netherlands

[We-P78] (Paper No. 10323-287)

Wide-Range Dynamic Strain Measurements based on K-BOTDA and Frequency-Agile Technique

Dengwang Zhou¹, Yongkang Dong¹, Benzhang Wang¹, Hongying Zhang², and Zhiwei Lu¹

¹Harbin Institute of Technology, China, ²Harbin University of Science and Technology, China

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[We-P79] (Paper No. 10323-288)

Terahertz Radiation based on Fiber-Pigtailed InGaAs Photoconductive Antenna Pumped by 1030 nm Mode-Locked Yb-Doped Fiber Laser

Ji Su Kim¹, Sang-Pil Han², Kiwon Moon², Han-Cheol Ryu³, Kyung Hyun Park², and Min Yong Jeon¹

¹Chungnam National University, Korea, ²Electronics and Telecommunications Research Institute, Korea, ³Sahmyook University, Korea

[We-P80] (Paper No. 10323-295)

Non-Contact Vibration Analysis Using Speckle-based Techniques

I. Robles-Urquijo¹, M. Lomer^{1,2}, L. Rodriguez-Cobo^{1,2} and J.M. Lopez-Higuera^{1,2}

¹University of Cantabria, Spain, ²Instituto de Salud Carlos III, Spain

[We-P81] (Paper No. 10323-304)

Application of FBG Sensing Technique for Monitoring and Early Warning System of High-Speed Railway Track Conditions

Yongjia Zhang, Fang Liu, Yuhai Jing, and Weilai Li

Wuhan University of Technology, China

[We-P82] (Paper No. 10323-305)

Extension of the Dynamic Range in Slope-Assisted Coherent BOTDA Sensors

Jon Marinelarena, Javier Urricelqui, and Alayn Loayssa

Universidad Pública de Navarra, Spain

[We-P83] (Paper No. 10323-309)

Feasibility Study of Strain and Temperature Discrimination in a BOTDA System via Artificial Neural Networks

R. Ruiz-Lombera¹, A. Piccolo², L. Rodriguez-Cobo^{1,3}, J.M. Lopez-Higuera^{1,3}, and J. Mirapeix^{1,3}

¹University of Cantabria, Spain, ²Università di Padova, Italy, ³Instituto de Salud Carlos III, Spain

[We-P84] (Paper No. 10323-312)

Fiber Interferometer Combining Sub-Nm Displacement Resolution with Miniaturized Sensor Head

Lun-Kai Cheng, Ronald A.J. Hagen, Lodi N. Schriek, Peter M. Toet, and Oana v.d. Togt

TNO, Netherlands

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[We-P85] (Paper No. 10323-314)

Brillouin Optical Time-Domain Analyzer with a Fiber Ring Laser Working on the SLM Regime

R. Ruiz-Lombera¹, L. Rodriguez-Cobo^{1,2}, J. Mirapeix^{1,2}, J.M. and Lopez-Higuera^{1,2}

¹University of Cantabria, Spain, ²Instituto de Salud Carlos III, Spain

[We-P86] (Paper No. 10323-315)

Distributional Measurement of Effective Refractive Index Differences of Multimode Fibers by Brillouin Spectrum Decomposition

Masashi Yokota¹, Motoharu Miura¹, Hiroki Watanabe¹, Fumihiko Ito¹, Ryo Maruyama², and Nobuo Kuwaki²

¹Shimane University, Japan, ²Fujikura Ltd., Japan

[We-P87] (Paper No. 10323-321)

Coherent Φ -OTDR based on Polarization-Diversity Integrated Coherent Receiver and Heterodyne Detection

Qizhong Yan^{1,2}, Ming Tian², Xiang Li³, Qi Yang³, and Yimin Xu¹

¹Wuhan University of Technology, China, ²Wuhan Wutos Co.,Ltd., China, ³State Key Laboratory of Optical Communication Technologies and Networks, China

[We-P88] (Paper No. 10323-324)

Spatially-Resolved Measurement of Arc Flash Event based on Transmission Loss of Plastic Optical Fiber

Youngwoong Kim¹, Hoonil Jeong², Young Ho Kim¹, Byung Sup Rho¹, and Myoung Jin Kim¹

¹Korea Photonics Technology Institute, Korea, ²Gwangju Institute of Science and Technology, Korea

[We-P89] (Paper No. 10323-326)

Suppression of Stray Interference Peaks of Optical Joint in White Light Interferometer

Yongqing Cheng, Jun Yang, Yonggui Yuan, Haolaing Zhang, Zhe Yang, Yan Lv, and Libo Yuan
Harbin Engineering University, China

[We-P90] (Paper No. 10323-327)

Long-Range Distributed Temperature Sensing with Sub-Meter Scale Spatial Resolution based on BOTDA Employing Pre-Pumped Golay Coding

Qiao Sun, ShilinSun, Jianfei Wang, and Zhou Meng
National University of Defense Technology, China

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[We-P91] (Paper No. 10323-328)

Quadrature Detection of Optical Frequency Domain Reflectometry for Measurement Range Enhancement in Distributed Sensing

Young Ho Kim, Youngwoong Kim, Myoung Jin Kim, and Byung Sup Rho
Korea Photonics Technology Institute, Korea

[We-P92] (Paper No. 10323-333)

Pulsed Photothermal Interferometry for High Sensitivity Gas Detection with Hollow-Core Photonic Bandgap Fibre

Yuechuan Lin^{1,2}, Wei Jin^{1,2}, Fan Yang^{1,2}, and Hoi Lut Ho^{1,2}

¹*The Hong Kong Polytechnic University, Hong Kong, China*, ²*The Hong Kong Polytechnic University Shenzhen Research Institute, China*

[We-P93] (Paper No. 10323-339)

Singularity Detection in FOG-based Pavement Data by Wavelet Transform

Dandan Yang, Lixin Wang, Wenbin Hu, Zhen Zhang, Jinghua Fu, and Weibing Gan
Wuhan University of Technology, China

[We-P94] (Paper No. 10323-342)

How to Specify and Measure Sensitivity in Distributed Acoustic Sensing (DAS)?

Haniel Gabai and Avishay Eyal
Tel Aviv University, Israel

[We-P95] (Paper No. 10323-346)

Dual-Core Fiber based Strain Sensor for Application in Extremely High Temperatures

Anna Ziłowicz^{1,2}, Lukasz Szostkiewicz^{1,2}, Agnieszka Kolakowska¹, Beata Bienkowska³, Dawid Budnicki¹, Lukasz Ostrowski³, Karol Wysokinski¹, Tomasz Stanczyk¹, Janusz Fidelus¹, Piotr Nasilowski¹, Tadeusz Tenderenda¹, Marek Napierala^{1,2}, Pawel Mergo⁴, and To

¹*Innovation Photonics Technology, Poland*, ²*Warsaw University of Technology, Poland*, ³*Polish Centre for Photonics and Fibre Optics, Poland*, ⁴*Maria Curie-Sklodowska University, Poland*

[We-P96] (Paper No. 10323-358)

Fibre-Optic Sensor based Measurements of Flow-Induced Vibration in a Liquid Metal Cooled Nuclear Reactor Set-Up

B. De Pauw¹, S. Vanlanduit¹, K. Van Tichelen², T. Geernaert¹, H. Thienpont¹, and F. Berghmans¹
¹*Vrije Universiteit Brussels, Belgium*, ²*Belgian Nuclear Research Centre, Belgium*

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[We-P97] (Paper No. 10323-373)

Strain and Temperature Measurement Using a 9.5-M Continuous Chirped Fiber Bragg Grating with Millimeter Resolution

K. Fröjdh, G. Hedin, and S. Helmfrid
Proximion AB, Sweden

[We-P98] (Paper No. 10323-377)

An Improved Calibration Method Using Third Order Polarization Mode Crosstalk for Optical Coherence Domain Polarimetry

Zhe Yang, Jun Yang, Haoliang Zhang, Hanyang Li, Feng Peng, Yonggui Yuan, Yongqing Cheng, and Libo Yuan
Harbin Engineering University, China

[We-P99] (Paper No. 10323-383)

Increasing the Frequency Response of Direct-Detection Phase-Sensitive OTDR by Using Frequency Division Multiplexing

Guangyao Yang, Xinyu Fan, Qingwen Liu, and Zuyuan He
Shanghai Jiao Tong University, China

[We-P100] (Paper No. 10323-388)

Determining the Alarm Signal in Pulse Interferometric Fibre Sensor by Two Independent Criteria

Marek Życzkowski and Mateusz Karol
*Military University of Technology,
Poland*

[We-P101] (Paper No. 10323-395)

Breaking through the Bandwidth Barrier in Distributed Fiber Vibration Sensing by Sub-Nyquist Randomized Sampling

Jingdong Zhang, Tao Zhu, Hua Zheng, Yang Kuang, Min Liu, and Wei Huang
Chongqing University, China

[We-P102] (Paper No. 10323-396)

The Continuous Line-Shape Measurement of Bridge based on Tri-Axis Fiber Optic Gyro

Liang Li, Jianguan Tang, Weibing Gan, Wenbin Hu, and Minghong Yang
Wuhan University of Technology, China

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[We-P103] (Paper No. 10323-401)

A Fiber-Optic Multi-Stress Monitoring System for Power Transformer

Dae-gil Kim, Umesh Sampath, Hyunjin Kim, and Minho Song
Chonbuk National University, Korea

[We-P104] (Paper No. 10323-403)

Increasing Effective Sensing Points of Brillouin Optical Correlation Domain Analysis Using Four-Wave-Mixing Process

Bin Wang, Xinyu Fan, Qingwen Liu, and Zuyuan He
Shanghai Jiao Tong University, China

[We-P105] (Paper No. 10323-404)

Multi-Wavelength Reflection Spectra from an Acousto-Optic Modulated Fiber Bragg Grating in a Highly Birefringent Suspended Core Fiber

Ricardo E. Silva^{1,2}, Martin Becker¹, Manfred Rothhardt¹, Hartmut Bartelt¹, and Alexandre A. P. Pohl²
¹Leibniz Institute of Photonic Technology, Germany, ²Federal University of Technology-Paraná, Brazil

[We-P106] (Paper No. 10323-409)

Experimental Demonstration of a Brillouin Optical Frequency-Domain Reflectometry (BOFDR) Sensor

R. Ruiz-Lombera¹, A. Minardo², R. Bernini³, J. Mirapeix¹, J. M. Lopez-Higuera¹, and L. Zeni²
¹University of Cantabria, Spain, ²Second University of Naples, Italy, ³National Research Council, Italy

[We-P107] (Paper No. 10323-416)

Tuning Refractive Index Sensing Properties of Micro-Cavity In-Line Mach-Zehnder Interferometer with Plasma Etching

Monika Janik¹, Marcin Koba^{2,3}, Wojtek J. Bock¹, and Mateusz Śmietana²
¹Université du Québec en Outaouais, Canada, ²Warsaw University of Technology, Poland, ³National Institute of Telecommunications, Poland

[We-P108] (Paper No. 10323-422)

Monitoring of Single-Mode Fiber Laser Heating Using Rayleigh Scattering and 1st Order fs-PbP Fiber Bragg Grating

Rudy Desmarchelier, Romain Cotillard, Nicolas Roussel, Steven Armiroli, and Guillaume Laffont
CEA, LIST, France

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[We-P109] (Paper No. 10323-429)

High Resolution Temperature Mapping of Gas Turbine Combustor Simulator Exhaust with Femtosecond Laser Induced Fiber Bragg Gratings

Robert B. Walker, Sangsig Yun, Huimin Ding, Michel Charbonneau, David Coulas, Ping Lu, Stephen J. Mihailov, and Nanthan Ramachandran
National Research Council, Canada

[We-P110] (Paper No. 10323-446)

Optical Fiber Distributed Sensing for High Temperature Superconductor Magnets

Federico Scurti and Justin Schwartz
North Carolina State University, USA

[We-P111] (Paper No. 10323-451)

Combined Long-Period Grating and Micro-Cavity In-Line Mach-Zehnder Interferometer for Refractive Index Sensing

Monika Janik¹, Marcin Koba^{2,3}, Predrag Miculic¹, Wojtek J. Bock¹, and Mateusz Śmietana²
¹*Université du Québec en Outaouais, Canada*, ²*Warsaw University of Technology, Poland*

[We-P112] (Paper No. 10323-453)

Study on the Strain Characteristic of Fiber-Optic Flexural Disk Accelerometer based on Multilayer Fiber Coils

Feng Peng¹, Yan Lv¹, Shuaifei Tian¹, Yaguang Geng², Jun Yang¹, and Wenjing Chen¹
¹*Harbin Engineering University, China*, ²*Hebei Hanguang Industry Co., Ltd., China*

[We-P113] (Paper No. 10323-472)

Impact of the Laser Phase Noise on Chirped-Pulse Phase-Sensitive OTDR

Juan Pastor-Graells¹, María R. Fernández-Ruiz¹, Hugo F. Martins², Andres Garcia-Ruiz¹, Sonia Martin-Lopez¹, and Miguel Gonzalez-Herraez¹
¹*Universidad de Alcalá, Spain*, ²*FOCUS S. L., Spain*

[We-P114] (Paper No. 10323-478)

Clarification of Strain-Temperature Cross-Sensitivity Effect on Brillouin Frequency Shift in Plastic Optical Fibers

Kazunari Minakawa, Yosuke Mizuno, and Kentaro Nakamura
Tokyo Institute of Technology, Japan

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[We-P115] (Paper No. 10323-479)

Optical Thin Film Inspection Using Parallel Spectral Domain Optical Coherence Tomography

Muhammad Faizan Shirazi¹, Ruchire Eranga Wijesinghe¹, Naresh Kumar Ravichandran¹, Pilun Kim², Mansik Jeon¹, and Jeehyun Kim^{1,2}

¹Kyungpook National University, Korea, ²Oz-tec Co. Ltd., Korea

[We-P116] (Paper No. 10323-486)

Multi-Point Strain and Displacement Sensor based on Intensity-Modulated Light and Two-Photon Absorption Process in Si-Avalanche Photodiode

Hiromasa Miyazawa, Masaya Nemoto, Yoshiaki Yamada, Yosuke Tanaka, and Takashi Kurokawa
Tokyo University of Agriculture and Technology, Japan

[We-P117] (Paper No. 10323-488)

Slope-Assisted Brillouin Optical Correlation-Domain Reflectometry Using High-Loss Plastic Optical Fibers

Heeyoung Lee¹, Neisei Hayashi², Yosuke Mizuno¹, and Kentaro Nakamura¹

¹Tokyo Institute of Technology, Japan, ²The University of Tokyo, Japan

[We-P118] (Paper No. 10323-489)

Effect of Parameters in Moving Average Method for Event Detection Enhancement Using Phase Sensitive OTDR

Yong-Seok Kwon^{1,2}, Khurram Naeem¹, Min Yong Jeon², and Il-bum Kwon¹

¹Korea Research Institute of Standards and Science, Korea, ²Chungnam National University, Korea

[We-P119] (Paper No. 10323-492)

Highly-Sensitive Distributed Birefringence Measurements based on a Two-Pulse Interrogation of a Dynamic Brillouin Grating

Marcelo A. Soto¹, Andrey Denisov¹, Xabier Angulo-Vinuesa², Sonia Martin-Lopez², Luc Thévenaz¹, and Miguel Gonzalez-Herraez²

¹École polytechnique fédérale de Lausanne Swiss Federal Institute of Technology, Switzerland,

²Universidad de Alcalá, Edificio Politécnico, Spain

[We-P120] (Paper No. 10323-494)

Towards Efficient Real-Time Submarine Power Cable Monitoring Using Distributed Fibre Optic Acoustic Sensors

Konstantin Hicke and Katerina Krebber

Bundesanstalt für Materialforschung und -prüfung, Germany

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[We-P121] (Paper No. 10323-495)

Effective Light Coupling in Reflective Fiber-Optic Distance Sensors Using a Double-Clad Fiber

Stefan Werzinger¹, Lisa Härteis¹, Aaron Köhler¹, Rainer Engelbrecht^{1,2}, and Bernhard Schmauss¹

¹Friedrich-Alexander University Erlangen-Nürnberg, Germany, ²Technische Hochschule Nürnberg Georg Simon Ohm, Germany

[We-P122] (Paper No. 10323-496)

Dual-Channel SPR Fiber Sensor by Adjusting Incident Angle in Fiber

Zongda Zhu, Lu Liu, Yong Wei, Yaxun Zhang, Yu Zhang, and Zihai Liu

Harbin Engineering University, China

[We-P123] (Paper No. 10323-498)

Demonstration of Distributed Shape Sensing based on Brillouin Scattering in Multi-Core Fibers

Zhiyong Zhao^{1,2}, Marcelo A. Soto¹, Ming Tang², and Luc Thévenaz¹

¹École polytechnique fédérale de Lausanne Swiss Federal Institute of Technology, Switzerland,

²Huazhong University of Science and Technology, China

[We-P124] (Paper No. 10323-501)

A New Fiber Optic Accelerometer with Push-Pull Structure Using 3 × 3 Coupler

Xiaokang Qiu¹, Fei Liu¹, Bin Xie³, Hongpu Zhou¹, Duo Yi², Xiangge He¹, Xiaoping Zheng¹, and Min Zhang^{1,2}

¹Tsinghua University, China, ²Peking University, China, ³Petro China Xinjiang Oilfield Company, China

[We-P125] (Paper No. 10323-509)

BOTDA Sensing System Employing a Tunable Low-Cost Brillouin Fiber Ring Laser Pump-Probe Source

M. Iuliano^{1,2}, D. Marini^{1,2}, F. Bastianini³, and G. Bolognini¹

¹Consiglio Nazionale delle Ricerche, Italy, ²Università degli Studi di Bologna, Italy, ³Sestosensor S.R.L., Italy

[We-P126] (Paper No. 10323-510)

Identification of Sensors in Optical Fiber Networks with Rayleigh Backscattering

T. Ringel and T. Bosselmann

Siemens AG, Germany

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[We-P127] (Paper No. 10323-513)

High Bending Curvature Withstanding One Dimensional Angle Sensor with Fiber Bragg Gratings

Minsu Jang^{1,2}, Ockchul Kim¹, Soong Ho Um², Sungwook Yang¹, and Jinseok Kim¹

¹*Korean Institute of Science and Technology, Korea*, ²*Sungkyunkwan University, Korea*

[We-P128] (Paper No. 10323-515)

Eliminating the Non-Local Effect in Frequency-Fixed Probe Wave based BOTDA Sensor

Sheng Wang, Zhisheng Yang, Xiaobin Hong, Wenqiao Lin, and Jian Wu

Beijing University of Posts and Telecommunications, China

[We-P129] (Paper No. 10323-516)

A Multicore Compound Glass Optical Fiber for Neutron Imaging

Michael Moore¹, Xiaodong Zhang¹, Xian Feng², Gilberto Brambilla², and Jason Hayward¹

¹*University of Tennessee, USA*, ²*University of Southampton, UK*

[We-P130] (Paper No. 10323-519)

Brillouin Optical Time Domain Analysis Enhanced by Tailored Pump Compensation

Young Hoon Kim and Kwang Yong Song

Chung-Ang University, Korea

[We-P131] (Paper No. 10323-521)

Low Velocity Impact Monitoring of Composite Wing Structure under Simulated Wing Loading Condition Using Fiber Bragg Grating Sensors

Pratik Shrestha, Yurim Park, Hyunseok Kwon, and Chun-Gon Kim

Korea Advanced Institute of Science and Technology, Korea

[We-P132] (Paper No. 10323-523)

Spatial-Division Multiplexed Hybrid Raman and Brillouin Distributed Sensor Employing Multicore Fiber

Zhiyong Zhao¹, Yunli Dang¹, Ming Tang¹, Li Duan¹, Meng Wang¹, Songnian Fu¹, Weijun Tong², and Deming Liu¹

¹*Huazhong University of Science and Technology, China*, ²*Yangtze Optical Fiber and Cable Joint Stock Limited Company (YOFC), China*

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[We-P133] (Paper No. 10323-530)

Long-Distance Delivery of Multi-Channel Polarization Signals in Nuclear Fusion Research

Jinseok Ko^{1,2}, Jinil Chung¹, and Kyuhang Lee³

¹National Fusion Research Institute, Korea, ²University of Science and Technology, Korea, ³General Optics Co., Korea

[We-P134] (Paper No. 10323-531)

Investigation of LEO Environment Exposure Monitoring Potential Using Embedded FBG Sensors

Yurim Park, Hyunseok Kwon, Pratik Shrestha, and Chun-Gon Kim

Korea Advanced Institute of Science and Technology, Korea

[We-P135] (Paper No. 10323-533)

Distributed Section-Localization of an Impact in a Composite Cylinder Using the Phase-Sensitive Optical Time Domain Reflectometer

Khurram Naeem¹, Yong-seok Kwon^{1,2}, and Il-Bum Kwon¹

¹Korea Research Institute of Standards and Science, Korea, ²Chungnam National University, Korea

[We-P136] (Paper No. 10323-540)

GeAsSe Chalcogenide Slot Optical Waveguide Ring Resonator for Refractive Index Sensing

N. Ashok, Yeung Lak Lee, and Woojin Shin

Gwangju Institute of Science and Technology, Korea

[We-P137] (Paper No. 10323-542)

Signal Characteristics of the Surface Bonded Fiber Bragg Grating Sensors by Bonding Length under Different Load Types

Hyunseok Kwon, Yurim Park, Pratik Shrestha, and Chun-Gon Kim

Korea Advanced Institute of Science and Technology, Korea

[We-P138] (Paper No. 10323-544)

Optical Fiber End-Facet Polymer Suspended-Mirror Devices

Mian Yao, Jushuai Wu, A. Ping Zhang, Hwa-Yaw Tam, and P. K. A. Wai

The Hong Kong Polytechnic University, Hong Kong, China

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[We-P139] (Paper No. 10323-547)

Analytical Expression and Experimental Validation of the Brillouin Gain Spectral Broadening at Any Sensing Spatial Resolution

Mehdi Alem¹, Marcelo A. Soto¹, Moshe Tur^{1,2}, and Luc Thévenaz¹

¹*Institute of Electrical Engineering*

SCI STI LT, Switzerland, ²Tel Aviv University, Israel

[We-P140] (Paper No. 10323-551)

Narrowing the Brillouin Gain Spectrum for BOTDA Sensor

Wenqiao Lin, Zhisheng Yang, Xiaobin Hong, Sheng Wang, and Jian Wu

Beijing University of Posts and Telecommunications, China

[We-P141] (Paper No. 10323-552)

Polarisation Pulling in Brillouin Optical Time-Domain Analysers

Marcelo A. Soto¹, Moshe Tur^{1,2}, Alexia Lopez-Gil³, Miguel Gonzalez-Herraez³, and Luc Thévenaz¹

¹*EPFL Swiss Federal Institute of Technology, Switzerland, ²Tel Aviv University, Israel, ³Universidad de Alcalá, Spain*

[We-P142] (Paper No. 10323-554)

Accurate Determination of Brillouin Frequency based on Cross Recurrence Plot Analysis in Brillouin Distributed Fiber Sensor

Shahna M Haneef, K. Srijith, D. Venkitesh, and B. Srinivasan

Indian Institute of Technology Madras, India

[We-P143] (Paper No. 10323-556)

Reducing Sensitivity Fading in C-OTDR by Use of Enhanced Scattering Fiber Segments

René Eisermann, Philipp Rohwetter, and Konstantin Hicke

Bundesanstalt für Materialforschung und-prüfung(BAM), Germany

[We-P144] (Paper No. 10323-100)

An Optical Fiber MEMS Pressure Sensor Using Microwave Photonics Filtering Technique

Yiping Wang, Ming Wang, Xiaoqi Ni, Wei Xia, Dongmei Guo, Hui Hao, Qingyu Ma, and Wei Zhuang

Nanjing Normal University, China