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Wojtek J. Bock
Jacques Albert
Xiaoyi Bao
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Contents

xxxvii	<i>Conference Committee</i>
xli	<i>Introduction</i>

A LOOK BACK AT OPTICAL FIBER SENSORS

- 7753 02 **Optical fiber sensor research and industry in Germany: review and outlook (Invited Paper)** [7753-475]
R. Willsch, W. Ecke, H. Bartelt, Institut für Photonische Technologien e.V. (Germany)
- 7753 03 **The origin, history and future of fiber optic interferometric acoustic sensors for US Navy applications (Invited Paper)** [7753-466]
J. H. Cole, J. A. Bucaro, C. K. Kirkendall, A. Dandridge, U.S. Naval Research Lab. (United States)

CURRENT FIBER SENSOR APPLICATIONS AND TECHNOLOGIES

- 7753 04 **Pressure measurement with fiber optic sensors: commercial technologies and applications (Invited Paper)** [7753-500]
É. Pinet, FISO Technologies, Inc. (Canada)
- 7753 05 **Distributed sensing with OFDR and its application to structural health monitoring (Invited Paper)** [7753-382]
H. Murayama, The Univ. of Tokyo (Japan); H. Igawa, Japan Aerospace Exploration Agency (Japan); K. Omichi, Fujikura Ltd. (Japan); Y. Machijima, Lazoc Inc. (Japan)

PLENARY TALK

- 7753 06 **Sensing high speed phenomena using fiber gratings and the Sagnac interferometer (Plenary Paper)** [7753-105]
E. Udd, Columbia Gorge Research (United States)

BRILLOUIN SENSORS

- 7753 07 **Brillouin scattering accompanied by acoustic grating in an optical fiber and applications in fiber distributed sensing (Invited Paper)** [7753-477]
K. Hotate, The Univ. of Tokyo (Japan)
- 7753 08 **100km sensing range Brillouin optical time domain analysis based on time-division multiplexing** [7753-265]
Y. Dong, X. Bao, L. Chen, Univ. of Ottawa (Canada)

- 7753 09 **Hot spot detection over 100 km with 2 meter resolution in a Raman-assisted Brillouin distributed sensor** [7753-182]
X. Angulo-Vinuesa, S. Martin-Lopez, J. Nuño, P. Corredera, J. D. Ania-Castañon, Consejo Superior de Investigaciones Cientificas (Spain); L. Thévenaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland); M. Gonzalez-Herraez, Univ. de Alcalá (Spain)
- 7753 0A **Measurement range elongation based on a temporal gating scheme in Brillouin correlation domain distributed discrimination system for strain and temperature operated by a single laser** [7753-203]
R. K. Yamashita, The Univ. of Tokyo (Japan); W. Zou, Shanghai Jiao Tong Univ. (China); Z. He, K. Hotate, The Univ. of Tokyo (Japan)
- 7753 0B **Faraday rotating Brillouin sensor system** [7753-178]
A. W. Brown, Dark-Pulse Technologies Ltd. (Canada); M. T. V. Wylie, B. G. Colpitts, Univ. of New Brunswick (Canada)

MICRO- AND NANO-FIBERS

- 7753 0C **Optical fibre microwire sensors (Invited Paper)** [7753-14]
G. Brambilla, M. Belal, Y. Jung, Z. Song, F. Xu, T. Newson, D. Richardson, Univ. of Southampton (United Kingdom)
- 7753 0D **Self-assembly and nanotechnology within an optical fibre for improved evanescent field sensing** [7753-301]
J. Canning, W. Padden, D. Boskovic, M. Naqshbandi, L. Costanza, H. de Bruyn, H. T. Sum, M. J. Crossley, The Univ. of Sydney (Australia)
- 7753 0E **Tunable Fabry-Perot filter based on hollow-core photonic bandgap fiber and micro-fiber and its application** [7753-462]
X. Wang, Univ. of Ottawa (Canada); T. Zhu, Univ. of Ottawa (Canada) and Chongqing Univ. (China); L. Chen, X. Bao, Univ. of Ottawa (Canada)
- 7753 0F **An optical trapping based microfiber vibration sensor** [7753-355]
L. Wang, P. Liang, Z. Liu, A. Zhou, L. Yuan, Harbin Engineering Univ. (China)
- 7753 0G **Etched core fiber Bragg grating sensor integrated with microfluidic channel** [7753-451]
S.-M. Lee, M.-Y. Jeong, Pusan National Univ. (Korea, Republic of); S. S. Saini, Univ. of Waterloo (Canada)

SENSOR APPLICATIONS

- 7753 0H **Demodulation technique for plasmonic fiber grating sensors using orthogonally polarized light states** [7753-354]
C. Caucheteur, Carleton Univ. (Canada) and Univ. de Mons (Belgium); Y. Y. Shevchenko, L. Shao, Carleton Univ. (Canada); P. Mégret, Univ. de Mons (Belgium); J. Albert, Carleton Univ. (Canada)

7753 0I **In situ radiation influence on strain measurement performance of Brillouin sensors** [7753-359]
X. Pheron, ANDRA (France) and Lab. Hubert Curien, CNRS (France); Y. Ouerdane, Lab. Hubert Curien, CNRS (France); S. Girard, C. Marcandella, CEA DAM (France); S. Delepine-Lesoille, J. Bertrand, ANDRA (France); F. Taillade, E. Merliot, Lab. Central des Ponts et Chaussées (France); Y. Sikali Mamdem, EDF Recherche & Developpement (France); A. Boukenter, Lab. Hubert Curien, CNRS (France)

7753 0J **Self-packaged Type II femtosecond IR laser induced fiber Bragg grating for temperature applications up to 1000 °C** [7753-456]
D. Grobnic, S. J. Mihailov, R. B. Walker, C. W. Smelser, Communications Research Ctr. Canada (Canada)

7753 0K **Evaluation of the transversal strain state in a satin weave composite using fibre Bragg gratings** [7753-253]
E. Voet, G. Luyckx, J. Degrieck, W. Van Paepegem, Univ. Gent (Belgium)

POSTER SESSION: MACH-ZEHNDER, SPR, FABRY-PEROT, INTERFEROMETER, RESONATOR, BRILLOUIN, DISTRIBUTED, LASER

7753 0L **A novel positioning method for dual Mach-Zehnder interferometric vibration sensor in submarine cable security application** [7753-255]
S. Xie, M. Zhang, Y. Li, Y. Liao, Tsinghua Univ. (China)

7753 0M **Fiber in-line Mach-Zehnder interferometer based on selective infiltration of photonic crystal fiber** [7753-276]
M. Yang, D. N. Wang, Y. Wang, C. R. Liao, The Hong Kong Polytechnic Univ. (Hong Kong, China)

7753 0N **In-line all-fiber Fabry-Perot and Mach-Zehnder interferometers formed by hollow fiber with lateral offset** [7753-92]
Y.-J. Rao, Chongqing Univ. (China) and Univ. of Electronic Science & Technology of China (China); D. W. Duan, L. C. Xu, M. Deng, T. Zhu, Chongqing Univ. (China)

7753 0O **Experimental demonstration on 2.5m spatial resolution and 1°C temperature uncertainty over 74.6km BOTDA with combined Raman amplification and optical pulse coding** [7753-101]
Y.-J. Rao, X.-H. Jia, K. Deng, Z.-X. Yang, L. Chang, C. Zhang, Z.-L. Ran, Univ. of Electronic Science and Technology of China (China)

7753 0P **A novel quasi-distributed sensing network based on non-balance Mach-Zehnder autocorrelator** [7753-285]
J. Yang, Y. Yuan, A. Zhou, L. Yuan, Harbin Engineering Univ. (China)

7753 0Q **Refractive index and temperature sensor based on double-pass in-line Mach-Zehnder interferometer** [7753-122]
Y. Li, China Jiliang Univ. (China) and Univ. of Ottawa (Canada); L. Chen, E. Harris, X. Bao, Univ. of Ottawa (Canada); W. J. Bock, Univ. du Québec en Outaouais (Canada)

- 7753 OR **Fiber loop ringdown strain sensor with photonic crystal fiber based Mach-Zehnder interferometer** [7753-165]
W. Zhou, China Jiliang Univ. (China) and Nanyang Technological Univ. (Singapore); W. C. Wong, C. C. Chan, Nanyang Technological Univ. (Singapore); L.-Y. Shao, China Jiliang Univ. (China) and Carleton Univ. (Canada); X. Dong, China Jiliang Univ. (China)
- 7753 OS **Curvature measurement with photonic crystal fiber based Mach-Zehnder interferometer** [7753-97]
M. Deng, C.-P. Tang, T. Zhu, Chongqing Univ. (China); Y.-J. Rao, Univ. of Electronic Science and Technology of China (China) and Chongqing Univ. (China)
- 7753 OT **PCF-based Fabry-Perot interferometric sensor for strain measurement under high-temperature** [7753-93]
M. Deng, C.-P. Tang, T. Zhu, Chongqing Univ. (China); Y.-J. Rao, Univ. of Electronic Science and Technology of China (China) and Chongqing Univ. (China)
- 7753 OU **Microstructured fiber Mach-Zehnder interferometers for simultaneous measurement of axial strain and temperature** [7753-409]
Q. Chen, P. Lu, Memorial Univ. of Newfoundland (Canada)
- 7753 OV **Polarization-dependent in-line Mach-Zehnder interferometer for discrimination of temperature and ambient index** [7753-89]
H.-J. Kim, Y. Y.-G. Han, Hanyang Univ. (Korea, Republic of)
- 7753 OW **Miniaturized fiber optic surface-plasmon-resonance sensor** [7753-474]
T. Schuster, N. Neumann, Technische Univ. Dresden (Germany); C. Schäffer, Helmut-Schmidt Univ. (Germany)
- 7753 OX **Improved performance of SPR optical fiber sensors with InN as dielectric cover** [7753-207]
Ó. Esteban, F. B. Naranjo, Univ. de Alcalá de Henares (Spain); N. Díaz-Herrera, Univ. Complutense de Madrid (Spain); S. Valdueza-Felip, Univ. de Alcalá de Henares (Spain); M. C. Navarrete, A. González Cano, Univ. Complutense de Madrid (Spain)
- 7753 OY **An experimental evaluation of the behavior of SPR fiber sensors in absorptive medium when plasmons are tuned to absorption peaks: method for selective measurement** [7753-297]
I. Leite, Univ. de Alcalá de Henares (Spain); M. C. Navarrete, N. Díaz-Herrera, A. Gonzalez Cano, Univ. Complutense de Madrid (Spain); O. Esteban, Univ. de Alcalá de Henares (Spain)
- 7753 OZ **Chemical sensing with an all-fiber reflection LSPR sensor** [7753-368]
P. M. P. Gouvêa, D. P. Parra, A. M. B. Braga, I. C. S. Carvalho, Pontifícia Univ. Católica do Rio de Janeiro (Brazil)
- 7753 10 **Surface plasmon resonance refractive index fiber sensor with hole-assisted structure** [7753-107]
C. Guan, L. Yuan, Harbin Engineering Univ. (China)
- 7753 11 **Development and sensitivity studies of a gold nanorod platform for a localized surface plasmon resonance based optical fibre biosensor** [7753-325]
J. Cao, The City Univ. (United Kingdom) and Harbin Institute of Technology (China); E. Galbraith, T. Sun, K. T. V. Grattan, The City Univ. (United Kingdom)

- 7753 12 **A novel fiber-tip micro-cavity sensor for high temperature application** [7753-385]
J. Ma, W. Jin, L. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 13 **Porous silicon-based optical fiber Fabry-Perot sensor for relative humidity determination** [7753-96]
G. Rong, S. Pan, C. Wu, Shanghai Jiao Tong Univ. (China); X. Li, M. Yang, Wuhan Univ. of Technology (China)
- 7753 14 **Inspection technique for cleaved optical fiber ends based on Fabry-Perot resonator** [7753-215]
M. Kihara, H. Watanabe, Y. Yajima, M. Toyonaga, Nippon Telegraph and Telephone East Corp. (Japan)
- 7753 15 **Fiber optic Fabry-Perot sensor based on graded-index multimode fiber: numerical simulations and experiments** [7753-100]
Y. Gong, T. Zhao, Y.-J. Rao, Y. Wu, Y. Guo, Univ. of Electronic Science and Technology of China (China)
- 7753 16 **Demodulation of micro fiber optic Fabry-Perot interferometer using subcarrier and dual-wavelength method** [7753-109]
Z. Ran, Y. Rao, Z. Liu, F. Xu, Univ. of Electronic Science and Technology of China (China)
- 7753 17 **1100°C fiber optic high-temperature Fabry-Perot sensors fabricated by laser-micromachining** [7753-113]
Z. Ran, Y. Chen, Y. Rao, D. Sun, E. Lu, Z. Liu, Univ. of Electronic Science and Technology of China (China)
- 7753 18 **Fiber optic Fabry-Perot interferometer tip accelerometer fabricated by laser-micromachining** [7753-114]
Z. Ran, E. Lu, Y. Rao, M. Ni, F. Peng, D. Zeng, Univ. of Electronic Science and Technology of China (China)
- 7753 19 **Fiber Fabry-Perot interferometer sensor for measuring resonances of piezoelectric elements** [7753-299]
R. E. da Silva, R. A. Oliveira, A. A. P. Pohl, Federal Univ. of Technology (Brazil)
- 7753 1A **Temperature Raman laser sensor based in a suspended-core Fabry-Perot cavity and cooperative Rayleigh scattering** [7753-281]
A. M. R. Pinto, M. Lopez-Amo, Univ. Pública de Navarra (Spain); J. Kobelke, K. Schuster, Institute of Photonic Technology (Germany)
- 7753 1B **High-sensitivity salinity sensor realized with photonic crystal fiber Sagnac interferometer** [7753-376]
C. Wu, The Hong Kong Polytechnic Univ. (Hong Kong, China) and Dalian Univ. of Technology (China); H. Y. Fu, H. Y. Au, The Hong Kong Polytechnic Univ. (Hong Kong, China); B. O. Guan, Dalian Univ. of Technology (China) and Jinan Univ. (China); H. Y. Tam, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 1C **A hybrid Sagnac interferometer for discrimination of ambient index and temperature** [7753-28]
O.-J. Kwon, Y. B. Shim, Y.-G. Han, Hanyang Univ. (Korea, Republic of)

- 7753 1D **Long distance simultaneous measurement of bending and temperature based on a dual-wavelength Raman fiber laser** [7753-46]
O.-J. Kwon, H.-J. Kim, M.-S. Yoon, S. Park, Y. Shim, S. B. Lee, Y.-G. Han, Hanyang Univ. (Korea, Republic of)
- 7753 1E **A Sagnac loop sensor for simultaneous strain and temperature measurement** [7753-279]
J. Kang, China Jiliang Univ. (China) and Univ. of Shanghai for Science and Technology (China); X. Dong, C. Zhao, China Jiliang Univ. (China); Y. Zhao, Zhejiang Tianma Bearing Co., Ltd (China); M. Li, Univ. of Shanghai for Science and Technology (China)
- 7753 1F **Interferometric phase sensor using single-ended polarization maintaining fiber in Sagnac interferometer** [7753-350]
Y. R. Yoon, M. H. Seo, H. D. Lee, M. Y. Jeong, C.-S. Kim, Pusan National Univ. (Korea, Republic of)
- 7753 1G **A novel magnetic field fiber sensor by using magnetic fluid in Sagnac loop** [7753-44]
P. Zu, C. C. Chan, Nanyang Technological Univ. (Singapore); Y. Jin, China Jiliang Univ. (China); Y. Zhang, Nanyang Technological Univ. (Singapore); X. Dong, China Jiliang Univ. (China)
- 7753 1H **Resonator micro optic gyro with double phase modulation technique using an FPGA-based digital processor** [7753-277]
H. Ma, H. Mao, Y. Chen, Z. Jin, Zhejiang Univ. (China)
- 7753 1I **Optical-frequency-comb based interrogation of fiber resonators** [7753-317]
G. Gagliardi, S. Avino, Istituto Nazionale di Ottica, CNR (Italy); M. Fabian, Univ. of Limerick (Ireland); M. Salza, P. Ferraro, P. De Natale, Istituto Nazionale di Ottica, CNR (Italy)
- 7753 1J **A novel optical fiber current sensor using polarization diversity and a Faraday rotation mirror cavity** [7753-273]
H. Zhang, Y. Dong, J. Leeson, L. Chen, X. Bao, Univ. of Ottawa (Canada)
- 7753 1K **Offset errors caused by the resonance asymmetry in the waveguide-type optical passive resonator gyro** [7753-163]
Y. Chen, H. Ma, Z. Jin, Zhejiang Univ. (China)
- 7753 1L **Microscopic multiple-point temperature sensing based on microfiber double-knot resonators** [7753-169]
Y. Wu, Y. Chen, Y. Rao, T. Zhang, Y. Gong, Univ. of Electronic Science and Technology of China (China)
- 7753 1M **Interferometric humidity sensors based on microfiber knot resonators** [7753-110]
Y. Wu, T. Zhang, Y. Rao, Y. Gong, Univ. of Electronic Science and Technology of China (China)
- 7753 1N **Dual-probe simultaneous measurements of refractive index and thickness with spectral-domain low coherence interferometry** [7753-256]
S. J. Park, K. S. park, Y. H. Kim, Gwangju Institute of Science and Technology (Korea, Republic of); S.-J. Baik, Chonnam National Univ. (Korea, Republic of); B. H. Lee, Gwangju Institute of Science and Technology (Korea, Republic of)

- 7753 1O **Analysis of optical fiber interferometer sensor bonded to flat diaphragm for dynamic stress measurement at high temperature** [7753-461]
H. Krisch, Krohne Messtechnik GmbH & Co. KG (Germany); T. Nasilowski, Military Univ. of Technology (Poland); N. Fernandes, Krohne Marshall Pvt Ltd. (India); M. Lau, P. Lutkowski, M. Skupski, K. Gossner, S. Tournillon, Krohne Messtechnik GmbH & Co. KG (Germany); R. Plaga, Warsaw Univ. of Technology (Poland); L. Jaroszewicz, Military Univ. of Technology (Poland); T. Wolinski, Warsaw Univ. of Technology (Poland)
- 7753 1P **Photonic crystal fiber interferometer for dew detection** [7753-241]
J. Mathew, Y. Semenova, G. Rajan, G. Farrell, Dublin Institute of Technology (Ireland)
- 7753 1Q **Miniaturized fiber probe reflective interferometer sensor** [7753-314]
J. Kou, J. Feng, F. Xu, Y. Lu, Nanjing Univ. (China)
- 7753 1R **Inline core-cladding intermodal interferometer based on nano-coated photonic crystal fiber for refractive-index sensing** [7753-326]
M. Smietana, Univ. du Québec en Outaouais (Canada) and Warsaw Univ. of Technology (Poland); D. Brabant, W. J. Bock, P. Mikulic, Univ. du Québec en Outaouais (Canada); T. Eftimov, The Paissi Hilendarski Univ. of Plovdiv (Bulgaria)
- 7753 1S **All-fiber interferometric sensor of 150kHz acoustic emission for the detection of partial discharges within power transformers** [7753-278]
J. E. Posada, J. Rubio-Serrano, J. A. Garcia-Souto, Univ. Carlos III de Madrid (Spain)
- 7753 1T **Delayed self-heterodyne interferometry using Faraday mirrors in a Michelson configuration** [7753-302]
M. L. Åslund, A. Canagasabay, A. Michie, J. Canning, The Univ. of Sydney (Australia); J. Holdsworth, Univ. of Newcastle (Australia); S. Fleming, The Univ. of Sydney (Australia)
- 7753 1U **Interferometric system controlled by virtual instrumentation for differential thermal analysis** [7753-374]
L. C. Gonçalves, INESC Porto (Portugal) and Univ. da Madeira (Portugal); G. González-Aguilar, INESC Porto (Portugal); J. M. Baptista, INESC Porto (Portugal) and Univ. da Madeira (Portugal); P. A. S. Jorge, INESC Porto (Portugal)
- 7753 1V **Tactical-grade interferometric fiber optic gyroscope driven with a narrow-linewidth laser** [7753-379]
S. W. Lloyd, M. J. F. Digonnet, S. Fan, Stanford Univ. (United States)
- 7753 1W **A simplified common-path autocorrelator based on Fizeau interferometer** [7753-286]
Y. Yuan, J. Yang, A. Zhou, L. Yuan, Harbin Engineering Univ. (China)
- 7753 1X **Dynamical interrogation of interferometric sensor arrays by a simple polarimetric setup** [7753-412]
Y. Katz, A. Eyal, Tel-Aviv Univ. (Israel)
- 7753 1Y **Compact photonic crystal fiber refractometer based on modal interference** [7753-61]
W. C. Wong, C. C. Chan, Z. Q. Tou, L. H. Chen, Nanyang Technological Univ. (Singapore); K. C. Leong, GLOBALFOUNDRIES Inc. (Singapore)

- 7753 1Z **Self-mixing interference in fiber ring laser and its multiplexing** [7753-66]
M. Wang, W. Xia, X. Dai, Y. Zhao, Nanjing Normal Univ. (China)
- 7753 20 **Matrix operators for complex interferometer analysis** [7753-443]
R. P. Dahlgren, Univ. of California, Santa Cruz (United States) and The SETI Institute (United States)
- 7753 21 **Simplified Brillouin optical time-domain sensor based on direct modulation of a laser diode** [7753-291]
K.-Y. Song, S. Yang, Chung-Ang Univ. (Korea, Republic of)
- 7753 22 **Impact of pump depletion on the determination of the Brillouin gain frequency in distributed fiber sensors** [7753-210]
L. Thévenaz, S. Foa Leng Mafang, J. Lin, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
- 7753 23 **Distributed and dynamical Brillouin sensing in optical fibers** [7753-289]
Y. Peled, A. Mofit, L. Yaron, M. Tur, Tel-Aviv Univ. (Israel)
- 7753 24 **Long integral temperature Brillouin sensor for off-shore wind energy power supply lines** [7753-308]
M. A. Quintela, A. Ullán, A. Quintela, C. Galindez, Univ. de Cantabria (Spain);
R. A. Perez-Herrera, M. López-Amo, Univ. Pública de Navarra (Spain); J. M. Lopez-Higuera, Univ. de Cantabria (Spain)
- 7753 25 **BOTDA sensor with 2-m spatial resolution over 120 km distance using bi-directional distributed Raman amplification** [7753-162]
M. A. Soto, S. Faralli, M. Taki, G. Bolognini, F. Di Pasquale, Scuola Superiore Sant'Anna (Italy)
- 7753 26 **Experimental examination of the variation of the spontaneous Brillouin power and frequency shift under the combined influence of temperature and strain** [7753-357]
M. Belal, T. P. Newson, Univ. of Southampton (United Kingdom)
- 7753 27 **Evaluation of a high spatial resolution temperature compensated distributed strain sensor using a temperature controlled strain rig** [7753-366]
M. Belal, T. P. Newson, Univ. of Southampton (United Kingdom)
- 7753 28 **Simultaneous temperature and strain measurement with bandwidth and peak of the Brillouin spectrum in LEAF fiber** [7753-471]
X. Liu, X. Bao, Univ. of Ottawa (Canada)
- 7753 29 **Potential of Brillouin scattering in polymer optical fiber for strain-insensitive high-accuracy temperature sensing** [7753-07]
Y. Mizuno, K. Nakamura, Tokyo Institute of Technology (Japan)
- 7753 2A **Expansion of spatial measurement range in a correlation based Brillouin optical sensing system** [7753-36]
J. H. Jeong, Korea Institute of Science and Technology (Korea, Republic of) and Hanyang Univ. (Korea, Republic of); K. Lee, Korea Institute of Science and Technology (Korea, Republic of); J.-M. Jeong, Hanyang Univ. (Korea, Republic of); S. B. Lee, Korea Institute of Science and Technology (Korea, Republic of)

- 7753 2B **Coherent probe-pump-based Brillouin sensor for 100- μm crack detection and 100-km distributed strain and temperature sensing** [7753-252]
L. Zou, O. Sezerman, OZ Optics, Ltd. (Canada)
- 7753 2C **Centimeter-range spatial resolution distributed sensing by BOFDA** [7753-407]
R. Bernini, Istituto per il Rilevamento Elettromagnetico dell'Ambiente, CNR (Italy);
A. Minardo, L. Zeni, Seconda Univ. degli Studi di Napoli (Italy)
- 7753 2D **Polarization pulling based on stimulated Brillouin scattering in a dual-pump configuration** [7753-272]
Z. Shmilovitch, A. Eyal, M. Tur, Tel-Aviv Univ. (Israel); A. Zadok, Bar-Ilan Univ. (Israel);
N. Primerov, S. Chin, L. Thévenaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
- 7753 2E **Reduction of measurement time in BOTDA sensors using wavelet shrinkage** [7753-369]
M. Amiri Farahani, B. G. Colpitts, E. Castillo-Guerra, Univ. of New Brunswick (Canada)
- 7753 2F **Self-heterodyne synchronous detection for SNR improvement and distributed Brillouin phase shift measurements in BOTDA sensors** [7753-392]
A. Zornoza, D. Olier, A. Loayssa, Univ. Pública de Navarra (Spain)
- 7753 2G **Intensity and phase noise caused by stimulated Brillouin scattering** [7753-274]
W. Chen, Z. Meng, National Univ. of Defense Technology (China)
- 7753 2H **30cm of spatial resolution using pre-excitation pulse BOTDA technique** [7753-173]
C. A. Galindez, A. Quintela, M. A. Quintela, J. M. Lopez-Higuera, Univ. de Cantabria (Spain)
- 7753 2I **Quasi-static strain sensing using molecular spectroscopy** [7753-35]
T. T.-Y. Lam, J. H. Chow, D. A. Shaddock, I. C. M. Littler, The Australian National Univ. (Australia); G.-Gagliardi, Istituto Nazionale di Ottica, CNR (Italy); M. B. Gray, National Measurement Institute (Australia); D. E. McClelland, The Australian National Univ. (Australia)
- 7753 2J **Sensing emulsification processes by photon density wave spectroscopy** [7753-309]
O. Reich, L. Bressel, R. Hass, Univ. Potsdam (Germany)
- 7753 2K **Laser induced breakdown spectroscopy algorithm using weights iteration artificial neural network** [7753-386]
X. Ma, Z. Zheng, H. Zhao, M. Zhang, Y. Liao, Tsinghua Univ. (China)
- 7753 2L **Phase-locking of commercial DFB lasers for distributed optical fiber sensing applications** [7753-230]
C. D. Rouse, Univ. of New Brunswick (Canada); A. W. Brown, Dark-Pulse Technologies Ltd. (Canada); M. T. V. Wylie, B. G. Colpitts, Univ. of New Brunswick (Canada)
- 7753 2M **500km remote interrogation of optical sensor arrays** [7753-425]
E. Austin, Stingray Geophysical Ltd. (United Kingdom); Q. Zhang, S. Alam, M. Zervas, R. Slavik, P. Petropoulos, Univ. of Southampton (United Kingdom); P. Nash, Stingray Geophysical Ltd. (United Kingdom); D. J. Richardson, Univ. of Southampton (United Kingdom)
- 7753 2O **Fibre optic distributed differential displacement sensor** [7753-10]
M. T. V. Wylie, Univ. of New Brunswick (Canada); A. W. Brown, Dark-Pulse Technologies Ltd. (Canada); B. G. Colpitts, Univ. of New Brunswick (Canada)

- 7753 2P **Refractive index sensing based on Mach-Zehnder interferometer formed by three cascaded single-mode fiber tapers** [7753-88]
T. Zhu, Chongqing Univ. (China) and Univ. of Ottawa (Canada); D. Wu, M. Deng, D. Duan, Chongqing Univ. (China); Y. Rao, Univ. of Ottawa (China) and Univ. of Electronic Science and Technology of China (China); X. Bao, Univ. of Ottawa (Canada)
- 7753 2Q **Tunable narrow linewidth and stable frequency laser based on stimulated Rayleigh scattering in non-uniform optical fiber** [7753-170]
T. Zhu, X. Bao, L. Chen, Univ. of Ottawa (Canada)
- 7753 2R **Characteristics of stimulated Rayleigh scattering in optical fibers** [7753-168]
T. Zhu, X. Bao, L. Chen, H. Liang, Y. Dong, Univ. of Ottawa (Canada)
- 7753 2S **Millimeter resolution distributed dynamic strain measurements using optical frequency domain reflectometry** [7753-335]
A. K. Sang, M. E. Froggatt, S. T. Kreger, D. K. Gifford, Luna Innovations Inc. (United States)
- 7753 2T **Chaotic lasers for elimination of low-frequency fluctuations of backscattered Rayleigh radiation in distributed fiber optical sensors** [7753-300]
V. V. Spirin, C. A. López-Mercado, S. V. Miridonov, Scientific Research and Advanced Studies Ctr. of Ensenada (Mexico); L. Cardoza-Avendaño, R. M. López-Gutiérrez, Univ. Autónoma de Baja California (Mexico); C. Cruz-Hernández, Scientific Research and Advanced Studies Ctr. of Ensenada (Mexico)
- 7753 2U **Distributed temperature monitoring of long distance submarine cables** [7753-320]
M. Fromme, LIOS Technology GmbH (Germany); W. Christiansen, S. V. Kjær, DONG Energy (Denmark); W. Hill, LIOS Technology GmbH (Germany)
- 7753 2V **Hybrid TDM/WDM based fiber optic sensor network for perimeter intrusion detection** [7753-440]
X. Li, Q. Sun, Z. Sun, J. Wo, M. Zhang, D. Liu, Huazhong Univ. of Science and Technology (China)
- 7753 2W **Improving the dynamic range in distributed anti-Stokes Raman thermometry by means of susceptibility asymmetry** [7753-332]
L. A. Ribeiro, Instituto Nacional de Pesquisas Espaciais (Brazil); J. B. Rosolem, CpqD Foundation (Brazil); A. O. Toledo, Instituto de Estudos Avançados (Brazil)
- 7753 2X **The three point method for measurement of P-OTDR sensor** [7753-447]
C. Wu, C. Shang, Z. Li, Beijing Jiaotong Univ. (China)
- 7753 2Y **Measurement of nonlinear refractive index by using input-output characteristics in OFRR nonlinear dynamics** [7753-186]
Y. Imai, S. Yamauchi, H. Yokota, S. Wei, Ibaraki Univ. (Japan)
- 7753 2Z **Quasi-distributed vibration sensor based on polarization-sensitive measurement** [7753-305]
N. Linze, P. Tihon, O. Verlinden, P. Mégret, M. Wuilpart, Univ. de Mons (Belgium)
- 7753 30 **A wide-area fiber sensor network with optical power supply** [7753-348]
Y. Tanaka, M. Kinoshita, A. Takahashi, T. Kurokawa, Tokyo Univ. of Agriculture and Technology (Japan)

- 7753 31 **Fiber optic intrusion detection sensor for physical security system** [7753-18]
T. Kumagai, S. Sato, W. Ohnuki, T. Nakamura, Hitachi Cable, Ltd. (Japan)
- 7753 32 **A new multi-point sensing system based on optical pass switching and remote optical power supply** [7753-120]
O. Ogawa, Central Research Institute of Electric Power Industry (Japan)
- 7753 33 **High performance wavelength demodulator for DFB fiber laser sensor using novel PGC algorithm and reference compensation method** [7753-292]
J. He, F. Li, W. Zhang, L. Wang, T. Xu, Y. Liu, Institute of Semiconductors (China)
- 7753 34 **Low frequency acoustic response of a planar fiber laser cantilever in a fluid** [7753-176]
G. A. Cranch, G. A. Miller, C. K. Kirkendall, U.S. Naval Research Lab. (United States)
- 7753 35 **Acoustic sensor based on depressed cladding erbium doped fiber ring laser** [7753-25]
J. B. Rosolem, CpqD Foundation (Brazil); M. B. Elias, Univ. Estadual de Campinas (Brazil); E. W. Bezerra, CpqD Foundation (Brazil); C. K. Suzuki, Univ. Estadual de Campinas (Brazil)
- 7753 36 **Ultrasound detection using a tunable low beat-frequency Er³⁺-doped DBR fiber laser** [7753-157]
T. Guo, Jinan Univ. (China) and The Hong Kong Polytechnic Univ. (China); A. C. Wong, W. Liu, The Hong Kong Polytechnic Univ. (Hong Kong, China); B. Guan, Jinan Univ. (China); C. Lu, H.-Y. Tam, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 37 **Ultra thin fiber laser vector hydrophone** [7753-60]
R. Ma, W. Zhang, J. He, F. Li, Y. Liu, Institute of Semiconductors (China)
- 7753 38 **Full characterization and comparison of phase properties of narrow linewidth lasers operating in the C-band** [7753-132]
R. Slavik, Y. Liao, Univ. of Southampton (United Kingdom); E. Austin, Stingray Geophysical Ltd. (United Kingdom); P. Petropoulos, D. J. Richardson, Univ. of Southampton (United Kingdom)
- 7753 39 **Mode-locked multi-wavelength fiber ring laser using low frequency phase modulation** [7753-364]
C. S. Jun, J. K. Ko, S. H. Yoo, B. Y. Kim, Korea Advanced Institute of Science and Technology (Korea, Republic of)
- 7753 3A **Fast method for engineering erbium-doped fiber lasers** [7753-375]
J. D. Causado-Bulevas, N. D. Gómez-Cardona, P. Torres, Univ. Nacional de Colombia (Colombia)
- 7753 3B **50km long distance DFB fiber laser hydrophone system** [7753-57]
Z. Chen, J. Ng, A*STAR Institute for Infocomm Research (Singapore); V. Pallayil, National Univ. of Singapore (Singapore)
- 7753 3C **L-band multiwavelength erbium-doped fiber ring laser for sensing applications** [7753-242]
R. A. Perez-Herrera, Univ. Pública de Navarra (Spain); A. Ullán, Univ. de Cantabria (Spain); D. Leandro, M. Fernández-Vallejo, Univ. Pública de Navarra (Spain); M. A. Quintela, Univ. de Cantabria (Spain); A. Loayssa, Univ. Pública de Navarra (Spain); J. M. López-Higuera, Univ. de Cantabria (Spain); M. Lopez-Amo, Univ. Pública de Navarra (Spain)

- 7753 3D **Fiber laser vector hydrophone: theory and experiment** [7753-401]
W. Zhang, F. Zhang, R. Ma, J. He, F. Li, Y. Liu, Institute of Semiconductors (China)
- 7753 3E **Weak injection locked DFB semiconductor laser for optical fiber sensing** [7753-398]
H. Zhou, Q. Yao, M. Chen, Z. Meng, National Univ. of Defense Technology (China)

RAYLEIGH TECHNIQUES AND FREQUENCY DOMAIN SENSORS

- 7753 3F **Long-range coherent optical frequency domain reflectometry and its applications (Invited Paper)** [7753-71]
F. Ito, X. Fan, Y. Koshikiya, NTT Access Network Service Systems Labs. (Japan)
- 7753 3G **Frequency domain simultaneous tone interrogation for faster, sweep-free Brillouin distributed sensing** [7753-254]
A. Voskoboinik, J. Wang, A. E. Willner, The Univ. of Southern California (United States); M. Tur, Tel Aviv Univ. (Israel)
- 7753 3H **High-performance Brillouin strain and temperature sensor based on frequency division multiplexing using nonuniform fibers over 75-km fiber** [7753-264]
Y. Dong, X. Bao, L. Chen, Univ. of Ottawa (Canada)
- 7753 3I **High precision, high sensitivity distributed displacement and temperature measurements using OFDR-based phase tracking** [7753-243]
D. K. Gifford, M. E. Froggatt, S. T. Kreger, Luna Innovations Inc. (United States)
- 7753 3J **Ultra high dynamic range coherent optical time domain reflectometry employing frequency division multiplexing** [7753-282]
H. Iida, Y. Koshikiya, F. Ito, K. Tanaka, NTT Access Network Service Systems Labs. (Japan)
- 7753 3K **Vibration monitoring with high frequency response based on coherent phase-sensitive OTDR method** [7753-236]
Y. Lu, T. Zhu, X. Bao, L. Chen, Univ. of Ottawa (Canada)

NEW FIBERS

- 7753 3L **Fibre lasers for photo-acoustic gas spectroscopy** [7753-131]
N. Arsad, Univ. of Strathclyde (United Kingdom) and Univ. Kebangsaan Malaysia (Malaysia); G. Stewart, Univ. of Strathclyde (United Kingdom)
- 7753 3M **Improved time response for polymer fibre Bragg grating based humidity sensors** [7753-331]
W. Zhang, D. J. Webb, Aston Univ. (United Kingdom); G.-D. Peng, The Univ. of New South Wales (Australia)
- 7753 3N **Two-photon excited fluorescence in praseodymium doped fibre and its application in distributed optical fibre sensing of temperature** [7753-104]
C. J. Dalzell, T. P. J. Han, I. S. Ruddock, Univ. of Strathclyde (United Kingdom)

POSTER SESSION: MICROSTRUCTURAL FIBER, NOVEL CONCEPTS, ETC.

- 7753 3O **Very high polarimetric sensitivity to strain of second order mode of highly birefringent microstructured fibre** [7753-465]
T. Nasilowski, Military Univ. of Technology (Poland); K. Skorupski, M. Makara, Maria Curie-Skłodowska Univ. (Poland); G. Statkiewicz-Barabach, Wrocław Univ. of Technology (Poland); P. Mergo, Maria Curie-Skłodowska Univ. (Poland); P. Marc, L. Jaroszewicz, Military Univ. of Technology (Poland)
- 7753 3P **Low cost pressure sensor system based on polarization-maintaining photonic crystal fiber operating at 850 nm with CCD interrogator** [7753-175]
L. Cho, H. Y. Fu, The Hong Kong Polytechnic Univ. (Hong Kong, China); C. Wu, The Hong Kong Polytechnic Univ. (Hong Kong, China) and Dalian Univ. of Technology (China); C. Lu, H. Y. Tam, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 3Q **Single-mode 7-cell core hollow core photonic crystal fiber with increased bandwidth** [7753-251]
J. K. Lyngsø, C. Jakobsen, H. R. Simonsen, J. Broeng, NKT Photonics A/S (Denmark)
- 7753 3R **Side-hole polarization-maintaining photonic crystal fiber for hydrostatic pressure sensing** [7753-23]
C. Wu, Dalian Univ. of Technology (China) and The Hong Kong Polytechnic Univ. (Hong Kong, China); J. Li, X. Feng, B.-O. Guan, Jinan Univ. (China); H.-Y. Tam, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 3S **Phase sensitivity to axial strain of microstructured optical silica fibers** [7753-68]
Y. Léguillon, Thales Underwater Systems (France), Univ. Européenne de Bretagne (France), and Fonctions Optiques pour les Technologies de l'information, CNRS (France); P. Besnard, Univ. Européenne de Bretagne (France) and Fonctions Optiques pour les Technologies de l'information, CNRS (France); L. Provino, A. Monteville, D. Méchin, D. Trégoat, Plate-forme d'Étude et de Recherche sur les Fibres Optiques Spéciales (France); M. Doisy, F.-X. Launay, Thales Underwater Systems (France)
- 7753 3T **A photonic crystal fiber temperature sensor based on forward stimulated fluorescence emission** [7753-130]
X. Li, X. Hong, Shenzhen Univ. (China) and Shenzhen Key Lab. of Sensor Technology (China); Y. Deng, Shenzhen Key Lab. of Sensor Technology (China); Y. Yu, Y. Geng, Shenzhen Univ. (China) and Shenzhen Key Lab. of Sensor Technology (China); H. Wei, W. Tong, Yangtze Optical Fibre and Cable Co., Ltd. (China)
- 7753 3U **High-sensitive temperature sensor based on alcohol-filled highly birefringent photonic crystal fiber loop mirror** [7753-136]
S. He, C.-L. Zhao, X. Dong, S. Zhang, S. Jin, China Jiliang Univ. (China); J. Guo, H. Wei, Yangtze Optical Fibre and Cable Co., Ltd. (China)
- 7753 3V **Transversal-force sensor based on supercontinuum generation in photonic crystal fibers** [7753-172]
L. H. Chen, R. M. Li, C. C. Chan, L. M. Zhao, Nanyang Technological Univ. (Singapore); Y. X. Jin, X. Y. Dong, China Jiliang Univ. (China); K. C. Leong, Globalfoundaries Singapore Pte Ltd. (Singapore)

- 7753 3W **Potential glucose monitoring of blood plasma using hollow core photonic crystal fibre** [7753-177]
L. E. Horan, G. Khara, M. Rutowska, A. D. Ellis, F. C. Garcia Gunning, Univ. College Cork (Ireland)
- 7753 3X **Fabrication of polarization-maintaining photonic crystal fiber couplers using CO₂ laser irradiation technique** [7753-217]
H. Yokota, Y. Ito, H. Kawashiri, Y. Imai, Y. Sasaki, Ibaraki Univ. (Japan)
- 7753 3Y **A hollow-core photonic bandgap fiber polarization controller** [7753-220]
M. Pang, W. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China); Y. Yang, BeiHang Univ. (China)
- 7753 3Z **Sensing characteristics of birefringent microstructured polymer optical fiber** [7753-295]
M. K. Szczurowski, Wroclaw Univ. of Technology (Poland); O. Frazão, J. M. Baptista, INESC Porto (Portugal); K. Nielsen, O. Bang, Technical Univ. of Denmark (Denmark); W. Urbańczyk, Wroclaw Univ. of Technology (Poland)
- 7753 40 **Thermo-optic effect of an index guiding photonic crystal fiber with elastomer inclusions** [7753-367]
C. Markos, National Hellenic Research Foundation (Greece) and Univ. of Patras (Greece); K. Vlachos, Univ. of Patras (Greece); G. Kakarantzas, National Hellenic Research Foundation (Greece)
- 7753 41 **Liquid crystal orientation control in photonic liquid crystal fibers** [7753-394]
M. S. Chychłowski, E. Nowinowski-Kruszelnicki, T. R. Woliński, Warsaw Univ. of Technology (Poland) and Military Univ. of Technology (Poland)
- 7753 42 **Index guiding photonic liquid crystal fibers for application in fiber optic sensing setups** [7753-429]
S. Ertman, M. M. Tefelska, M. S. Chychłowski, Warsaw Univ. of Technology (Poland); D. Pysz, Institute of Electronics Materials Technology (Poland); R. Buczyński, Univ. of Warsaw (Poland); E. Nowinowski-Kruszelnicki, R. Dąbrowski, Military Univ. of Technology (Poland); T. R. Woliński, Warsaw Univ. of Technology (Poland)
- 7753 43 **Photonic crystal fiber integrated microfluidic chip for highly sensitive real-time chemical sensing** [7753-38]
D. Z. Y. Yong, A*STAR Singapore Institute of Manufacturing Technology (Singapore) and Nanyang Technological Univ. (Singapore); X. Yu, A*STAR Singapore Institute of Manufacturing Technology (Singapore); C. C. Chan, Nanyang Technological Univ. (Singapore); Y. Zhang, A*STAR Singapore Institute of Manufacturing Technology (Singapore); P. Shum, Nanyang Technological Univ. (Singapore)
- 7753 44 **Photonic crystal fiber couplers based on large mode area fibers** [7753-179]
P. Marć, K. Stasiewicz, L. R. Jaroszewicz, T. Nasitowski, M. Szymański, Military Univ. of Technology (Poland)
- 7753 45 **Enhancing the sensitivity of liquid refractive index sensor based on slow light photonic crystal waveguide** [7753-307]
Y. Zhao, H. Huang, Q. Wang, Northeastern Univ. (China)

- 7753 46 **Hybrid photonic crystal fiber sensing of high hydrostatic pressure** [7753-343]
M. A. R. Franco, Instituto Tecnológico de Aeronáutica (Brazil) and Instituto de Estudos Avançados (Brazil); V. A. Serrão, Instituto de Estudos Avançados (Brazil); T. R. Pitarello, Instituto Tecnológico de Aeronáutica (Brazil); A. Cerqueira S., Jr., Univ. Estadual de Campinas (Brazil)
- 7753 47 **Intensity-modulated temperature sensor based on the photonic crystal fibers filled with magnetic fluid** [7753-270]
Y. Miao, Y. Liu, Tianjin Univ. of Technology (China); B. Liu, Nankai Univ. (China); K. Zhang, Tianjin Univ. of Technology (China); H. Zhang, Q. Zhao, Nankai Univ. (China)
- 7753 48 **Colloidal photonic crystals self-assembled onto the optical fiber substrates** [7753-51]
M. Wang, Nanjing Normal Univ. (China); W. Guo, Nanjing Normal Univ. (China) and Changshu Institute of Technology (China); H. Yan, L. Dai, Nanjing Normal Univ. (China)
- 7753 49 **Bending effect on fiber optic evanescent absorption sensor for sensitivity enhancement in hetero-core structured fiber optic** [7753-127]
Y. Takamoto, A. Seki, K. Takagi, H. Sasaki, M. Nishiyama, K. Watanabe, Soka Univ. (Japan)
- 7753 4A **Multimodal interference based on large-core air-clad photonic crystal fibres for simultaneous measurement of multiparameters** [7753-365]
S. Silva, J. L. Santos, INESC Porto (Portugal) and Univ. do Porto (Portugal); F. X. Malcata, Instituto Superior da Maia (Portugal) and Ctr. Interdisciplinar Investigação Marinha e Ambiental (Portugal); J. Kobelke, K. Schuster, IPHT Jena (Germany); O. Frazão, INESC Porto (Portugal)
- 7753 4B **Wearable motion capturing with the flexing and turning based on a hetero-core fiber optic stretching sensor** [7753-195]
Y. Koyama, M. Nishiyama, K. Watanabe, Soka Univ. (Japan)
- 7753 4D **A hetero-core fiber optic smart mat sensor for discrimination between a moving human and object on temporal loss peaks** [7753-192]
A. Hosoki, M. Nishiyama, Y. Choi, K. Watanabe, Soka Univ. (Japan)
- 7753 4E **Detection of soil gravity water with hetero-core optical fiber sensor** [7753-275]
N. Kumekawa, K. Watanabe, Soka Univ. (Japan)
- 7753 4F **Effect of doping swelling polymer cladding with phthalocyanine dye in plastic optical fiber humidity sensors** [7753-40]
M. Morisawa, H. Yokomori, Univ. of Yamanashi (Japan)
- 7753 4G **Low-cost, non-contact displacement sensor based on plastic fiber bundle** [7753-167]
D. Tosi, A. Neri, G. Perrone, A. Vallan, Politecnico di Torino (Italy)
- 7753 4H **Self-repairing polymer optical fiber sensor** [7753-249]
Y. Song, K. Peters, North Carolina State Univ. (United States)
- 7753 4I **Twisted optical microfiber for refractive index sensing** [7753-293]
C. Liao, D. Wang, X. He, M. Yang, The Hong Kong Polytechnic Univ. (Hong Kong, China)

- 7753 4J **Bend sensors based on periodically tapered soft glass fibers** [7753-181]
Y. Wang, Univ. of Southampton (United Kingdom) and Harbin Engineering Univ. (China);
D. Richardson, G. Brambilla, X. Feng, M. Petrovich, M. Ding, Z. Song, Univ. of Southampton
(United Kingdom)
- 7753 4K **Effects of aluminum doping concentrations on radiation sensitivity of erbium-doped fibers**
[7753-395]
T.-S. Peng, Y.-C. Hsieh, L. A. Wang, National Taiwan Univ. (Taiwan); W.-C. Chiou, R.-Y. Liu,
National Space Organization (Taiwan)
- 7753 4L **Endoscopic optical coherence elastography using acoustic radiation force and bending
vibration of optical Fiber** [7753-54]
R. Isago, K. Nakamura, Tokyo Institute of Technology (Japan)
- 7753 4M **Fiber optic confocal microscopy using a miniaturized needle-compatible imaging probe**
[7753-470]
R. S. Pillai, D. Lorensen, D. D. Sampson, The Univ. of Western Australia (Australia)
- 7753 4N **Temperature monitoring of superconducting wire for quench detection** [7753-197]
K. Omichi, Y. Terada, A. Sakamoto, R. Yamauchi, Fujikura Ltd. (Japan)
- 7753 4O **Ferrule-top cantilever optical fiber sensor for velocity measurements of low speed air flows**
[7753-212]
A. Cipullo, Second Univ. of Naples (Italy); G. Gruca, K. Heeck, Vrije Univ. (Netherlands);
F. De Filippis, Italian Aerospace Research Ctr. (Italy); D. Iannuzzi, Vrije Univ. (Netherlands);
L. Zeni, Second Univ. of Naples (Italy)
- 7753 4P **In situ monitoring of carbon dioxide emissions from a diesel engine using a mid-infrared
optical fibre sensor** [7753-262]
E. Lewis, J. Clifford, C. Fitzpatrick, G. Dooly, Univ. of Limerick (Ireland); W. Zhao, T. Sun,
K. Grattan, The City Univ. (United Kingdom); J. Lucas, Univ. of Liverpool (United Kingdom);
M. Degner, H. Ewald, Univ. Rostock (Germany); S. Lochmann, G. Bramann, Hochschule
Wismar (Germany); E. Merlone-Borla, F. Gili, Ctr. Ricerche Fiat S.C.p.A. (Italy)
- 7753 4Q **Low concentration fluorescence sensing in suspended-core fibers** [7753-427]
E. P. Schartner, H. Ebendorff-Heidepriem, T. M. Monro, The Univ. of Adelaide (Australia)
- 7753 4R **Modeling of polarization mode coupling involved in a capillary optical fibre sensor**
[7753-180]
C. Paré, S. Caron, P. Paradis, A. Proulx, INO (Canada)
- 7753 4S **Magnetic field sensing using D-fiber coupled Bi:RIG slab** [7753-246]
B. Shreeve, R. Selfridge, S. Schultz, Brigham Young Univ. (United States); C. Gaeta, R. Forber,
IPITEK, Inc. (United States)
- 7753 4T **Biosensor application of resonance coupling to thin film planar waveguides on
side-polished optical fiber** [7753-312]
W. Ecke, Institut für Photonische Technologien e.V. (Germany); A. Andreev, Institute of Solid
State Physics (Bulgaria); A. Csaki, K. Kirsch, K. Schroeder, T. Wieduwilt, R. Willsch, Institut für
Photonische Technologien e.V. (Germany)

7753 4U **Distance displacement measurement with two-photon absorption process in Si-APD and high-speed optical millimeter wave scanner** [7753-349]
Y. Tanaka, D. Meguro, N. Endo, T. Kurokawa, Tokyo Univ. of Agriculture and Technology (Japan)

7753 4V **Stress monitoring in a maxilla model and dentition** [7753-418]
M. S. Milczewski, Brazilian Dentistry Association, Parana (Brazil); H. J. Kalinowski, J. C. C. da Silva, Federal Univ. of Technology (Brazil); I. Abe, Institute of Nanostructures, Nanomodelling and Nanofabrication (Portugal); A. Simões, Univ. de Aveiro (Portugal); A. Saga, Brazilian Dentistry Association, Parana (Brazil)

Part 2

7753 4W **Development of an integrated fibre optic sensing network for a composite rudder** [7753-189]
C. Davis, I. Grabovac, Defence Science and Technology Organisation (Australia); R. Crane, Naval Surface Warfare Ctr. (United States); C. Ratcliffe, U.S. Naval Academy (United States)

7753 4X **Fibre optic sensors for high speed hypervelocity impact studies and low velocity drop tests** [7753-231]
D. A. Jackson, M. J. Cole, M. J. Burchell, Univ. of Kent (United Kingdom); D. J. Webb, Aston Univ. (United Kingdom)

7753 4Y **Evanescent-wave fiber optic sensor: on power transfer from core-cladding interface to fiber end-face** [7753-245]
Y. Chiniforooshan, J. Ma, W. J. Bock, Univ. du Québec en Outaouais (Canada)

7753 4Z **Influence of the lamination process on the strain sensitivity of the fiber sensors embedded in composite materials** [7753-410]
P. Lesiak, Warsaw Univ. of Technology (Poland); G. Rajan, Y. Semenova, G. Farrell, Dublin Institute of Technology (Ireland); A. Boczkowska, D. Budaszewski, M. Szeląg, A. Domański, T. Woliński, Warsaw Univ. of Technology (Poland)

7753 50 **Numerical modelling of imaging fibre bundles and their application in optical coherence tomography** [7753-454]
A. Saglam, H. D. Ford, R. P. Tatam, Cranfield Univ. (United Kingdom)

7753 51 **A dynamic fiber optic strain and power change sensor** [7753-32]
S. Liehr, K. Krebber, BAM Federal Institute for Materials Research and Testing (Germany)

7753 52 **Highly sensitive fiber optic inclinometer: easy to transport and easy to install** [7753-43]
P. Lenke, M. Wendt, K. Krebber, BAM Federal Institute for Materials Research and Testing (Germany); R. Glötzl, Glötzl Gesellschaft für Baumesstechnik mbH (Germany)

7753 53 **Linear-core-array optical fiber based laser beam shape convertor** [7753-48]
L. Yuan, X. Zhu, A. Zhou, Q. Dai, F. Tian, Harbin Engineering Univ. (China)

- 7753 54 **Launching the excitation light to a taper externally: comprehensive performance improvement of fiber optic evanescent-wave sensor** [7753-52]
H. Chen, China Jiliang Univ. (China); J. Ma, W. J. Bock, Univ. du Québec en Outaouais (Canada)
- 7753 55 **An improved radiometric wavelength measurement system incorporating fibre comb filters fabricated by CO₂ laser irradiation** [7753-171]
P. Wang, Univ. of Southampton (United Kingdom) and Dublin Institute of Technology (Ireland); G. Brambilla, M. Ding, Y. Wang, Univ. of Southampton (United Kingdom); Y. Semenova, Q. Wu, L. Bo, G. Farrell, Dublin Institute of Technology (Ireland)
- 7753 56 **Turbidity sensor for determination of concentration, ash presence and particle diameter of sediment suspensions** [7753-232]
L. Bilro, S. Prats, J. L. Pinto, J. J. Keizer, Univ. de Aveiro (Portugal); R. N. Nogueira, Instituto de Telecomunicações (Portugal)
- 7753 57 **Fiber ringdown breathing rate sensor** [7753-257]
Z. Chen, H. Yim, J. T. Teo, S. H. Ng, A*STAR Institute for Infocomm Research (Singapore)
- 7753 58 **Optical fiber ferrule-top sensor for humidity measurements** [7753-324]
G. Gruca, J. Rector, K. Heeck, D. Iannuzzi, Vrije Univ. Amsterdam (Netherlands)
- 7753 59 **Micro fluidic channel actuator using optical force induced by evanescent field material coupling** [7753-390]
H. Choi, W. Ha, M. Park, K. Oh, Yonsei Univ. (Korea, Republic of)
- 7753 5A **Hydrazine concentration fiber optic reversible sensor** [7753-421]
A. Andrawis, Y. Peng, X. Yan, B. Ranjithkar, South Dakota State Univ. (United States)
- 7753 5B **Composite cavity fiber laser sensor based on feedback modulation** [7753-387]
J. Zhang, Y. Ge, Q. Cai, Q. Hao, Q. Li, W. Sun, L. Yuan, Harbin Engineering Univ. (China); P. Lu, Communications Research Ctr. Canada (Canada); G. D. Peng, The Univ. of New South Wales (Australia)
- 7753 5C **Highly sensitive refractive index sensor based on cladding mode interference in microtapered SMF** [7753-441]
S. M. Tripathi, A. Kumar, Indian Institute of Technology (India); E. Marin, J.-P. Meunier, Lab. Hubert Curien, CNRS, Univ. Lyon and Univ. Jean Monnet Saint-Etienne (France)
- 7753 5D **Structural bending sensor with temperature insensitivity based on a single polarization fiber** [7753-27]
M.-S. Yoon, O.-J. Kwon, H.-J. Kim, S. Chu, Y.-G. Han, Hanyang Univ. (Korea, Republic of)
- 7753 5E **High-speed focusing of a liquid microlens using acoustic radiation force** [7753-58]
D. Koyama, R. Isago, K. Nakamura, Tokyo Institute of Technology (Japan)
- 7753 5F **Refractive index measurement by using multimode interference** [7753-439]
Y. X. Jin, China Jiliang Univ. (China); C. C. Chan, Nanyang Technological Univ. (Singapore); Y. Zhao, X. Y. Dong, China Jiliang Univ. (China)

- 7753 5G **The use of a bent singlemode-multimode-singlemode (SMS) fiber structure for vibration sensing** [7753-174]
Q. Wu, Y. Semenova, P. Wang, G. Farrell, Dublin Institute of Technology (Ireland)
- 7753 5H **Investigation of single mode polarization-maintaining fibres for directional transverse force measurement** [7753-185]
M. Karimi, City Univ. London (United Kingdom) and Azad Univ. (United Kingdom); F. Surre, T. Sun, K. T. V. Grattan, City Univ. London (United Kingdom); P. Fonjallaz, Acreo AB (Sweden)
- 7753 5I **Measurement of sucrose and ethanol concentrations in process streams and effluents of sugarcane bioethanol industry by optical fiber sensor** [7753-219]
E. Fujiwara, E. Ono, T. P. Manfrim, J. S. Santos, C. K. Suzuki, Univ. Estadual de Campinas (Brazil)
- 7753 5J **Ultra fast all-optical fiber pressure sensor for blast event evaluation** [7753-225]
N. Wu, W. Wang, Y. Tian, C. Niezrecki, X. Wang, Univ. of Massachusetts Lowell (United States)
- 7753 5K **Fibre optic pressure sensor system for high temperature exhaust gas flows** [7753-247]
K. Bremer, E. Lewis, G. Leen, B. Moss, J. Leen, Univ. of Limerick (Ireland); S. Lochmann, I. Mueller, Hochschule Wismar (Germany)
- 7753 5L **Design of a polarization-insensitive optical fiber probe based on effective parameters** [7753-258]
T.-T.-H. Pham, Y.-L. Lo, National Cheng Kung Univ. (Taiwan)
- 7753 5M **Enabling low-cost, high-performance vapor-phase TNT detection by optimizing multimode fiber sensing platform** [7753-283]
J. Ma, A. Kos, W. J. Bock, Univ. du Québec en Outaouais (Canada); X. Li, H. Nguyen, Z. Y. Wang, Carleton Univ. (Canada)
- 7753 5N **Remote ice detection system for on-board applications based on fiber optics** [7753-323]
M. Ruiz-Llata, P. Acedo, Univ. Carlos III de Madrid (Spain)
- 7753 5O **Fiber optic rotational seismic system for investigation of the rotational events** [7753-403]
L. R. Jaroszewicz, Z. Krajewski, Military Univ. of Technology (Poland); J. Kowalski, m-Soft Ltd. (Poland); P. Zinówko, Elproma Electronics Ltd. (Poland)
- 7753 5P **Three-component all polarization-maintaining optical fiber vector hydrophone** [7753-436]
J. Wang, H. Luo, Z. Meng, Y. Hu, National Univ. of Defense Technology (China)
- 7753 5Q **Improving optical fiber current sensor accuracy using artificial neural networks to compensate temperature and minor non-ideal effects** [7753-448]
A. C. Zimmermann, M. Besen, L. S. Encinas, Univ. Federal de Santa Catarina (Brazil)
R. Nicolodi, Centrais Elétricas de Santa Catarina S.A. (Brazil)
- 7753 5R **Long-gauge strain sensors for underwater and deep-water applications** [7753-468]
D. Inaudi, Smartec S.A. (Switzerland)
- 7753 5S **Characterization of tapered polymer optical fibers under side illumination for fluorescence sensing applications** [7753-59]
C. Pulido, Ó. Esteban, Univ. de Alcalá de Henares (Spain)

- 7753 5T **Optical characterisation of RF sputter coated palladium thin films for hydrogen sensing** [7753-405]
R. M. Carter, Heriot-Watt Univ. (United Kingdom); P. Morrall, AWE plc (United Kingdom); R. R. J. Maier, Heriot-Watt Univ. (United Kingdom); B. J. S. Jones, S. McCulloch, AWE plc (United Kingdom); J. S. Barton, Heriot-Watt Univ. (United Kingdom)
- 7753 5U **Design and optimization of an optical refractometer for remote measurements via fiber optic cables** [7753-430]
S. Khotiaintsev, C. E. García-Guerra, J. E. Morales-Farah, S. Perez-Garcia, L. E. Yam-Ontiveros, Univ. Nacional Autónoma de México (Mexico)
- 7753 5V **Stripping and splicing polyimide-coated fibers** [7753-129]
D. Duke, AFL Telecommunications LLC (United States); Y. Kanda, K. Tobita, R. Yamauchi, Fujikura Ltd. (Japan)
- 7753 5W **Mode field analysis of eccentric optical fibers by conformal mapping** [7753-356]
C. Guan, L. Yuan, F. Tian, Q. Dai, X. Tian, Harbin Engineering Univ. (China)
- 7753 5X **Twin-half hollow elliptical core polarization-maintaining fiber for polarization state selective sensing** [7753-393]
C. Liu, L. Wang, Z. Liu, Q. Dai, F. Tian, L. Yuan, Harbin Engineering Univ. (China)
- 7753 5Y **A compact fiber optic accelerator** [7753-42]
F. Peng, X. Li, B. Wu, Y. Yuan, J. Yang, L. Yuan, Harbin Engineering Univ. (China)
- 7753 5Z **In-fiber integrated accelerator** [7753-284]
F. Peng, X. Li, B. Wu, Y. Yuan, J. Yang, L. Yuan, Harbin Engineering Univ. (China)
- 7753 60 **Optical path correlator for low-coherence multiplexing fiber optic sensor** [7753-49]
Y. Yuan, B. Wu, J. Yang, L. Yuan, Harbin Engineering Univ. (China)
- 7753 61 **Highly sensitive optical fiber oxygen sensor based on dye entrapped core-shell silica nanoparticles** [7753-239]
C.-S. Chu, Ming Chi Univ. of Technology (Taiwan); Y.-L. Lo, T.-W. Sung, National Cheng Kung Univ. (Taiwan)
- 7753 62 **Characteristics of hydrogen gas sensor based on a wavelength division multiplexing fiber coupler** [7753-260]
K. S. Park, J. B. Eom, M.-S. Park, Y. H. Kim, S. J. Park, J.-H. Jang, B. H. Lee, Gwangju Institute of Science and Technology (Korea, Republic of)
- 7753 63 **Fiber optic sensors for monitoring a concrete beam high strain bending test** [7753-266]
M. Bravo, Univ. Pública de Navarra (Spain); J. Sáenz, M. Bravo-Navas, Eurocontratas S.A. (Spain); M. López-Amo, Univ. Pública de Navarra (Spain)
- 7753 64 **Radiation-resistance technology for broadband fiber optic source** [7753-389]
Y. Yang, X. Suo, M. Yang, X. Shi, W. Jin, BeiHang Univ. (China)

- 7753 65 **Construction optimization of the sensors used in point fluorescence investigation of cancer-changed tissues** [7753-344]
L. Kłonowski, E. Bereś-Pawlik, Wrocław Univ. of Technology (Poland); M. Rząca, R. Czarnecki, Regional Specialised Hospital (Poland)
- 7753 66 **CO₂ phase study using an optical fiber refractometer** [7753-415]
D. Prada, Pontificia Univ. Católica do Rio de Janeiro (Brazil); C. Martelli, Federal Univ. of Technology (Brazil); C. C. Kato, A. M. B. Braga, M. S. P. Gomes, Pontificia Univ. Católica do Rio de Janeiro (Brazil)
- 7753 67 **Low loss arc splicing of silica microfibers** [7753-434]
C.-D. Chang, S.-M. Chuo, L. A. Wang, National Taiwan Univ. (Taiwan)
- 7753 68 **Performance characterization of an intensity-modulated fiber optic displacement sensor** [7753-13]
E. A. Moro, Univ. of California, San Diego (United States) and Los Alamos National Lab. (United States); M. D. Todd, Univ. of California, San Diego (United States); A. D. Puckett, Los Alamos National Lab. (United States)
- 7753 69 **Fiber optic hydrogen sensor resisting temperature interference** [7753-16]
Y. Zhang, Q. S. Li, Z. Zhuang, Institute of Structural Mechanics (China); M. Zhang, Z. Yang, Y. B. Liao, Tsinghua Univ. (China)
- 7753 6A **Light scattering measurements for quantifying biological cell concentration: an optimization of opto-geometric parameters** [7753-70]
A. G. Mignani, L. Ciaccheri, A. A. Mencaglia, Istituto di Fisica Applicata Nello Carrara, CNR (Italy); L. Giannelli, Hospitex Diagnostics srl (Italy)
- 7753 6B **High pressure measurement by nonadiabatic tapered optical fiber sensor for downhole application** [7753-209]
M. I. Zibaii, H. Latifi, M. Kheiri, H. Pourbeyram, S. Nouri Joubari, A. Ahmadlou, M. Karami, Shahid Beheshti Univ. (Iran, Islamic Republic of)
- 7753 6C **Nonadiabatic tapered optical fiber sensor for measuring interaction nicotine with DNA** [7753-200]
M. I. Zibaii, H. Latifi, H. Pourbeyram, M. Gholami, Z. Taghipour, Z. Saeedian, S. M. Hosseini, Shahid Beheshti Univ. (Iran, Islamic Republic of)
- 7753 6D **Spectral intensities and phase distributions of supercontinuum pulses generated in low-dispersion fibers** [7753-294]
H. Sone, Kitami Institute of Technology (Japan); D. Yoshitomi, X. Zhou, National Institute of Advanced Industrial Science and Technology (Japan) and Japan Science and Technology Agency (Japan); K. Kikuchi, R. Kasahara, Ibaraki Univ. (Japan); F. Abrishamian, Osaka Electro-Communication Univ. (Japan); S. Nakamura, Ibaraki Univ. (Japan); Y. Harada, Kitami Institute of Technology (Japan); K. Torizuka, National Institute of Advanced Industrial Science and Technology (Japan) and Japan Science and Technology Agency (Japan)
- 7753 6E **Optical fibers and sensors for biomedical applications: bend effects** [7753-304]
S. A. Wade, A. C. Thompson, W. G. A. Brown, D. F. Robertson, P. R. Stoddart, Swinburne Univ. of Technology (Australia)

- 7753 6F **Measurement of the velocities in the transient acceleration process using all-fiber photonic Doppler velocimetry** [7753-460]
J. Wang, C. Wu, Beijing Jiaotong Univ. (China); H. Song, Institute of Mechanics (China); T. Yu, J. Xu, Beijing Jiaotong Univ. (China)
- 7753 6G **Two-beam fiber laser Doppler velocimeter enabling velocity distribution measurement of liquid flow** [7753-306]
A. L. Bin Muhamad, A. Ugajin, O. Mikami, Tokai Univ. (Japan); T. Okazaki, Y. Yoshikuni, Kitasato Univ. (Japan)
- 7753 6H **Induction heating assisted optical fiber bonding and sealing technique** [7753-334]
P. Niewczas, G. Fusiek, Univ. of Strathclyde (United Kingdom)

PCF SENSORS

- 7753 6I **DNA probe detection within 3D hydrogel matrix in a hollow core photonic crystal fibre** [7753-417]
M. Rutowska, J. Lu, F. C. Garcia-Gunning, A. D. Ellis, Tyndall National Institute (Ireland) and Univ. College Cork (Ireland)
- 7753 6J **Introduction of birefringence into photonic crystal fibers** [7753-221]
J. Ju, W. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China); Y. Yang, BeiHang Univ. (China)
- 7753 6K **High performance interrogation of long period fiber grating sensor with wavelength scanning and Fourier analysis** [7753-184]
A. Wada, S. Tanaka, N. Takahashi, National Defense Academy (Japan)
- 7753 6L **Liquid crystal long-period fiber grating as a sensing element for electric field and temperature measurements** [7753-472]
A. Czaplá, Univ. du Québec en Outaouais (Canada) and Warsaw Univ. of Technology (Poland); W. J. Bock, Univ. du Québec en Outaouais (Canada); T. R. Woliński, Warsaw Univ. of Technology (Poland); R. Dąbrowski, E. Nowinowski-Kruszelnicki, Military Univ. of Technology (Poland)

FBG SENSORS

- 7753 6M **Regenerated draw tower grating (DTG) temperature sensors** [7753-37]
E. Lindner, IPHT Jena (Germany) and FBGS Technologies GmbH (Germany); J. Canning, The Univ. of Sydney (Australia); C. Chojetzki, FBGS Technologies GmbH (Germany); S. Brückner, M. Becker, M. Rothhardt, H. Bartelt, IPHT Jena (Germany)
- 7753 6N **Femtosecond laser inscribed Bragg sensor in Terfenol-D coated optical fibre with ablated microslot for the detection of static magnetic fields** [7753-237]
G. N. Smith, T. Allsop, Aston Univ. (United Kingdom); K. Kalli, C. Koutsides, Cyprus Univ. of Technology (Cyprus); R. Neal, Univ. of Plymouth (United Kingdom); K. Sugden, Aston Univ. (United Kingdom); P. Culverhouse, Univ. of Plymouth (United Kingdom); I. Bennion, Aston Univ. (United Kingdom)

- 7753 6O **Transverse load sensing with a tilted fiber Bragg grating compressed between conforming elastomers** [7753-06]
L.-Y. Shao, Carleton Univ. (Canada) and China Jiliang Univ. (China); J. Albert, Carleton Univ. (Canada)
- 7753 6P **Experimental validation of a numerically determined multi-axial strain transfer from CFRP-laminates to embedded Bragg sensors** [7753-233]
G. Luyckx, E. Voet, N. Lammens, W. De Waele, J. Degrieck, Univ. Gent (Belgium)
- 7753 6Q **Numerical modeling of complex femtosecond laser inscribed fiber gratings: comparison with experiment** [7753-238]
C. Koutsides, Cyprus Univ. of Technology (Cyprus) and Aston Univ. (United Kingdom); K. Kalli, Cyprus Univ. of Technology (Cyprus); D. J. Webb, L. Zhang, Aston Univ. (United Kingdom)
- 7753 6R **Regenerated fibre Bragg gratings used to map internal reaction temperatures of a modified chemical vapour deposition (MCVD) optical fibre preform lathe** [7753-303]
M. L. Åslund, The Univ. of Sydney (Australia); A. Canagasabay, Y. Liu, The Univ. of New South Wales (Australia); K. Cook, J. Canning, The Univ. of Sydney (Australia); G.-D. Peng, The Univ. of New South Wales (Australia)

MULTIMODE EFFECTS

- 7753 6S **The use of fibre optic sensors to compare the internal strains and pressures produced by different Lamb wave modes** [7753-450]
G. Thursby, B. Culshaw, Univ. of Strathclyde (United Kingdom)
- 7753 6T **Utilisation of thermal annealing to record multiplexed FBG sensors in multimode microstructured polymer optical fibre** [7753-327]
I. P. Johnson, D. J. Webb, Aston Univ. (United Kingdom); K. Kalli, Cyprus Univ. of Technology (Cyprus)
- 7753 6U **Target delivery to sensors by using generated uniform three fiber pseudo Bessel beams from one source** [7753-381]
J. Kim, S. Lee, Y. Jeong, K. Oh, Yonsei Univ. (Korea, Republic of)
- 7753 6V **Development of a FBG vortex flow sensor for high-temperature applications** [7753-400]
L. K. Cheng, W. Schiferli, R. A. Nieuwland, TNO Science and Industry (Netherlands); A. Franzen, J. J. den Boer, Shell International Exploration and Production (Netherlands); T. H. Jansen, TNO Science and Industry (Netherlands)

BIOMEDICAL APPLICATIONS

- 7753 6W **3D visualization of tissue microstructures using optical coherence tomography needle probes** [7753-469]
R. W. Kirk, R. A. McLaughlin, B. C. Quirk, A. Curatolo, D. D. Sampson, The Univ. of Western Australia (Australia)
- 7753 6X **Fiber-based broadband ultrasound detector for photoacoustic imaging** [7753-39]
H. Grün, T. Berer, K. Felbermayer, P. Burgholzer, RECENDT GmbH (Austria); G. Paltauf, Karl-Franzens Univ. (Austria)

- 7753 6Y **A novel optical-fiber based surface plasmon resonance sensing architecture and its application to gastric cancer diagnostics** [7753-194]
A. Francois, J. Boehm, M. Penno, P. Hoffmann, T. M. Monro, Univ. of Adelaide (Australia)
- 7753 6Z **Miniature temperature insensitive fiber optic sensors for minimally invasive surgical devices** [7753-216]
G. Rajan, D. Callaghan, Y. Semenova, G. Farrell, Dublin Institute of Technology (Ireland)
- 7753 70 **High sensitivity interferometric polymer optical fiber ultrasound sensors for optoacoustic imaging and biomedical application** [7753-446]
D. Gallego, H. Lamela, Univ. Carlos III de Madrid (Spain)
- 7753 71 **Dynamic analysis for mental sweating of a group of eccrin sweat glands on a human fingertip by optical coherence tomography** [7753-79]
M. Ohmi, M. Tanigawa, Y. Wada, M. Haruna, Osaka Univ. (Japan)

POSTER SESSION: BRAGG GRATINGS, LONG PERIOD GRATINGS, SPECIALIZED GRATINGS

- 7753 72 **Fiber Bragg grating sensor system using single-mode wavelength swept light source** [7753-128]
T. Saitoh, K. Nakamura, H. Furukawa, M. Koshihara, Anritsu Corp. (Japan)
- 7753 73 **Fiber Bragg grating transverse load sensors using suspended core fibers for directional dependent strain measurement** [7753-250]
C. M. Jewart, T. Chen, K. P. Chen, Univ. of Pittsburgh (United States); E. Lindner, J. Fiebrandt, M. Rothhardt, K. Schuster, J. Kobelke, H. Bartelt, IPHT Jena (Germany)
- 7753 74 **Fibre Bragg gratings subject to high strain at high frequencies** [7753-164]
D. A. Jackson, Univ. of Kent (United Kingdom)
- 7753 75 **Displacement monitoring of switch track and its slab on a bridge of high speed railway monitored by FBG** [7753-380]
W. Li, H. Li, J. Cheng, X. Huang, J. Pan, C. Zhou, M. Yang, Wuhan Univ. of Technology (China)
- 7753 76 **Single coherence peak extraction among synthesized periodical peaks by different beat frequencies for elongation of measurement range in multiplexed long-length distributed FBG sensors** [7753-193]
K. Kajiwara, Z. He, K. Hotate, The Univ. of Tokyo (Japan)
- 7753 77 **Fiber Bragg grating interrogator for demonstration of spaceborne applications** [7753-333]
M. R. Rößner, M. S. Müller, T. C. Buck, A. W. Koch, Technische Univ. München (Germany)
- 7753 78 **Magnetic field sensor based on magnetic fluid with side-polished fiber Bragg grating** [7753-55]
J. Dai, M. Yang, Wuhan Univ. of Technology (China)
- 7753 79 **Static and dynamic strain fiber Bragg grating sensor interrogation using a monolithically integrated echelle diffractive grating** [7753-183]
H. Guo, Univ. of Ottawa (Canada); G. Xiao, National Research Council Canada (Canada); N. Mrad, National Defence Headquarters (Canada); J. Yao, Univ. of Ottawa (Canada)

- 7753 7A **Temperature-independent strain sensor based on four-wave mixing using Raman FBG laser sensor with cooperative Rayleigh scattering** [7753-263]
H. F. Martins, M. B. Marques, O. Frazão, INESC Porto (Portugal)
- 7753 7B **Remotely tuneable optical filter based on polymer fibre Bragg grating** [7753-321]
W. Zhang, D. J. Webb, Aston Univ. (United Kingdom); G.-D. Peng, The Univ. of New South Wales (Australia)
- 7753 7C **Free water in fuel sensor using fiber long period grating** [7753-318]
W. Zhang, S. Grice, K. Sugden, I. Bennion, Aston Univ. (United Kingdom)
- 7753 7D **Hydrogen detection in high pressure gas mixtures using a twin hole fibre Bragg grating** [7753-342]
D. Grobnic, S. J. Mihailov, R. B. Walker, G. Cuglietta, C. W. Smelser, Communications Research Ctr. Canada (Canada)
- 7753 7E **Probing of sapphire fiber Bragg gratings using intrinsic black-body radiation** [7753-268]
D. Grobnic, S. J. Mihailov, C. W. Smelser, Communications Research Ctr. Canada (Canada)
- 7753 7F **Benchmark for standard and computationally intelligent peak detection algorithms for fiber Bragg grating sensors** [7753-345]
L. H. Negri, Santa Catarina State Univ. (Brazil); H. J. Kalinowski, Federal Univ. of Technology (Brazil); A. S. Paterno, Santa Catarina State Univ. (Brazil)
- 7753 7G **Optimal design and implementation of a temperature and strain optical transducer using FBGs and fiber taper hybrid structure** [7753-347]
A. Quintela, L. Rodriguez, M. I. Barquin, C. Galindez, M. A. Quintela, J. M. Lopez-Higuera, Univ. de Cantabria (Spain)
- 7753 7H **Application of simultaneous strain and temperature measurement technique using polarization maintaining fiber Bragg grating for distributed sensing based on OFDR** [7753-353]
D. Wada, H. Murayama, The Univ. of Tokyo (Japan); H. Igawa, Japan Aerospace Exploration Agency (Japan); K. Omichi, Fujikura Ltd. (Japan); K. Kageyama, The Univ. of Tokyo (Japan)
- 7753 7I **Fiber Bragg grating interrogation technique for remote sensing (100km) using a hybrid Brillouin-Raman fiber laser** [7753-08]
M. Fernandez-Vallejo, D. Leandro, A. Loayssa, M. Lopez-Amo, Univ. Pública de Navarra (Spain)
- 7753 7J **Polarization-switching FBG interrogator for wavelength-encoded polarization-sensitive measurements** [7753-33]
P. Orr, P. Niewczas, Univ. of Strathclyde (United Kingdom)
- 7753 7K **Microfiber Bragg grating for liquid-level variation sensing** [7753-123]
B. Lin, S. C. Tjin, Nanyang Technological Univ. (Singapore); Y. Zhang, Huazhong Univ. of Science and Technology (China); B. Dong, J. Hao, Institute for Infocomm Research (Singapore)

- 7753 7L **Highly birefringent photonic bandgap Bragg fiber loop mirror for sensing applications** [7753-140]
M. S. Ferreira, J. M. Baptista, INESC Porto (Portugal); P. Roy, R. Jamier, S. Février, Xlim, CNRS, Univ. de Limoges (France); O. Frazão, INESC Porto (Portugal)
- 7753 7M **Fibre Bragg grating vibration transducer based on novel mechanical sensing element for monitoring applications** [7753-156]
S. Andresen, F. K. Nielsen, T. R. Licht, M. N. Rasmussen, M. Kirkelund, Brüel & Kjær Sound & Vibration Measurement A/S (Denmark)
- 7753 7N **Dual-polarization distributed Bragg reflector fiber lasers for hydrostatic pressure measurement** [7753-202]
Y. Zhang, C. Wu, Y.-N. Tan, Dalian Univ. of Technology (China); B.-O. Guan, Jinan Univ. (China)
- 7753 7O **RF-frequency-division multiplexing of polarimetric fiber grating laser sensors** [7753-26]
Y. Zhang, Y.-N. Tan, Dalian Univ. of Technology (China); B.-O. Guan, Jinan Univ. (China)
- 7753 7P **Realization of nano-order static strain resolution in FBG sensors using narrow linewidth tunable laser sources: theoretical analysis** [7753-227]
Q. Liu, Z. He, T. Tokunaga, K. Hotate, The Univ. of Tokyo (Japan)
- 7753 7Q **High-speed full-spectrum fiber Bragg gratings interrogator system and testing** [7753-248]
S. Chadderdon, R. Selfridge, S. Schultz, Brigham Young Univ. (United States); S. Webb, C. Park, K. Peters, M. Zikry, North Carolina State Univ. (United States)
- 7753 7R **A novel FBG-based fence with high sensitivity and low nuisance alarm rate** [7753-112]
H. Wu, Y. Rao, S. Li, X. Lu, Y. Wu, Univ. of Electronic Science and Technology of China (China)
- 7753 7S **A fast response tilted fiber Bragg grating fluid refractometer using an exposed-hole microstructured optical fiber** [7753-125]
G. Wang, J. Liu, Z. Zheng, J. Xiao, J. Zhang, BeiHang Univ. (China)
- 7753 7T **A fast response suspended core fiber optical gas sensor with side-opening and micro-holes configurations** [7753-133]
G. Wang, J. Liu, Z. Zheng, J. Xiao, J. Zhang, BeiHang Univ. (China)
- 7753 7U **FBG-based vibration measurement of rotating structure using optical fiber rotary joint** [7753-126]
N. Takahashi, S. Tanaka, A. Wada, National Defense Academy (Japan)
- 7753 7V **Linearly chirped and weakly tilted fiber Bragg grating edge filters for in-fiber sensor interrogation** [7753-143]
T. Guo, Jinan Univ. (China) and The Hong Kong Polytechnic Univ. (China); H.-Y. Tam, The Hong Kong Polytechnic Univ. (Hong Kong, China); J. Albert, Carleton Univ. (Canada)
- 7753 7W **Fast wavelength-swept dispersion-tuned fiber laser over 500 kHz using a wideband chirped fiber Bragg grating** [7753-196]
S. Yamashita, Y. Takubo, The Univ. of Tokyo (Japan)

- 7753 7X **Etched fiber Bragg grating sensing system thermally assisted for analysis of water- ethanol mixtures** [7753-213]
F. K. Coradin, G. R. C. Possetti, R. C. Kamikawachi, M. Muller, J. L. Fabris, Federal Univ. of Technology (Brazil)
- 7753 7Y **Linear FBG interrogation with a wavelength-swept fiber laser and a volume phase grating spectrometer** [7753-214]
H. Kim, M. Song, Chonbuk National Univ. (Korea, Republic of)
- 7753 7Z **Three parameters simultaneous measurement with a single TFBG** [7753-234]
N. J. Alberto, Univ. de Aveiro (Portugal); C. A. Marques, Instituto de Telecomunicações (Portugal); P. F. Antunes, J. L. Pinto, Univ. de Aveiro (Portugal); R. N. Nogueira, Instituto de Telecomunicações (Portugal)
- 7753 80 **Thermal characterization of FBG strain gauges for the monitoring of the cupola of Duomo di Milano** [7753-310]
A. Cigada, L. Comolli, A. Giussani, F. Roncoroni, F. Zenucchi, Politecnico di Milano (Italy)
- 7753 81 **Performance of a high-temperature sensor based on regenerated fiber Bragg gratings** [7753-328]
D. Barrera, Univ. Politécnic de Valencia (Spain); V. Finazzi, J. Villatoro, ICFO-Institut de Ciències Fotoniques (Spain); S. Sales, Univ. Politécnic de Valencia (Spain); V. Pruneri, ICFO-Institut de Ciències Fotoniques (Spain) and ICREA-Institució Catalana de Recerca i Estudis Avançats (Spain)
- 7753 82 **Strain monitoring in power cables of offshore wind energy plants with femtosecond laser inscribed fibre Bragg gratings** [7753-408]
J. Burgmeier, Technische Univ. Clausthal (Germany); P. Funken, Draka Industrial Cable GmbH (Germany); W. Schade, Technische Univ. Clausthal (Germany) and Fraunhofer Heinrich Hertz Institute (Germany)
- 7753 83 **Resonant hydrophones based on coated fiber Bragg gratings. Part II: experimental analysis** [7753-411]
M. Moccia, M. Consales, Univ. degli Studi del Sannio (Italy); A. Iadicicco, Univ. degli Studi di Napoli Parthenope (Italy); M. Pisco, Univ. degli Studi del Sannio (Italy); M. Giordano, Istituto per i Materiali Compositi e Biomedici, CNR (Italy); A. Cutolo, A. Cusano, Univ. degli Studi del Sannio (Italy)
- 7753 84 **Resonant hydrophones based on coated fiber Bragg gratings. Part I: numerical analysis** [7753-371]
M. Moccia, M. Pisco, A. Cutolo, V. Galdi, A. Cusano, Univ. degli Studi del Sannio (Italy)
- 7753 85 **Impact of hydrogen-induced effects on optical fiber Bragg gratings** [7753-416]
C. Martelli, Federal Univ. of Technology (Brazil); A. Mendez, MCH Engineering LLC (United States); A. L. C. Triques, Petrobras Research Ctr. (Brazil); A. M. B. Braga, Pontificia Univ. Católica do Rio de Janeiro (Brazil); J. Canning, K. Cook, The Univ. of Sydney (Australia); R. Llerena, V. Takahashi, Pontificia Univ. Católica do Rio de Janeiro (Brazil)

- 7753 86 **Miniature fiber Bragg grating strain rosette based on lossless tapers** [7753-420]
D. Viegas, Univ. do Porto (Portugal) and INESC Porto (Portugal); M. C. Navarrete, N. Díaz-Herrera, A. González-Cano, Univ. Complutense de Madrid (Spain); J. L. Santos, Univ. do Porto (Portugal) and INESC Porto (Portugal); F. M. Araújo, INESC Porto (Portugal) and FiberSensing (Portugal)
- 7753 87 **Monitoring the hysteresis effects in the strain-stress curve of carbon fiber reinforced laminates by FBG technology** [7753-424]
H. Zhang, L.C. Pegasus Corp. (United States); M. Ghandehari, A. Sidelev, New York Univ. Polytechnic Institute (United States); R. Bazhanski, Independent Contractor (United States); P. Wang, New York Univ. Polytechnic Institute (United States); J. Xie, J. Zou, L.C. Pegasus Corp. (United States); E. Lui, New York Univ. Polytechnic Institute (United States); D. Li, F. Fang, L.C. Pegasus Corp. (United States); H.-L. Cui, New York Univ. Polytechnic Institute (United States); X. Wang, Univ. of Massachusetts Lowell (United States)
- 7753 88 **Cognitive fiber Bragg grating sensors system based on fiber Fabry-Pérot tunable filter technology** [7753-422]
H. Zhang, L.C. Pegasus Corp. (United States); P. Wang, Polytechnic Institute of NYU (United States); J. Zou, J. Xie, L.C. Pegasus Corp. (United States); H. Cui, Polytechnic Institute of NYU (United States)
- 7753 89 **Response of some pi-phase-shifted Bragg gratings to elevated pressure** [7753-459]
H. K. Bal, N. M. Dragomir, F. Sidiroglou, Victoria Univ. (Australia); S. A. Wade, Swinburne Univ. of Technology (Australia); G. W. Baxter, S. F. Collins, Victoria Univ. (Australia)
- 7753 8B **Fiber Bragg grating microphone system for condition-based maintenance of industrial facilities** [7753-98]
D. Tosi, M. Olivero, G. Perrone, A. Vallan, Politecnico di Torino (Italy)
- 7753 8C **High speed high-resolution fiber Bragg grating sensing system for monitoring of weigh-in-motion devices** [7753-103]
D. Tosi, M. Olivero, G. Perrone, A. Vallan, Politecnico di Torino (Italy)
- 7753 8D **Wheel flat detection in high-speed railway systems using fiber Bragg gratings** [7753-428]
M. L. Filograno, P. Corredera, Consejo Superior de Investigaciones Científicas (Spain); M. Gonzalez-Herraez, Univ. de Alcalá de Henares (Spain); M. Rodríguez-Plaza, A. Andrés-Alguacil, Administrador de Infraestructuras Ferroviarias (Spain)
- 7753 8E **All-fibre twist sensor system based on 45° and 81° tilted fibre gratings** [7753-91]
Z. Yan, A. Adebayo, K. Zhou, L. Zhang, D. Webb, Aston Univ. (United Kingdom)
- 7753 8F **Numerical comparison of peak detection algorithms for the response of FBG in non-homogeneous strain fields** [7753-311]
L. Comolli, A. Micieli, Politecnico di Milano (Italy)
- 7753 8G **Nickel plating of FBG strain sensors for nuclear applications** [7753-330]
M. Perry, P. Niewczas, Univ. of Strathclyde (United Kingdom); M. Johnston, Univ. of Strathclyde (United Kingdom) and EDF Energy plc (United Kingdom); J. Mackersie, Univ. of Strathclyde (United Kingdom)

- 7753 8H **Nonlinear-programming optimized fiber Bragg grating based force-torque-sensor with six degrees of freedom** [7753-453]
M. S. Müller, L. Hoffmann, T. C. Buck, R. Wojtech, A. W. Koch, Technische Univ. München (Germany)
- 7753 8I **Pressure sensor using carbon fiber laminate tube and fiber Bragg grating** [7753-17]
D. Song, J. Zou, J. Xie, L.C. Pegasus Corp. (United States); Z. Chen, Jilin Univ. (China); H. Cui, L.C. Pegasus Corp. (United States)
- 7753 8J **Bragg wavelength-insensitive fiber Bragg grating ultrasound detection system based on a fiber ring laser** [7753-20]
H. Tsuda, National Institute of Advanced Industrial Science and Technology (Japan)
- 7753 8K **Side polished fiber Bragg grating sensor for simultaneous measurement of refractive index and temperature** [7753-261]
Z. Chen, J. Tang, R. Fan, Y. Zhong, J. Zhang, S. Li, Jinan Univ. (China)
- 7753 8L **Fiber Bragg grating cantilever sensor system for fluid flow monitoring with temperature compensation** [7753-406]
P. Lu, Q. Chen, Memorial Univ. of Newfoundland (Canada)
- 7753 8M **Temperature-insensitive 2D tilt sensor with two chirped fiber Bragg gratings** [7753-108]
L. Hu, X. Dong, S. Zhang, S. Jin, China Jiliang Univ. (China); C. C. Chan, Nanyang Technological Univ. (Singapore)
- 7753 8N **100-km long distance FBG vibration sensor based on matching filter demodulation** [7753-161]
J. Hu, National Univ. of Singapore (Singapore); Z. Chen, J. T. Teo, A*STAR Institute for Infocomm Research (Singapore); C. Yu, National Univ. of Singapore (Singapore) and A*STAR Institute for Infocomm Research (Singapore)
- 7753 8O **Hydrogen sensor based on side-polished fiber Bragg gratings coated with thin palladium film** [7753-41]
H. Liu, M. Yang, J. Dai, k. Cao, H. Liao, P. Zhang, Wuhan Univ. of Technology (China)
- 7753 8P **Liquid core fibre Bragg grating based refractive index sensor formed by femtosecond assisted chemical etching technique** [7753-211]
P. Saffari, Z. Yan, K. Zhou, L. Zhang, I. Bennion, Aston Univ. (United Kingdom)
- 7753 8Q **Monitoring the junction temperature of an IGBT through direct measurement using a fiber Bragg grating** [7753-271]
J. P. Bazzo, T. Lukasiewicz, M. Vogt, V. de Oliveira, H. J. Kalinowski, J. C. Cardozo da Silva, Federal Univ. of Technology (Brazil)
- 7753 8R **Fiber Bragg grating sensors embedded in concrete samples for a normalized fire test** [7753-329]
A. Bueno, B. Torres, D. Barrera, P. Calderón, Univ. Politécnica de Valencia (Spain); J. M. Lloris, M. J. López, Instituto Tecnológico de la Construcción (Spain); S. Sales, Univ. Politécnica de Valencia (Spain)

- 7753 8S **Simulation of FBG sensing networks using CDM + SDM** [7753-362]
D. Li, Q. Jiang, Q. Sui, Shandong Univ. (China)
- 7753 8T **FBG sensor system based on wavelength-swept active mode-locking laser with RSOA gain medium** [7753-198]
H.-J. Kim, H. D. Lee, M. Y. Jeong, C.-S. Kim, Pusan National Univ. (Korea, Republic of); J. H. Lee, Univ. of Seoul (Korea, Republic of)
- 7753 8U **Cladding modes FBG curvature sensor based on a core misaligned splice** [7753-383]
C. Jesus, INESC Porto (Portugal) and Univ. da Madeira (Portugal); P. A. S. Jorge, INESC Porto (Portugal); J. M. Baptista, Univ. da Madeira (Portugal) and INESC Porto (Portugal); O. Frazão, INESC Porto (Portugal)
- 7753 8V **Simple CW correlation OTDR for interrogation of multiplexed low-reflectivity FBG sensors** [7753-431]
M. G. Shlyagin, A. Arias, Ctr. de Investigación Científica y de Educación Superior de Ensenada (Mexico)
- 7753 8W **Monitoring of vacuum assisted resin transfer moulding (VARTM) process with superimposed fiber-Bragg gratings** [7753-99]
S. Triollet, Lab. Hubert Curien, CNRS (France), Univ. de Toulouse (France), and Ecole des Mines d'Albi (France); L. Robert, Univ. de Toulouse (France) and Ecole des Mines d'Albi (France); E. Marin, Y. Ouerdane, Lab. Hubert Curien, CNRS (France)
- 7753 8X **870nm Bragg grating in single mode TOPAS microstructured polymer optical fibre** [7753-166]
W. Yuan, Technical Univ. of Denmark (Denmark); D. J. Webb, Aston Univ. (United Kingdom); K. Kalli, Cyprus Univ. of Technology (Cyprus); K. Nielsen, A. Stefani, H. K. Rasmussen, O. Bang, Technical Univ. of Denmark (Denmark)
- 7753 8Y **Acousto-optic control of the LPG spectrum for sensing applications** [7753-223]
R. A. Oliveira, G. R. C. Possetti, Federal Univ. of Technology (Brazil); C. A. F. Marques, Instituto de Telecomunicações (Portugal); P. T. Neves, Jr., Federal Univ. of Technology (Brazil); C. A. Bavastri, Federal Univ. of Paraná (Brazil); R. C. Kamikawachi, J. L. Fabris, M. Muller, Federal Univ. of Technology (Brazil); R. N. Nogueira, Instituto de Telecomunicações (Portugal); J. Canning, The Univ. of Sydney (Australia); A. A. P. Pohl, Federal Univ. of Technology (Brazil)
- 7753 8Z **Tapered long-period fiber gratings working in inverted mode through all-fiber ring shaped illumination** [7753-372]
D. Paladino, Univ. degli Studi del Sannio (Italy); A. Iadicicco, S. Campopiano, Univ. degli Studi di Napoli Parthenope (Italy); A. Cutolo, Univ. degli Studi del Sannio (Italy); W. J. Bock, Univ. du Québec en Outaouais (Canada); A. Cusano, Univ. degli Studi del Sannio (Italy)
- 7753 90 **Response of hydrogel coated cascaded long period gratings to relative humidity** [7753-21]
X. Yu, Heilongjiang Univ. (China) and The Hong Kong Polytechnic Univ. (Hong Kong, China); M. Zhang, Tsinghua Univ. (China); S. Liu, Heilongjiang Univ. (China); Y. Liao, Tsinghua Univ. (China); W. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 91 **Photonic-crystal-fiber-based surface long-period fiber grating for simultaneous measurement of temperature and ambient index** [7753-56]
H.-J. Kim, O.-J. Kwon, S. B. Lee, Y.-G. Han, Hanyang Univ. (Korea, Republic of)

- 7753 92 **Flow cell with hybrid LPG and FBG optical fibre sensor for refractometric measurements** [7753-240]
F. Baldini, M. Brenci, Istituto di Fisica Applicata Nello Carrara, CNR (Italy); F. Chiavaioli, Univ. degli Studi di Siena (Italy); R. Falciai, C. Trono, Istituto di Fisica Applicata Nello Carrara, CNR (Italy)
- 7753 93 **Femtosecond laser inscribed superstructure fibre gratings** [7753-361]
K. Kalli, Cyprus Univ. of Technology (Cyprus); C. Koutsides, Cyprus Univ. of Technology (Cyprus) and Aston Univ. (United Kingdom); E. Davies, Aston Univ. (United Kingdom); M. Komodromos, Frederick Univ. Cyprus (Cyprus); D. J. Webb, L. Zhang, Aston Univ. (United Kingdom)
- 7753 94 **Mechanical stress sensors using micromachined grating fibers** [7753-12]
H. Kumazaki, M. Hiramatsu, H. Oguri, S. Inaba, Gifu National College of Technology (Japan); K. Hane, Tohoku Univ. (Japan)
- 7753 95 **Uncertainties evaluation in optical fiber grating sensor measurements** [7753-106]
G. R. C. Possetti, I. Lourenço, Jr., R. C. Kamikawachi, M. Muller, J. L. Fabris, Univ. Tecnológica Federal do Paraná (Brazil)
- 7753 96 **Strain sensing using long period gratings in microstructured polymer optical fibres** [7753-287]
R. Lwin, A. Argyros, S. G. Leon-Saval, M. C. J. Large, The Univ. of Sydney (Australia)
- 7753 97 **Fabrication and simulation of corrugated long period microfiber gratings** [7753-433]
H.-Y. Wang, S.-M. Chuo, L. A. Wang, National Taiwan Univ. (Taiwan)
- 7753 98 **Pressure and temperature discrimination based on dual-FBG written in microstructured fiber and standard fiber** [7753-22]
C. Wu, Y. Zhang, Dalian Univ. of Technology (China); B.-O. Guan, Jinan Univ. (China)
- 7753 99 **Compact fiber bending sensor based on superimposed gratings** [7753-62]
Y. Liu, X. Dong, L.-Y. Shao, J. Kang, C.-L. Zhao, China Jiliang Univ. (China); C. C. Chan, Nanyang Technological Univ. (Singapore)
- 7753 9A **Refractive index sensitivity of fibre optic long period gratings with SiO₂ nanoparticle based mesoporous coatings** [7753-65]
S. Korposh, S.-W. Lee, Univ. of Kitakyushu (Japan); S. W. James, R. P. Tatam, Cranfield Univ. (United Kingdom)
- 7753 9B **Simultaneous measurement of strain and temperature by using micro-tapered long-period fiber gratings** [7753-69]
M.-S. Yoon, Y.-G. Han, Hanyang Univ. (Korea, Republic of)
- 7753 9C **Demodulation based on a long-period grating in photonic crystal fiber with differential processing for highly birefringent fiber loop mirror temperature sensor** [7753-87]
Y. Wang, C.-L. Zhao, X. Dong, J. Kang, S. Jin, China Jiliang Univ. (China); C. C. Chan, Nanyang Technological Univ. (Singapore)
- 7753 9D **Novel fiber loop mirror pressure sensor using a LPG as demodulation device** [7753-280]
Y. Zhao, H. Wu, Q. Wang, Northeastern Univ. (China)

- 7753 9E **Pressure sensitivity of dual resonant long-period gratings written in boron co-doped optical fiber** [7753-290]
M. Smietana, Univ. du Québec en Outaouais (Canada) and Warsaw Univ. of Technology (Poland); W. J. Bock, P. Mikulic, J. Chen, Univ. du Québec en Outaouais (Canada); R. Wisniewski, Institute of Atomic Energy POLATOM (Poland)
- 7753 9F **Effective tuning of long-period grating refractive-index sensitivity by plasma-deposited diamond-like carbon nano-coatings** [7753-315]
M. Smietana, Univ. du Québec en Outaouais (Canada) and Warsaw Univ. of Technology (Poland); W. J. Bock, P. Mikulic, Univ. du Québec en Outaouais (Canada); J. Szmids, Warsaw Univ. of Technology (Poland)
- 7753 9G **UV inscribed long period gratings with femtosecond ablated axial fibre slots for polarization control** [7753-358]
E. Davies, Aston Univ. (United Kingdom); K. Kalli, C. Koutsides, Cyprus Univ. of Technology (Cyprus); T. Allsop, L. Zhang, Aston Univ. (United Kingdom)
- 7753 9H **Highly refractive index sensitive femtosecond laser inscribed long period gratings** [7753-360]
E. Davies, Aston Univ. (United Kingdom); K. Kalli, Cyprus Univ. of Technology (Cyprus); C. Koutsides, Aston Univ. (United Kingdom) and Cyprus Univ. of Technology (Cyprus); L. Zhang, Aston Univ. (United Kingdom)
- 7753 9I **Multi long-period gratings in a fiber carved and written by using a CO₂ laser for distributed sensing** [7753-373]
Y. Katsuyama, Y. Tokunaga, S. Kasahara, R. Sougen, O. Koyama, M. Yamada, Osaka Prefecture Univ. (Japan)
- 7753 9J **Temperature characteristics of microfiber long-period-gratings fabricated by a femtosecond infrared laser** [7753-391]
J. Ma, W. Jin, L. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 9K **Bending sensitivity of long-period fiber gratings written in polarization-maintaining fiber by CO₂ laser** [7753-397]
J. Zou, Y. Liu, D. Yang, T. Wang, Shanghai Univ. (China)
- 7753 9L **A spectrally and spatially multiplexed LPG sensor system using an InGaAs CCD linear array** [7753-464]
P. E. Balzhiiev, Technical Univ. of Sofia (Bulgaria); W. J. Bock, Univ. du Québec en Outaouais (Canada); T. A. Effimov, Plovdiv Univ. (Bulgaria); P. Mikulic, Univ. du Québec en Outaouais (Canada); R. Arnaudov, Technical Univ. of Sofia (Bulgaria)
- 7753 9M **Highly sensitive refractive index sensor based on two cascaded long period gratings with rotary refractive index modulation** [7753-90]
T. Zhu, Y. Fan, M. Deng, Chongqing Univ. (China); Y. Rao, Univ. of Electronic Science and Technology of China (China) and Chongqing Univ. (China)
- 7753 9N **Long period grating for acoustic wave detection** [7753-206]
J.-O. Gaudron, F. Surre, T. Sun, K. T. V. Grattan, The City Univ. (United Kingdom)

- 7753 9O **Asymmetrical twin-core fiber based long period fiber gratings** [7753-269]
X. Wang, L. Yuan, Harbin Engineering Univ. (China)
- 7753 9P **Strain sensitivity of long period gratings in hollow-core photonic bandgap fibers** [7753-296]
L. Jin, The Hong Kong Polytechnic Univ. (Hong Kong, China) and Jinan Univ. (China); W. Jin, J. Ju, Hong Kong Polytechnic Univ. (Hong Kong, China)
- 7753 9Q **Highly sensitive operation of LPG vibration sensor using bending-induced spectral change** [7753-188]
S. Tanaka, A. Wada, N. Takahashi, National Defense Academy (Japan)
- 7753 9R **Pd-Ag film coated cascaded long period gratings for hydrogen gas sensing** [7753-316]
Z. Yang, Tsinghua Univ. (China); X. Yu, Heilongjiang Univ. (China); X. Chu, M. Zhang, S. Lai, Y. Liao, Tsinghua Univ. (China); Q. Li, Y. Zhang, Z. Zhuang, Institute of Structural Mechanics (China)
- 7753 9S **Simultaneous measurement of temperature, hydrostatic pressure and acoustic signal using a single distributed Bragg reflector fiber laser** [7753-47]
Y.-N. Tan, Y. Zhang, Dalian Univ. of Technology (China); B.-O. Guan, Jinan Univ. (China)

SENSOR CHARACTERIZATION

- 7753 9T **High-birefringent fiber loop mirror with an output port probe for sensing applications** [7753-09]
O. Frazão, R. M. Silva, INESC Porto (Portugal); J. L. Santos, INESC Porto (Portugal) and Univ. do Porto (Portugal)
- 7753 9U **Distributed optical fiber temperature sensor using only anti-Stokes Raman scattering light in a loop configuration** [7753-384]
M. A. Soto, A. Signorini, T. Nannipieri, S. Faralli, G. Bolognini, F. Di Pasquale, Scuola Superiore Sant'Anna (Italy)
- 7753 9V **Impact of Raman scattering and modulation instability on the performances of Brillouin sensors** [7753-226]
S. M. Foaeng, L. Thévenaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
- 7753 9W **Fiber optic ultrasonic probe based on refractive-index modulation in water** [7753-147]
B. Shen, Y. Wada, D. Koyama, R. Isago, Y. Mizuno, K. Nakamura, Tokyo Institute of Technology (Japan)

POST DEADLINE PAPER SESSION

- 7753 A2 **High-repetition-rate distributed Brillouin sensor by correlation domain analysis with differential frequency modulation** [7753-700]
K. Y. Song, Chung-Ang Univ. (Korea, Republic of); M. Kishi, Z. He, K. Hotate, The Univ. of Tokyo (Japan)
- 7753 A3 **Near shot-noise limited performance of an open-loop laser-driven interferometric fiber optic gyroscope** [7753-701]
S. W. Lloyd, M. J. F. Digonnet, S. Fan, Edward L. Ginzton Lab., Stanford Univ. (United States)

- 7753 A4 **Multiplexed interferometric displacement sensing below the laser frequency noise limit**
[7753-702]
T. T.-Y. Lam, D. M. R. Wuchenich, J. H. Chow, D. E. McClelland, D. A. Shaddock, The Australian National Univ. (Australia)
- 7753 A5 **Depletion in a distributed Brillouin fiber sensor: practical limitation and strategy to avoid it**
[7753-703]
L. Thévenaz, S. Foa Leng Mafang, Ecole Polytechnique Fédérale de Lausanne (Switzerland);
J. Lin, Bucknell Univ. (United States)
- 7753 A6 **Distributed fiber beat length, birefringence and differential group delay measurement using BOTDA technique** [7753-704]
S. Xie, Univ. of Ottawa (Canada) and Tsinghua Univ. (China); X. Bao, L. Chen, Univ. of Ottawa (Canada)
- 7753 A7 **An all polymer fibre optic sensor for measuring rapid change in oxygen partial pressure**
[7753-705]
R. Chen, A. D. Farmery, Univ. of Oxford (United Kingdom); A. Obeid, Oxford Optronix Ltd. (United Kingdom); C. E. W. Hahn, Univ. of Oxford (United Kingdom)
- 7753 A8 **High-axial-resolution distributed lateral displacement measurement based on differential pulse-width pair BOTDA** [7753-706]
Y. Dong, X. Bao, L. Chen, Univ. of Ottawa (Canada)

Author Index

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Session Chairs

- 1 A Look Back at Optical Fiber Sensors
Xiaoyi Bao, University of Ottawa (Canada)

- 2 Current Fiber Sensor Applications and Technologies
Jacques Albert, Carleton University (Canada)
- 3 Opening Plenary
Wojtek J. Bock, Université du Québec en Outaouais (Canada)
- 4 Brillouin Sensors
Moshe Tur, Tel Aviv University (Israel)
- 5 Micro- and Nano- Fibers
Anna Grazia Mignani, Istituto di Fisica Applicata Nello Carrara (Italy)
- 6 Sensor Applications
Stephen F. Collins, Victoria University (Australia)
- 7 Rayleigh Techniques and Frequency Domain Sensors
Wolfgang Ecke, IPHT Jena (Germany)
- 8 New Fibers
Manuel Lopez-Amo, Universidad Pública de Navarra (Spain)
- 9 PCF Sensors
Wei Jin, The Hong Kong Polytechnic University (Hong Kong, China)
- 10 FBG Sensors
John Canning, The University of Sydney (Australia)
- 11 Multimode Effects
Geoffrey Cranch, Naval Research Laboratory (United States)
- 12 Biomedical Applications
Kentaro Nakamura, Tokyo Institute of Technology (Japan)
- 13 Sensor Characterization
José Luís Santos, Instituto de Engenharia de Sistemas e Computadores do Porto (Portugal)

Introduction

Dear participants and readers,

It is a great honor and pleasure for us to publish the Proceedings of the 21st International Conference on Optical Fiber Sensors (OFS21), on behalf of the OFS International Steering Committee (ISC), the OFS Technical Program Committee (TPC) and the OFS21 Local Organizing Committee. Since 1983 an OFS Conference has been held approximately every eighteen months, rotating between the Americas, Europe, and Asia - Pacific. This year, for the first time in history, OFS21 was held in Canada in its beautiful and friendly capital – Ottawa.

It is important to realize that OFS has never belonged to a large learned society or a professional organization; our Conference series has been able to flourish for the last 28 years thanks to a large group of dedicated volunteers around the world, to our informal structures such as the ISC and the TPC, and in a large part thanks to your continuous excellent progress in your research activities on fiber optic sensors. Being completely independent, OFS is now widely recognized around the world as a unique technical forum of the highest quality. Thanks to your excellent contributions, we are able to offer you this scientifically interesting and inspiring volume.

This volume contains extended summaries of the papers presented at the Conference, including some from two special workshops held on the Sunday preceding the official opening of the conference. The first workshop was dedicated to the history of optical fiber sensors in pioneering institutions from around the world, with presentations by three of the most senior members of our community; the second was devoted to one of the most active current applications: structural sensing, with papers by prominent researchers in companies active in the field.

As for the regular conference papers, notable trends this year include many works dealing with special fibers and coating materials to add functionality and multi-dimensional sensing modalities, sensors devices that rely on micro- and nano-structured fibers for compactness and higher sensitivities, and fiber sensors for biomedical applications, including imaging with fiber probes and fiber interferometers. Also of note is that fiber gratings remain at the heart of many optical sensor interrogation schemes and are constantly being improved by new fabrication techniques and integration with new fibers and coatings. Finally, distributed sensors are continuing to push the limits of distance and resolution, using both time and frequency domain interrogation, and to add more functionality (parameters), especially in the area of dynamic measurements.

We hope you will enjoy reading these papers as much as we had pleasure in putting them together for you all.

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