PROCEEDINGS OF SPIE

SPIDigitalLibrary.org/conference-proceedings-of-spie

Front Matter: Volume 9634

, "Front Matter: Volume 9634," Proc. SPIE 9634, 24th International Conference on Optical Fibre Sensors, 963401 (29 September 2015); doi: 10.1117/12.2214760

SPIE.

Event: International Conference on Optical Fibre Sensors (OFS24), 2015, Curitiba, Brazil

PROCEEDINGS OF SPIE

24th International Conference on Optical Fibre Sensors

Hypolito J. Kalinowski
José Luís Fabris
Wojtek J. Bock
Editors

28 September–2 October 2015
Curitiba, Brazil

Organized by
Sociedade Brasileira de Micro-Ondas e Optoeletrônica – SBMO (Brazil)
Universidade Tecnológica Federal do Paraná – UTFPR / Grupo de Pesquisa
“Dispositivos Fotônicos e Aplicações” (Brazil)

Sponsored by
Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq (Brazil)
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES (Brazil)

Published by
SPIE

Part One of Two Parts

Volume 9634

Proceedings of SPIE 0277-786X, V. 9634

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

24th International Conference on Optical Fibre Sensors, edited by Hypolito José Kalinowski,
José Luís Fabris, Wojtek J. Bock, Proc. of SPIE Vol. 9634, 963401 · © 2015 SPIE
CCC code: 0277-786X/15/\$18 · doi: 10.1117/12.2214760

Proc. of SPIE Vol. 9634 963401-1

The papers included in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. The papers published in these proceedings reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from this book:

Author(s), "Title of Paper," in *24th International Conference on Optical Fibre Sensors*, edited by Hypolito J. Kalinowski, José Luís Fabris, Wojtek J. Bock, Proceedings of SPIE Vol. 9634 (SPIE, Bellingham, WA, 2015) Article CID Number.

ISSN: 0277-786X

ISBN: 9781628418392

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

SPIE.org

Copyright © 2015, Society of Photo-Optical Instrumentation Engineers.

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$18.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 0277-786X/15/\$18.00.

Printed in the United States of America.

Publication of record for individual papers is online in the SPIE Digital Library.

SPIEDigitalLibrary.org

Paper Numbering: Proceedings of SPIE follow an e-First publication model, with papers published first online and then in print. Papers are published as they are submitted and meet publication criteria. A unique citation identifier (CID) number is assigned to each article at the time of the first publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online, print, and electronic versions of the publication. SPIE uses a six-digit CID article numbering system in which:

- The first four digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc.

The CID Number appears on each page of the manuscript. The complete citation is used on the first page, and an abbreviated version on subsequent pages.

Contents

Part One

xxi	<i>Authors</i>
xxxi	<i>Conference Committees</i>
xxxvii	<i>Introduction</i>
xxxix	<i>Conference Support</i>
xli	<i>Random lasers: history and prospects (9634-500) (Plenary Abstract)</i>
xlili	<i>New frontiers in terahertz technology (9634-501) (Plenary Abstract)</i>
xlvi	<i>Distributed vibration sensing: principles, techniques, and applications (9534-502) (Plenary Abstract)</i>
xlvi	<i>Optical nanofibers: pushing the limit of fiber optical sensors on the nanometer scale (9534-503) (Plenary Abstract)</i>
xlix	<i>Workshop Papers</i>
	<i>Overview of the surface plasmon resonance effect for biosensing applications (9634-504) (Invited Paper)</i>
	<i>Features and advantages of Bloch surface waves on dielectric multilayers: label-free sensing and fluorescence tailoring (9634-505) (Invited Paper)</i>
	<i>Development of a Bloch surface wave label-free and fluorescence sensing platform for early cancer diagnosis (9634-506) (Invited Paper)</i>
	<i>Photonic sensors increase efficiency in electric power systems (9634-512) (Invited Paper)</i>
	<i>Fiber optic current and voltage sensors and their impact on electric power transmission systems (9634-513) (Invited Paper)</i>
	<i>FOS for gas turbine applications: some practical challenges (9634-514) (Invited Paper)</i>
	<i>Perspectives on commercialization of fiber optic current sensors for the electric power industry (9634-515) (Invited Paper)</i>
	<i>Overview of fiber optic distributed acoustic sensing (DAS) in the oil industry: principles, applications, and trends (9634-507) (Invited Paper)</i>
	<i>Next generation specialty optical fibers for oil and gas applications: challenges, advancements, and opportunities (9634-508) (Invited Paper)</i>

Optical sensing under oilfield pressure (9634-509) (Invited Paper)

Petrobras in-field applications of optical fiber sensors (9634-510) (Invited Paper)

Optical fibers for distributed sensor applications (9634-511) (Invited Paper)

lv *OFS-24 Opening and Special Session: International Year of the Light and Light-based Technologies*

DISTRIBUTED SENSING

- 9634 OG **Brillouin analysis with 8.8 km range and 2 cm resolution** [9634-338]
- 9634 OH **Enlargement of measurement range in Brillouin optical correlation domain analysis with high-speed random accessibility using temporal gating scheme for multiple-points dynamic strain measurement** [9634-212]
- 9634 OI **Brillouin optical correlation domain analysis with more than 1 million effective sensing points** [9634-228]
- 9634 OJ **200 km fiber-loop Brillouin distributed fiber sensor using bipolar Golay codes and a three-tone probe** [9634-339]

APPLICATIONS AND TECHNIQUES

- 9634 OK **Fiber optic sensing of magnetic fields utilizing femtosecond laser sculpted microslots and long period gratings coated with Terfenol-D (Invited Paper)** [9634-145]
- 9634 OL **Multi-parameter sensing based on the stimulated Brillouin scattering of higher-order acoustic modes in OAM fiber** [9634-207]
- 9634 OM **Adaptive interferometry for high sensitivity optical fiber sensing** [9634-98]
- 9634 ON **Real time monitoring oxidation of transition metals with long period fiber gratings** [9634-326]
- 9634 OO **High resolution fiber Bragg grating interrogation using a random distributed feedback fiber laser** [9634-193]

SENSORS FOR SMART STRUCTURES

- 9634 OP **Structural health monitoring of composite-based UAVs using simultaneous fiber optic interrogation by static Rayleigh-based distributed sensing and dynamic fiber Bragg grating point sensors (Invited Paper)** [9634-319]
- 9634 OQ **SS316 structure fabricated by selective laser melting and integrated with strain isolated optical fiber high temperature sensor** [9634-159]

- 9634 OR **Gas refractometer based on an S-taper fiber tailored fiber Bragg grating** [9634-170]
- 9634 OS **Novel method of defect identification in bent structures through feature-guided wave detection using fiber Bragg grating sensors** [9634-303]
- 9634 OT **Measuring residual stresses in metallic components manufactured with fibre Bragg gratings embedded by selective laser melting** [9634-150]

BIOLOGICAL AND ENVIROMENTAL SENSING

- 9634 OU **Dispersive Raman spectroscopy for the nondestructive and rapid assessment of honey quality (Invited Paper)** [9634-65]
- 9634 OV **Surface-core fiber gratings** [9634-140]
- 9634 OW **Photothermal effect in gas-filled hollow-core photonic bandgap fiber** [9634-252]
- 9634 OX **DNA aptamer-based fiber optic biosensor for selective and label-free detection of dopamine** [9634-73]
- 9634 OY **Photodecomposition of a target compound detected using an optical fibre long period grating coated with a molecularly imprinted titania thin film** [9634-46]

NEW SENSING CONCEPTS AND APPLICATIONS

- 9634 10 **In-fiber modal interferometer for high sensitivity gas detection** [9634-263]
- 9634 11 **Portable smartphone optical fibre spectrometer** [9634-361]
- 9634 12 **Enhanced Terahertz transmission through 3D non-spherical terajets** [9634-348]
- 9634 13 **Silicon photonics-based laser system for high performance fiber sensing** [9634-27]

MULTIPLEXED AND NETWORKED SENSORS

- 9634 14 **Remote optical sensing network for gas monitoring based on laser spectroscopy over hybrid TDM/WDM-PONs (Invited Paper)** [9634-72]
- 9634 15 **Time and wavelength division multiplexing scheme for ultra-long sensing based on a cavity-modulated random DFB fiber laser** [9634-178]
- 9634 16 **All-fiber ultrasound sensor array implemented by swept frequency interferometry** [9634-185]
- 9634 17 **Vibration measurement of electrical machines using integrated fibre Bragg gratings** [9634-187]

- 9634 18 **Monitoring multiple interferometric sensors multiplexed in a single fiber loop mirror** [9634-168]

BRILLOUIN AND ACOUSTIC SENSING

- 9634 19 **Simultaneous gain and phase profile determination on an interferometric BOTDA (Invited Paper)** [9634-55]
- 9634 1A **Brillouin optical correlation domain reflectometry with temporal gating scheme and apodization scheme** [9634-219]
- 9634 1B **Over 100km long ultra-sensitive dynamic sensing via Gated-OFDR** [9634-266]
- 9634 1C **Distributed acoustic sensing: towards partial discharge monitoring** [9634-260]
- 9634 1D **Differential chirped-pulse pair for sub-meter spatial resolution Brillouin distributed fiber sensing** [9634-218]

SENSING OF PHYSICAL PARAMETERS

- 9634 1E **Two-dimensional optical fibre cantilever accelerometer (Invited Paper)** [9634-210]
- 9634 1F **Optical frequency domain reflectometry based fiber Bragg grating vibration sensor array using sinusoidal current modulation of laser diodes** [9634-214]
- 9634 1G **Curvature sensing using an added-signal in a fiber optic cavity ring-down system** [9634-238]
- 9634 1H **Laboratory investigation of an intensimetric dual FBG-based hybrid voltage sensor** [9634-294]
- 9634 1I **Coherent pulse compression Brillouin dynamic gratings reflectometry for slope-assisted, fast and distributed fiber strain sensing** [9634-275]

MICRO- AND NANO-SENSORS

- 9634 1K **All-fiber photoacoustic gas sensor with graphene nano-mechanical resonator as the acoustic detector** [9634-157]
- 9634 1L **Long high finesse fiber Fabry-Pérot resonators** [9634-107]
- 9634 1M **Fiber optic anemometer based on metal infiltrated microstructured optical fiber inscribed with Bragg grating** [9634-172]
- 9634 1N **Self-assembled periodic patterns on the optical fiber tip by microsphere arrays** [9634-78]

SENSING WITH INTERFEROMETERS

- 9634 1O **Resonator fiber optic gyro with high backscatter-error suppression using two independent phase-locked lasers (Invited Paper)** [9634-331]
- 9634 1P **Ultra-sensitive acoustic fiber sensors utilizing nano-membranes** [9634-152]
- 9634 1Q **Range-resolved signal processing for fibre segment interferometry applied to dynamic long-gauge length strain sensing** [9634-149]
- 9634 1R **Drastic sensitivity enhancement of temperature sensing based on modal interference in plastic optical fibers** [9634-113]
- 9634 1S **A hybrid Michelson-FP interference fiber sensor** [9634-92]

NON-CONVENTIONAL FIBRE SENSORS

- 9634 1T **High power laser and explosive driven shock wave characterization in solids using fiber optic probes (Invited Paper)** [9634-108]
- 9634 1U **Cryogenic temperature monitoring in superconducting power transmission line at CERN with hybrid multi-point and distributed fiber optic sensors** [9634-231]
- 9634 1V **First field demonstration of end-reflection assisted Brillouin analysis for in-service loss monitoring of branched fibers in PONs** [9634-30]
- 9634 1W **In-fiber Michelson interferometer inclinometer** [9634-369]
- 9634 1X **Design of a triangulation based fiber optical distance sensor for application in large rotating machines** [9634-378]

FIBER DEVICES AND SYSTEMS

- 9634 1Y **A method to gather/arrange particles based on thermal convection (Invited Paper)** [9634-125]
- 9634 1Z **Highly birefringent polymer fibers for hydrostatic pressure sensing** [9634-19]
- 9634 20 **All-fiber laser mode-locked by the acousto-optic modulation of a fiber Bragg grating in suspended core fiber** [9634-272]
- 9634 21 **Mach-Zehnder interferometric based on a 5-core fiber** [9634-226]
- 9634 22 **Fast interrogation of fiber Bragg grating sensors using electro-optic dual optical frequency combs** [9634-352]

SENSORS FOR THE LIVING STATE

- 9634 23 **Lab-on-Fiber biosensing for cancer biomarker detection (Invited Paper)** [9634-276]
- 9634 24 **Central arterial pressure assessment with intensity POF sensor** [9634-296]
- 9634 25 **The force magnitude of a human bite precisely measured at the molar intercuspitation using FBG: part II** [9634-310]
- 9634 26 **Detection specificity studies of bacteriophage adhesin-coated long-period grating-based biosensor** [9634-161]
- 9634 27 **In-vivo determination of chewing patterns using FBG and artificial neural networks** [9634-372]
- 9634 28 **Optical fiber biocompatible sensors for monitoring selective treatment of tumors via thermal ablation** [9634-44]
- 9634 29 **Glucose optical fibre sensor based on a luminescent molecularly imprinted polymer** [9634-291]

POST-DEADLINE PAPERS AND CLOSING

- 9634 2A **All Fiber Grating (AFG): a new platform for fiber optic sensing technologies** [9634-399]
- 9634 2B **Very high sensor-density multiplexing using a wavelength-to-time domain reflectometry approach based on a rapidly swept akinetic laser** [9634-411]
- 9634 2C **A distributed acoustic and temperature sensor using a commercial off-the-shelf DFB laser** [9634-400]
- 9634 2D **Intensifying Brillouin distributed fibre sensors using image processing** [9634-403]
- 9634 2E **Reaching the ultimate performance limit given by non-local effects in BOTDA sensors** [9634-407]
- 9634 2F **Demonstration of an advanced fibre laser hydrophone array in Gulf St Vincent** [9634-600]

POSTER SESSION I

- 9634 2G **High sensitive reflection type long period fiber grating biosensor for real time detection of thyroglobulin, a differentiated thyroid cancer biomarker: the Smart Health project** [9634-270]
- 9634 2H **Nanowire humidity optical sensor system based on fast Fourier transform technique** [9634-249]
- 9634 2I **Plastic optical fibre sensor for in-vivo radiation monitoring during brachytherapy** [9634-328]

- 9634 2J **Fiber optic evaporation analysis of environmental parameters and of synthetic urine samples** [9634-254]
- 9634 2K **Polymeric optical fiber tweezers as a tool for single cell micro manipulation and sensing** [9634-327]
- 9634 2L **Humidity insensitive step-index polymer optical fibre Bragg grating sensors** [9634-280]
- 9634 2M **Immunobiosensor for fast detection of bacteria in water using plastic optical fiber (POF) bended** [9634-250]
- 9634 2N **Multi FBG femtosecond laser inscription in FPI based pressure sensors for temperature distribution** [9634-9]
- 9634 2O **Rapid detection of methanol in artisanal alcoholic beverages** [9634-87]
- 9634 2P **Fiber optic thermo-hygrometers for soil moisture and temperature measurements: the SFORI project** [9634-234]
- 9634 2Q **A fiber optic buckle transducer for measurement of in vitro tendon strain** [9634-335]
- 9634 2R **Acetone evaporation monitoring using a caterpillar-like microstructured fiber** [9634-274]
- 9634 2S **Dissolved oxygen sensing using an optical fibre long period grating coated with hemoglobin** [9634-233]
- 9634 2T **PAMAM dendrimer/gold nanoparticle nanocomposites for a reflection LSPR optical fiber sensor** [9634-110]
- 9634 2U **Novel approach for simultaneous sediment classification and concentration determination of water turbidity** [9634-184]
- 9634 2V **High-performance Brillouin optical correlation-domain reflectometry** [9634-74]
- 9634 2W **Distributed fiber vibration measurement based on phase extraction from time-gated digital OFDR** [9634-376]
- 9634 2X **Spontaneous anti-Stokes backscattering in Brillouin dynamic gratings** [9634-192]
- 9634 2Y **Compensation of optical source phase noise in long-range OFDR by using an optical fiber delay loop** [9634-367]
- 9634 2Z **Influence of polarization scrambling on Brillouin optical correlation-domain reflectometry using plastic fibers** [9634-85]
- 9634 30 **Unexpected non-local effects in dual-probe-sideband BOTDA** [9634-39]
- 9634 31 **Colour cyclic code for Brillouin distributed sensors** [9634-45]
- 9634 32 **Study of the hydrogen influence on the acoustic velocity of single-mode fibers by Rayleigh and Brillouin backscattering measurements** [9634-118]

- 9634 33 **Mitigation of modulation instability in Brillouin distributed fiber sensors by using orthogonal polarization pulses** [9634-354]
- 9634 34 **Sources of noise in Brillouin optical time-domain analyzers** [9634-358]
- 9634 35 **Measurements of endotracheal tube cuff contact pressure using fibre Bragg gratings** [9634-316]
- 9634 36 **Simultaneous demodulation of polarization mode coupling and fiber Bragg grating within a polarization maintaining fiber** [9634-80]
- 9634 37 **Simple refractometer based on in-line fiber interferometers** [9634-190]
- 9634 38 **Magnetic field sensing with an in-line Fabry-Perot interferometer based on capillary optical fiber and Terfenol-D** [9634-255]
- 9634 39 **Expanding the dynamic range of an open loop IFOG** [9634-374]
- 9634 3A **Fourier transform-based absolute phase interrogation algorithm for Sagnac interferometer-based PMF sensors** [9634-200]
- 9634 3B **Hydrostatic pressure sensing with surface-core fibers** [9634-264]
- 9634 3C **Fiber Bragg grating inscription in optical multicore fibers** [9634-256]
- 9634 3D **Component and setup for insertion of gases in a hollow-core optical fiber sensor** [9634-26]
- 9634 3E **Air-structured optical fibre drawn from a 3D-printed preform** [9634-370]
- 9634 3F **Submicron accuracy fiber taper profiling using whispering gallery modes in a cylindrical fiber micro-resonator** [9634-287]
- 9634 3G **Thermally tunable bandgaps in a hybrid As₂S₃/silica photonic crystal fiber** [9634-253]
- 9634 3H **Lab-on-fiber platforms for ultrasound detection: a comparative study** [9634-282]
- 9634 3I **Bragg grating fabrication on tapered fiber tips based on focused ion beam milling** [9634-285]
- 9634 3J **Asymmetrically and symmetrically coated tapered optical fiber for sensing applications** [9634-240]
- 9634 3K **Improved response time of laser etched polymer optical fiber Bragg grating humidity sensor** [9634-119]
- 9634 3L **Fabrication of in-line modal couplers based on multicore fibers and their applications to fiber optic sensors** [9634-50]
- 9634 3M **Study of few-mode fiber based SMS sensor for simultaneous measurement of temperature and strain** [9634-67]

- 9634 3N **Femtosecond laser inscription of Bragg and complex gratings in coated and encapsulated silica and low-loss polymer optical fibers** [9634-371]
- 9634 3O **Optical fiber sensor for simultaneous measurement of hydrostatic pressure and temperature in soil embankments** [9634-76]
- 9634 3P **Measuring strain at extreme temperatures with a Fabry-Perot optical fiber sensor** [9634-167]
- 9634 3Q **Simultaneous multipoint strain measurement using cascaded long period fiber gratings** [9634-211]
- 9634 3R **Common frequency suppression method for fiber specklegram perimeter sensors** [9634-138]
- 9634 3S **Stretching the limits for the decoupling of strain and temperature with FBG based sensors** [9634-246]
- 9634 3T **0.1-nano-strain resolution fiber optic sensor for quasi-static strain measurement with 1 kS/s sampling rate** [9634-215]
- 9634 3U **Simultaneous regeneration of seed FBGs during the HFCVD diamond-grating coating process and its thermal monitoring** [9634-251]
- 9634 3V **Effective refractive index modulation based optical fiber humidity sensor employing etched fiber Bragg grating** [9634-332]
- 9634 3W **Elastomeric fluorescent POF for partial discharge detection: recent progress** [9634-267]
- 9634 3X **Entrained-flow gasifier and fluidized-bed combustor temperature monitoring using arrays of fs-IR written fiber Bragg gratings** [9634-123]
- 9634 3Y **Fiber optic sensing system for temperature and gas monitoring in coal waste pile combustion environments** [9634-307]
- 9634 3Z **Identification of hand postures by force myography using an optical fiber specklegram sensor** [9634-191]
- 9634 40 **Partial regeneration of Aluminum coated FBG along 450 days** [9634-68]
- 9634 41 **Analysis of mechanical and thermal response of rock due to laser drilling using optical fiber Bragg grating sensors** [9634-258]
- 9634 42 **200 MW hydroelectric generator stator surface temperature monitoring using a DTS system** [9634-309]
- 9634 43 **Thermal and vibration dynamic analysis of an induction motor using optical fiber Bragg gratings** [9634-297]
- 9634 44 **A Bragg grating tunable filter based on temperature control system to demodulate a voltage sensor** [9634-325]
- 9634 45 **An efficient and fast detection algorithm for multimode FBG sensing** [9634-141]

- 9634 46 **Raman distributed temperature measurement at CERN high energy accelerator mixed field radiation test facility (CHARM)** [9634-25]
- 9634 47 **Bridge SHM system based on fiber optical sensing technology** [9634-220]
- 9634 48 **Thermo-optic coefficient dependent temperature sensitivity of FBG-in-SMS based sensor** [9634-100]
- 9634 49 **Fiber Bragg grating strain sensor for hard rocks** [9634-295]
- 9634 4A **Fiber laser sensor system based on a random mirror and a compound ring resonator for displacement measurements** [9634-35]

Part Two

POSTER SESSION II

- 9634 4B **Cantilevers orthodontics forces measured by fiber sensors** [9634-379]
- 9634 4C **A label free aptamer-based LPG sensor for detection of mercury in aquatic solutions** [9634-114]
- 9634 4D **Concentration measurements in silica and quartz nanofluids by optical fiber sensor** [9634-70]
- 9634 4E **Real time monitoring of Pb²⁺-induced formation of G-quadruplex DNA with LPFG sensor** [9634-89]
- 9634 4F **High temperature assessment of an Er³⁺/Yb³⁺ co-doped phosphosilicate optical fibre for lasers, amplifiers and sensors** [9634-194]
- 9634 4G **Real-time multi-monitoring interrogation based on Fourier domain mode-locked fiber laser for measurement of radiation dose and multipoint strain** [9634-52]
- 9634 4H **Stability aspects of a fiber optic sensor for CO₂ phase monitoring** [9634-28]
- 9634 4I **Reflective refractometer based on strong optical coupling between a tilted fiber Bragg grating and a parallel D-shaped fiber** [9634-216]
- 9634 4J **An optical fibre sensor for combined point pressure measurement and spatially resolved temperature measurement** [9634-181]
- 9634 4K **Detection of the volatile organic compounds emitted from paints using optical fibre long period grating modified with the mesoporous nano-scale coating** [9634-298]
- 9634 4L **Temperature and strain insensitive long period gratings (LPGs) in W fibre with post-annealing** [9634-29]
- 9634 4M **Application of a fluorescence intensity ratio technique for the intrinsic determination of pH using an optical fiber sensor** [9634-366]

- 9634 4N **Detection of volatile organic compounds using optical fibre long period grating modified with metal organic framework thin films** [9634-121]
- 9634 4O **Chitosan-hydrogel-based fiber optic sensor for heavy metal ion detection** [9634-245]
- 9634 4P **Fiber optic gas sensor for on-line CO₂ monitoring** [9634-247]
- 9634 4Q **Novel multi-point disturbance detection method for polarization-sensitive optical time domain reflectometry** [9634-166]
- 9634 4R **Temperature calibration of optical fiber attenuation differences induced measurement error of Raman distributed temperature sensor** [9634-213]
- 9634 4S **Interrogation of a cascaded FBG sensor using a wavelength-to-delay mapping technique** [9634-284]
- 9634 4T **Dynamic distributed Brillouin optical fiber sensing based on multi-slope analysis** [9634-174]
- 9634 4U **Brillouin optical time domain analysis sensor assisted by a Brillouin distributed amplifier** [9634-286]
- 9634 4V **Steady state γ-ray radiation effects on Brillouin fiber sensors** [9634-289]
- 9634 4W **Deformation of Brillouin gain spectrum shape caused by strain varying linearly with respect to time** [9634-128]
- 9634 4X **Fast inscription of Bragg grating arrays in undoped PMMA mPOF** [9634-47]
- 9634 4Y **Bend-insensitive distributed sensing in singlemode-multimode-singlemode optical fiber structure by using Brillouin optical time-domain analysis** [9634-153]
- 9634 4Z **Enhanced tolerance to pulse extinction ratio in Brillouin optical time domain analysis sensors by dithering of the optical source** [9634-342]
- 9634 50 **Some refractometric features of dual-core chirped microstructured optical fibers** [9634-261]
- 9634 51 **Low voltage integrated optics electro-optical modulator applied to optical voltage transformer based on WLI technique** [9634-347]
- 9634 52 **Measurement for polarization mode dispersion of LiNbO₃ integrated waveguide modulator used white light interferometry** [9634-203]
- 9634 53 **Ultrahigh sensitive twist sensor employing Sagnac interferometer based on PM-elliptical core fibers** [9634-15]
- 9634 54 **Integrated liquid-filled directional coupler for temperature sensing** [9634-158]
- 9634 55 **Negative curvature fibres: exploiting the potential for novel optical sensors** [9634-8]
- 9634 56 **Enhancing sensitivity of long-period gratings by combined fiber etching and diamond-like carbon nano-overlay deposition** [9634-329]

- 9634 57 **A novel three-core fiber optic spanner** [9634-204]
- 9634 58 **Laser structured fibre Bragg gratings as enhanced force sensors** [9634-180]
- 9634 59 **Combined regenerated fibre Bragg gratings and Fabry-Perot etalons for dual strain and temperature sensing** [9634-262]
- 9634 5A **Nanoporous nanocrystalline monoclinic zirconia for luminescent oxygen sensors** [9634-333]
- 9634 5B **High-pressure sensor based on fiber in-line Mach-Zehnder interferometer** [9634-111]
- 9634 5C **Scanning-free characterization of temperature dependence of forward stimulated Brillouin scattering resonances** [9634-312]
- 9634 5D **Ultra-long and high-stability random laser based on EDF gain-media and Rayleigh scattering distributed mirror** [9634-242]
- 9634 5E **Modified Brillouin ring laser technology for Brillouin-based sensing** [9634-279]
- 9634 5F **Photonic liquid crystal fibers tuning by four electrode system produced with 3D printing technology** [9634-324]
- 9634 5G **Magneto-optic properties of Pb/Al codoped silica fiber via atomic layer deposition** [9634-179]
- 9634 5H **A MHz speed wavelength sweeping for ultra-high speed FBG interrogation** [9634-359]
- 9634 5I **In-situ temperature calibration procedure for temperature and strain fibre Bragg grating sensors for monitoring pre-stressing strands** [9634-71]
- 9634 5J **Enhancement of temperature sensitivity of a Mach-Zehnder interferometer based on a polymer-overlaid microfiber** [9634-54]
- 9634 5K **Fiber Bragg grating regeneration temperature in standard fibers** [9634-139]
- 9634 5L **Oscillatory behaviour in Type IA FBG: ruling out chemical complexity** [9634-313]
- 9634 5M **Hydrostatic pressure sensor based on micro-cavities developed by the catastrophic fuse effect** [9634-304]
- 9634 5N **Vector magnetic measurement based on directional scattering between polarized plasmon wave and arrayed nanoparticles** [9634-224]
- 9634 5O **Alkanes-filled photonic crystal fibers as sensor transducers** [9634-22]
- 9634 5P **In-line Sagnac interferometer-type optical voltage sensor for DC voltage measurement** [9634-133]
- 9634 5Q **Birefringence properties of a polarization maintaining Panda fibre during Bragg grating regeneration** [9634-273]

- 9634 5R **Diamond-like carbon thin film for tuned high sensitivity etched fiber Bragg grating refractometer** [9634-162]
- 9634 5S **Electric field sensor based on cholesteric liquid crystal Fabry-Perot etalon** [9634-135]
- 9634 5T **Erbium doped optical fiber lasers for magnetic field sensing** [9634-305]
- 9634 5U **A mechanical method to tuning a FBG-PZT voltage sensor** [9634-314]
- 9634 5V **Fiber optic liquid level monitoring system using microstructured polymer fiber Bragg grating array sensors: performance analysis** [9634-106]
- 9634 5W **Optical fibre sensors based on multi-mode fibres and MIMO signal processing: an experimental approach** [9634-315]
- 9634 5X **Customizing CO₂ laser inscription of LPG sensors to enhance the sensitivity to refractive index** [9634-355]
- 9634 5Y **An improved PGC demodulation method to extend dynamic range and compensate low-frequency drift of modulation depth** [9634-377]
- 9634 5Z **BOTDA-based DTS robustness demonstration for subsea structure monitoring applications** [9634-122]
- 9634 60 **Femtosecond laser inscribed Bragg gratings in gold-coated fiber for space application** [9634-36]
- 9634 61 **Long-term monitoring of local stress changes in 67km installed OPGW cable using BOTDA** [9634-12]
- 9634 62 **Characterization of a polyimide-coated humidity sensor in a hybrid fibre grating configuration** [9634-79]
- 9634 63 **Fiber Bragg grating inscriptions in multimode fiber using 800 nm femtosecond laser** [9634-90]
- 9634 64 **Numerical analysis of stress distribution in embedded highly birefringent PANDA fibers** [9634-349]
- 9634 65 **Identification of cavitation signatures using both optical and PZT acoustic sensors** [9634-195]
- 9634 66 **Metal-packaged fibre Bragg grating strain sensors for surface-mounting onto spalled concrete wind turbine foundations** [9634-10]

POSTER SESSION III

- 9634 67 **Optical fiber Fabry-Perot interferometer with pH sensitive hydrogel film for hazardous gases sensing** [9634-237]
- 9634 68 **Unobtrusive heart rate monitor based on a fiber specklegram sensor and a single-board computer** [9634-196]

- 9634 69 **Novel gas sensor combined fiber cavity ring-down and frequency-shifted interferometry** [9634-155]
- 9634 6A **Long period grating inscribed in multimode fibre interferometer and its application in refractive index sensing** [9634-18]
- 9634 6B **Phase interrogated plasmonic optical fiber optrode with bimetallic layers** [9634-308]
- 9634 6C **A fluorescent optical fibre chemosensor for mercury detection** [9634-186]
- 9634 6D **Fluorescence excitation on tapered polymer optical fibers through microfiber evanescent field** [9634-109]
- 9634 6E **Construction aspects of a plastic optical fiber-based surface plasmon resonance biochip** [9634-300]
- 9634 6F **Intensity-modulated refractometer with long period fiber grating cascaded by chirped fiber grating** [9634-235]
- 9634 6G **Ultra-thin silver-coated tilted fiber grating for surface and bulk refractive index measurement** [9634-222]
- 9634 6H **Acetone vapor fiber sensor based on side polished fiber coated with cholesteric liquid crystal** [9634-105]
- 9634 6I **Compound parabolic concentrator optical fiber tip for FRET-based fluorescent sensors** [9634-49]
- 9634 6J **Optic fiber hydrogen sensor based on high-low reflectivity Bragg gratings and WO₃-Pd-Pt multilayer films** [9634-117]
- 9634 6K **Arc-induced gratings in the turning points** [9634-134]
- 9634 6L **Simple BOTDA temperature sensor based on distributed Brillouin phase-shift measurements within a Sagnac interferometer** [9634-66]
- 9634 6M **High-sensitive distributed transverse load sensing based on Brillouin dynamic gratings** [9634-143]
- 9634 6N **High-resolution Brillouin analysis of composite materials beams** [9634-169]
- 9634 6O **Simplified Brillouin sensor for structural health monitoring applications based on passive optical filtering** [9634-277]
- 9634 6P **Raman-based distributed temperature sensor using simplex code and gain controlled EDFA** [9634-23]
- 9634 6Q **The effect of the gain dependency of the linewidth of Brillouin amplification on double slope-assisted dynamic sensing techniques** [9634-230]
- 9634 6R **Rating the limitations and effectiveness of BOTDA range extension techniques** [9634-243]

- 9634 6S **A calibration scheme of optical path correlator scan speed and position based 3x3 coupler and dual Mach-Zehnder interferometer** [9634-221]
- 9634 6T **Fiber optic distributed chemical sensor for the real time detection of hydrocarbon fuel leaks** [9634-337]
- 9634 6U **Coating impact and radiation effects on optical frequency domain reflectometry fiber-based temperature sensors** [9634-288]
- 9634 6V **Narrow-linewidth laser source with precision frequency tunability for distributed optical sensing applications** [9634-164]
- 9634 6W **Magnetic-field sensor based on tapered all-solid waveguide-array fiber and magnetic fluids** [9634-177]
- 9634 6X **Relative humidity sensor based on an optical microfiber knot resonator with a polyvinyl alcohol overlay** [9634-75]
- 9634 6Y **Fabrication and sensing characteristics of helical long-period fiber gratings written in the rotated fiber by CO₂ laser** [9634-197]
- 9634 6Z **New SPR PCF D-type optical fiber sensor configuration for refractive index measurement** [9634-317]
- 9634 70 **Single-polarization single-mode hollow core photonic bandgap fiber for gyroscope applications** [9634-345]
- 9634 71 **Femtosecond laser micromachining of Fabry-Perot cavity in fibre Bragg grating** [9634-306]
- 9634 72 **Simultaneous measurement of refractive index and temperature with micro silica sphere cavity hybrid Fabry Perot optical fiber sensor** [9634-84]
- 9634 73 **Interrogation of fiber Bragg grating sensors using a VCSEL and correlation techniques** [9634-311]
- 9634 74 **Temperature sensor based on a tapered optical fiber with ALD nanofilm** [9634-175]
- 9634 75 **Reliable spectrometric fiber Bragg grating peak detection** [9634-293]
- 9634 76 **Stable dual-wavelength erbium fiber laser for temperature measurements** [9634-156]
- 9634 77 **Temperature monitoring system using correlated FBGs** [9634-248]
- 9634 78 **Optical code division multiplexed fiber Bragg grating sensing networks** [9634-290]
- 9634 79 **Nonlinear acousto-optics coupling in fiber optics: model based on local bending for LP cladding modes** [9634-151]
- 9634 7A **Study of supercontinuum generation in photonic crystal fiber infiltrated with carbon disulfide using super-mode theory** [9634-147]
- 9634 7B **Generation of optical super-Gaussian pulses using tapered fibers** [9634-206]

- 9634 7C **Single mode fiber and twin-core fiber connection technique for in-fiber integrated interferometer** [9634-223]
- 9634 7D **Spider silk: a novel optical fibre for biochemical sensing** [9634-48]
- 9634 7E **Hydrogen sensing array based on weak fiber Bragg grating** [9634-93]
- 9634 7F **Quasi-distributed fiber sensor based on Fresnel-reflection-enhanced Incomplete-POTDR system** [9634-163]
- 9634 7G **A novel method to generate a self-accelerating Bessel-like beam based on graded index multimode optical fiber** [9634-115]
- 9634 7H **Centre of mass determination based on an optical weighing machine using fiber Bragg gratings** [9634-318]
- 9634 7I **Lamb wave detection with a fiber optic angular displacement sensor** [9634-343]
- 9634 7J **Fiber specklegram sensors sensitivities at high temperatures** [9634-137]
- 9634 7K **Torsion sensing characteristics of a highly birefringent photonic crystal fiber with two asymmetric cores in the Sagnac loop** [9634-208]
- 9634 7L **FBG feedback's effects on distributed Bragg reflector fiber laser's polarization modes' beat** [9634-64]
- 9634 7M **Indium-Tin-Oxide coated optical fibers for temperature-viscosity sensing applications in synthetic lubricant oils** [9634-320]
- 9634 7N **Liquid damped fiber laser accelerometer** [9634-368]
- 9634 7O **Interferometric fiber Bragg grating shift demodulation** [9634-268]
- 9634 7P **A SPR sensor based on twin-core fiber** [9634-94]
- 9634 7Q **High-speed FBG interrogation system insensitive to fiber link attenuation for magnetic field sensing** [9634-58]
- 9634 7R **Evaluation of shrinkage polymerization and temperature of different acrylic resins used to splinting transfer copings in indirect impression technique** [9634-69]
- 9634 7S **Smartphone-based portable intensity modulated force sensor** [9634-244]
- 9634 7T **Fabry-Perot cavity based on sapphire-derived fiber for high temperature sensor** [9634-171]
- 9634 7U **Magnetic field sensor based on fiber taper coupler coated with magnetic fluid** [9634-32]
- 9634 7V **Lithium batteries temperature and strain fiber monitoring** [9634-330]
- 9634 7W **A new optical pressure sensor interrogated by speckles pattern for oil industry** [9634-7]

- 9634 7X **Early detection of pipeline integrity threats using a smart fiber optic surveillance system: the PIT-STOP project** [9634-38]
- 9634 7Y **Long term strain behavior of PMMA-based polymer optical fibers** [9634-344]
- 9634 7Z **HOBAN project: towards the development of radiation-tolerant fiber-based temperature sensors for nuclear industry** [9634-302]
- 9634 80 **Simultaneous strain and temperature measurement with enhanced intrinsic sensitivity using etched polymer fibre Bragg gratings** [9634-165]
- 9634 81 **High-order polarization mode crosstalk effect: a calibration scheme of white light-based optical coherence domain polarimetry** [9634-136]
- 9634 82 **Feasibility of crack monitoring in a road tunnel based on a low cost plastic optical fiber sensor** [9634-77]
- 9634 83 **New properties of a fiber optic sensor in application of a composite fence for critical infrastructure protection** [9634-56]
- 9634 84 **Optical fiber Fabry-Perot refractive index sensor based on porous Al₂O₃ film** [9634-24]
- 9634 85 **1200°C high-temperature distributed Brillouin optical fiber sensing based on photonics crystal fiber** [9634-404]
- 9634 86 **Microgel photonics: a breathing cavity onto optical fiber tip** [9634-406]
- 9634 87 **Overcoming non-local effects and Brillouin threshold limitations in Brillouin distributed sensors** [9634-409]

Authors

Numbers in the index correspond to the last two digits of the six-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first four digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Aasmul, Soren, 6I
Abe, Ilda, 25, 7I
Acedo, P., 22
Acuna Herrera, Rodrigo, 79, 7A, 7B
Adachi, Jociel L. S., 7I
Adler, Gadi, 6N
Ahlen, C. H., 7X
Ahlstedt, M., 82
Ahrens, Andreas, 5W
Aichele, Claudia, 3P
Albert, Jacques, 4I, 6G
Alberto, Nélia J., 3U, 5M, 7V
Alem, Mehdi, 33
Aliberti, A., 86
Allil, Regina C. S. B., 2M, 5R
Allsop, Tom, 0K
Alvarez, Carlos A., 7A
Alwis, Lourdes, 62
Ambikairajah, Eliathamby, 80
Ams, M., 17
André, Paulo, S., 24, 5M
André, Ricardo M., 2R, 3I
Andrés, M. V., 19, 5T
Aneesh, R., 30
Angulo-Vinuesa, Xabier, 19, 2E, 30, 6L, 6R
Ania-Castañon, J. D., 6R
Antman, Yair, 0G, 5C, 6N
Antunes, Paulo, 24, 5M, 7V
Aporta, I., 5D
Araújo, Francisco M., 75
Ardanaz, D., 00
Armakolas, I., 65
Arregui, Francisco J., 29, 3J, 7M
Asadollahi, A., 0X
Atubga, David, 4Q
Auguste, J.-L., 32, 3Y
Ayotte, S., 13
Ba, Dexin, 4T
Babin, A., 13
Bagheri, Z., 4E
Bai, Wei, 2A, 7E
Bajas, H., 1U
Bajko, M., 1U
Balasubramaniam, Krishnan, 0S
Bandyopadhyay, S., 1G
Bang, Ole, 2L, 3G, 45, 5V, 6I, 7Y
Bao, Haihong, 59
Bao, Weijia, 0R
Bao, Xiaoyi, 0L, 4T, 4Y, 6M, 85
Baptista, J. M., 3Y, 5T, 6Z
Barbosa, Carmem Lúcia, 5R
Barrera, David, 4S
Bartelt, Hartmut, 20, 3C, 3I, 5Q
Bassan, F. R., 6P
Bastianini, F., 5E
Bastos, José M., 24
Bauer, S., 6U
Baxter, Gregory W., 4M
Bayat, A. H., 0X
Bazzo, João P., 42
Becker, Martin, 20, 3C, 3I
Bednarska, Karolina, 5F
Behroodi, E., 4E
Benevides, Alessandro B., 68
Ben-Simon, Uri, 0P
Bereś-Pawlik, Elżbieta, 77
Bergman, Arik, 0P, 1I, 2X
Bertotti, Fábio Luiz, 27
Bhowmik, Kishore, 80
Bierlich, Jörg, 2R, 3P
Bilro, Lúcia, 0V, 2U, 4X
Biswas, P., 1G
Blake, Jim, xlix
Bock, Wojtek J., 26, 56
Bohnert, Klaus M., xlix
Bolognini, G., 5E
Bonilla-Manrique, O. E., 22
Borg Bartolo, J., 17
Borriello, A., 23, 2G
Bortolozzo, U., 0M
Boschert, P., 2B
Bosselmann, Thomas, xlix, 1X
Bossi, G., 82
Boukenter, A., 4V, 6U, 7Z
Braga, Arthur M. B., 2T, 38, 4I, 4H
Brambilla, Gilberto, 6A
Braschi, Giovanni, 28
Bravo, M., 15, 18
Bremer, Kort, 5W
Brooks, S., 55
Brugger, Markus, 46
Bruno, Antonio C., 38
Brusenbach, Roy, 3W
Brzozowska, Ewa, 26
Bundalo, Ivan-Lazar, 7Y
Burchat, Ryan, 3X
Cadier, B., 7Z
Caetano, R. E., 5I

Cai, Haiwen, 6V
 Cai, Zhongyue, 4I
 Caldas, P., 6K
 Camargo, Sergio S., Jr., 5R
 Cancino-Bernardi, Juliana, 2T
 Cangialosi, C., 4V
 Cannas, M., 4V, 6U
 Canning, John, 1I, 36, 3E, 48, 4F, 4L, 59, 5L
 Cao, Yingchun, 0W
 Cao, Yulong, 6V
 Capmany, José, 4S
 Caponero, Michele, 40
 Carabetta, S., 0U
 Cardoso, Marcos, 3K
 Cardoso, Rafael, 27
 Cardozo da Silva, Jean Carlos, 27, 42, 43
 Carlton, J., 65
 Carotenuto, B., 23
 Carter, R., 55
 Carvalho, Isabel C. S., 2T, 38
 Castro-Caicedo, Alvaro, 49
 Chai, Quan, 48
 Chan, Chi Chiu, 40, 67, 6F
 Charrett, Thomas O. H., 1Q
 Chen, Dijun, 6V
 Chen, Jiageng, 3T
 Chen, Li Han, 40, 67, 6F
 Chen, Liang, 4T, 4Y, 6M, 85
 Chen, Na, 7T
 Chen, Pengfei, 7T
 Chen, Xianfeng, 3K
 Chen, Yujin, 36, 48
 Chen, Yuxuan, 3A
 Chen, Zhe, 6H
 Chen, Zhenyi, 5G, 7T
 Cheng, Cheng, 6J
 Cheng, Linghao, 5N, 7L
 Chibante, R., 6K
 Chitaree, R., 5B
 Chiuchiolo, A., 1U
 Choudhury, D., 55
 Chow, Desmond M., 7D
 Chung, Youngjoo, 7K
 Ciaccheri, L., 0U
 Cidade, Fernando N., 25, 7I
 Clement, Juan, 4S
 Coelho, L., 0N, 6B
 Colaço, C., 6K
 Collins, Stephen F., 4M
 Compton, S., 1T
 Consales, M., 1U, 23, 2G, 2P
 Cook, Kevin, 1I, 3E, 4F, 4L, 59
 Cordeiro, Cristiano M. B., 0V, 12, 3B
 Corredera, P., 7X
 Correia, R., 35
 Correia, Ricardo, 1Q
 Corres, Jesus M., 3J
 Costa, Greice K. B., 38
 Costa, J. W. A., 1W
 Costin, F., 13
 Cotrina, Anibal, 68
 Coulas, David, 3X
 Coutinho, I. B. G., 6E
 Cranch, G. A., 1T
 Crawford, M., 2B
 Crescitelli, A., 23
 Crump, Derrick, 4K
 Cruz, Alice L. S., 12
 Cruz, J. L., 19, 5T
 Cruz, R. M. S., 6E
 Culshaw, Brian, 4R
 Culverhouse, Philip, 0K
 Cusano, Andrea, 1N, 1U, 23, 26, 2G, 2P, 3H, 86
 Cutolo, A., 23, 2G, 2P, 3H
 Cvijetic, Neda, 14
 Czapla, Aleksandra, 5F
 Danz, Norbert, xlix
 da Silva, Erlon V., 42, 7Q
 da Silva, Hugo G., 4I
 da Silveira, C. R., 1W
 Dai, Jixiang, 6J, 7E, 84
 Dai, Yutang, 6J
 Davis, Frank, 4K
 de Almeida, J. M. M., 0N
 de Araújo, Cid Bartolomeu, xli
 de Arruda, Josiel Urbaninho, 39
 de Goes, R. E., 2O
 de Lira, Hugo Leonardo Rocha, 39
 de Moura, Camila Carvalho, 40
 de Nazaré, Fabio B. V., 44
 de Oliveira, Valmir, 40, 4B, 7I
 De Smet, F., 7X
 Del Villar, Ignacio, 3J
 Delepine-Lesoille, Sylvie, 32, 4V
 Dellith, Jan, 3I
 Derrickson, D., 2B
 Di Pasquale, Fabrizio, 2C, 46
 Di Sanzo, R., 0U
 Diaz, S., 3Y, 76
 Díaz-Herrera, N., 6D
 Dicaire, Isabelle, 7D
 Digonnet, M. J. F., 1P
 Dilli, Paulo Ivã G., 7Q
 Ding, Huimin, 3X
 Dini, Danilo C., 7Q
 Diodato, L., 2G
 Dochow, Sebastian, 3C
 Dolfi, D., 0M
 Domingues, M. Fátima, 5M, 7V
 Dominguez-Lopez, Alejandro, 19, 2E, 30, 3Y, 6L, 6R
 Dong, Fengzhong, 1E, 4R
 Dong, Hui, 7F
 Dong, Xinyong, 67, 6F
 Dong, Yongkang, 4T, 4Y, 6M, 85
 Dooly, Gerard, 4J
 dos Santos, Marcéu C., 7Q
 Dreyer, Uilian José, 43
 Du, Jiangbing, 3T
 Duarte, Daniel P., 2U

Duchesne, Marc A., 3X
 Dunlop, B., 1T
 Durairababu, DineshBabu, 28, 2N, 4J
 Dwivedi, S., 82
 Efraim, Liel, 6N
 Eisermann, René, 1C
 Elosua, C., 29
 Elsmann, Tino, 3C
 Ensher, J., 2B
 Eom, Tae Joong, 5H
 Ertman, Slawomir, 5F
 Eschrich, Tina, 20
 Esposito, E., 23
 Esteban, Ó., 2H, 37, 3Y, 6D
 Esterkin, Yan, 6T
 Evans, D., 35
 Eyal, Avishay, 16, 1B
 Fabian, M., 17
 Fabris, José Luís, 2O, 7S
 Fan, Dian, 47, 69
 Fan, Xinyu, 2W, 2Y, 3T
 Faralli, S., 2C
 Farrell, Gerald, 3F, 6A
 Fasano, A., 2L
 Faucher, D., 13
 Fávero, Fernando C., 38
 Fernández-Pousa, Carlos R., 4S
 Ferreira, J., 3Y
 Ferreira, Luís A., 75
 Ferreira, M. F. S., 2R
 Ferreira, Marta S., 3P
 Fidelus, Janusz D., 5A
 Fiorin, Rodrigo, 7I
 Flores, D., 3Y
 Floridia, Claudio, 6P, 7Q
 Fontana, Eduardo, xlix
 Foster, Scott, 2F
 Fournier, K., 1T
 Fracarolli, João Paulo V., 6P, 7Q
 Franco, Ana Paula G. O., 7R
 Franco, Marcos A. R., 0V, 12, 3B, 5R, 70
 Frazão, Orlando, 1G, 1W, 2Q, 2R, 3I, 3P, 3Y, 7H
 Froochzad, Avihay, 6N
 Fruett, Fabiano, 6P, 7Q
 Fu, Cheng, 85
 Fu, Jiang-hua, 47
 Fu, Songnian, 7F
 Fujiwara, Eric, 3Z, 4D
 Fukai, Chisato, 3M
 Fukuda, Hideyuki, 2V
 Furtado, Felipe O., 4I
 Fusiek, Grzegorz, 1H, 5I, 66
 G.-Deschênes, É., 13
 Gabai, Haniel, 16, 1B
 Galeotti, Francesco, 1N
 Gallati, Mario, 28
 Galtarossa, A., 1U, 3O
 Galvão, José Rodolfo, 7R
 Ganziy, D., 45
 Gao, Shang, 57
 Gao, Shaorui, 1M
 Garcia, Marlon R., 7I
 Garcia, Sébastien, 1L
 Garcia-Souto, J. A., 22
 Georgieva, Petia, 2U
 Gerada, C., 17
 Gerber, Doron, 2J
 Gheysens, Tom, 7D
 Giaquinto, M., 3H, 86
 Giordano, M., 1U, 23, 2G
 Giralaldi, M. T. M. R., 1W
 Girard, S., 4V, 6U, 7Z
 Gomes, A. D., 2R
 Gomes, Marcos S. P., 3D, 4H
 Gonçalves, Marcell N., 44
 Gonçalves, Steve, 24
 González-Cano, A., 6D
 González-Herráez, Miguel, 19, 2E, 30, 3Y, 4A, 6L, 6R, 7X
 Górska, Sabina, 26
 Goto, Yukihiko, 3M
 Gouvêa, Paula M. P., 2T, 38, 3D, 4H
 Gran, J. K., 1T
 Granata, Carmine, 23
 Grattan, Kenneth T. V., 17, 29, 4M, 62, 65, 6C
 Grelin, J., 7Z
 Grisci, Giorgio, 1N
 Grobncic, Dan, 3X
 Groethe, M. A., 1T
 Grün, J., 1T
 Guan, Bai-Ou, 4I, 5N, 6G
 Guan, Chunying, 2I, 7C
 Guariza Filho, Odilon, 4B
 Guerreiro, A., 2K, 6Z
 Guillermain, Elisa, 46
 Guo, Huiyong, 6J
 Guo, Tuan, 4I, 5N, 6G
 Hadar, Raanan, 6Q
 Haghighparast, A., 0X
 Han, Young-Geun, 3L, 4G, 5J, 6X
 Hand, Duncan P., 0Q, 0T, 1E, 55
 Handerek, Vincent, xlv
 Harrison, Joanne, 2F
 Havermann, Dirk, 0Q, 0T
 Hayashi, Neisei, 1R, 2V, 2Z
 Hayes-Gill, B. R., 35
 He, Jun, 60
 He, Zuyuan, 2W, 2Y, 3T
 HeidariAlamdardloo, Jamshid, 0V, 4X
 Herbst, André Ricardo, 5X
 Hernandez, F. U., 35
 Hervás, Javier, 4S
 Hey Tow, Kenny, 7D
 Higuñi, Ricardo T., 7I
 Ho, Waymon, 1O
 Hohberg, Michaela, 3W
 Hoi Lut, Ho, 0W, 1K
 Hong, Lin, 7T
 Hoover, E., 2B
 Hossain, Md. Arafat, 1I, 3E

Hotate, Kazuo, 0H, 1A
 Hou, Lu, 5Y
 Hromadka, Jiri, 4K, 4N
 Hsiao, Vincent K. S., 6H
 Hu, Chenyuan, 7E
 Huang, Chujia, 6J, 84
 Huang, Ming-Fang, 14
 Huang, Wenzhu, 7N
 Huang, Xing, 47
 Huber, H., 58
 Hughes, Robin W., 3X
 Huignard, J.-P., 0M
 Humbert, G., 32
 Hurtado Castano, Catalina, 79
 Ibrahim, S. K., 3S
 Iribas, Haritz, 4Z, 6O
 Jäger, Matthias, 20
 Jamalipour, Abbas, 11
 James, Stephen W., 0Y, 1Q, 2S, 35, 4K, 4N
 Jamier, R., 3Y
 Janse-Van Vuuren, D., 82
 Jaroszewicz, L. R., 5O
 Jarrahi, Mona, xlii
 Jarsen, Andreas, 5Q
 Jędrzejewski, Kazimierz, 77
 Jeon, Min Yong, 5S
 Jeong, Myung Yung, 5H
 Jerez-Gonzalez, B., 22
 Jespersen, O., 45
 Ji, Younghoon, 4G
 Jiang, De-sheng, 2A, 47
 Jiang, Taofei, 6M, 85
 Jo, Wonuk, 1P
 Johnston, M., 5I
 Jorge, P. A. S., 1G, 1W, 2K, 5T
 Józwiak, Michalina, 7O
 Jun, Ma, 1K
 Kalinowski, Hypolito José, 25, 27, 3U, 40, 4B, 71, 7R
 Kalli, Kyriacos, 2N, 3N, 5L
 Kato, Carla C., 4H
 Katzman, Moshe, 2J
 Kavungal, Vishnu, 3F
 Keizer, J. J., 2U
 Kempen, C., 6T
 Kersey, A. D., 2B
 Khijwania, Sunil K., 3V
 Kim, Bok Hyeon, 7K
 Kim, Chang-Seok, 5H
 Kim, Gyeong Hun, 5H
 Kim, Hyun-Joo, 4G
 Kim, Jong-Hyun, 5S
 Kim, Soo Kyung, 5J
 Kim, Sunduck, 4G
 Kim, Sung-Jo, 5S
 Kim, Yoen Jun, 3L, 5J
 Kim, Yong Hyun, 0I
 Kishi, Masato, 0H, 1A
 Kissinger, Thomas, 1Q
 Kitano, Cláudio, 7I
 Kito, Chihiro, 1V
 Knight, J. C., 55
 Ko, Myeong Ock, 5S
 Koba, Marcin, 26, 56
 Kobelke, Jens, 2R, 3C, 3P
 Kohlhaas, Ralf, 1L
 Komatsu, Ayako, 4W
 Korposh, Sergiy, 0Y, 35, 4K, 4N
 Krebber, Katerina, 1C
 Kressel, Iddo, 0P
 Kuhnhen, Jochen, 46, 7Z
 Kurashima, Toshio, 3M
 Lablonde, L., 32
 Lacraz, Amedee, 2N, 3N, 5L
 Laliberté, M., 13
 Langer, T., 1I, 2X
 Lao, Yiqin, 7L
 LaRochelle, Sophie, 0L
 Latifi, Hamid, 0X, 3I, 4C, 4E, 72
 Latka, Ines, 3C
 Latrasse, C., 13
 Laudati, A., 2P
 Le Floch, Sébastien, 1D, 3I
 Leandro, D., 0O, 15, 18
 Lee, Bong Wan, 5S
 Lee, Graham C. B., 0K
 Lee, Hwi Don, 5H
 Lee, Kwanil, 0I
 Lee, S.-W., 0Y
 Lee, Sang Bae, 3L
 Leen, Gabriel, 28, 2N, 4J
 Lehzen, Kevin, 4J
 Lei, Jiaojie, 1Y
 Leitão, Cátia, 24, 7V
 Leite, I. T., 6B
 Leonardi, Arioaldo A., 6P, 7Q
 Leone, M., 2P
 Leon-Saval, Sergio, 3E
 Leparmentier, S., 32
 Lesiak, Piotr, 64
 Levanon, Nadav, 0G
 Levenberg, Eyal, 6N
 Lewis, Elfed, 28, 2I, 2N, 4J
 Li, Chuang, 6S
 Li, Fang, 7N
 Li, Jie, 5N
 Li, Jun, 1E, 4R
 Li, Mengmeng, 69
 Li, Ming-Jun, xlix
 Li, Sheng, 47
 Li, Yunbo, 7L
 Li, Zhi, 6J, 7E
 Liang, Shuai, 52, 6S, 8I
 Liao, C. R., 5B
 Libera, Stefano, 40
 Lin, Wei, 53, 6W, 7U
 Lin, Yandong, 7U
 Lindner, E., 3S
 Liu, Bo, 53, 6W, 7U
 Liu, Chen, 3K

Liu, Chunlan, 7G
 Liu, Fu, 4I, 5N, 6G
 Liu, Haifeng, 53, 7U
 Liu, Jun, 4Q
 Liu, Qingwen, 2W, 2Y, 3T
 Liu, Shuo, 3A
 Liu, Wen, 4F, 4L
 Liu, Yange, 7U
 Liu, Yanlei, 36
 Liu, Yunqi, 6Y
 Liu, Zhengyong, 1M
 Liu, Zhihai, 1S, 1Y, 52, 7G, 7P
 Llera, Miguel, 3I
 Loayssa, Alayn, 33, 4U, 4Z, 6O, 87
 Lochmann, Steffen, 5W
 Lomer, M., 3R, 7J
 London, Yosef, 0G, 5C, 6N
 Lopes, Rafaela N., 2M
 Lopes, Stephani C. P. S., 4B
 López Bautista, M. C., 2H
 Lopez-Albada, A., 2H, 3Y
 López-Amo, M., 0O, 1S, 18, 2H, 3Y, 4A, 76
 López-Gil, Alexia, 19, 30, 3Y, 6L, 6R
 López-Higuera, José M., 3R, 5D, 5K, 7J, 87
 Lorenz, Adrian, 3C
 Lu, Bin, 6V
 Lu, Huihui, 6H
 Lu, Ping, 0L
 Lu, Yang, 0L
 Lu, Yuanfu, 3K
 Lu, Zhiwei, 4T, 4Y, 6M, 85
 Luo, Yan H., 5G
 Luo, Yanhua, 4F, 80
 Luo, Yunhan, 6H
 Ma, Lin, 3T
 Macchi, Edoardo G., 28
 Macé, J.-R., 6U, 7Z
 Macias-Guarasa, J., 7X
 MacPherson, William N., 0Q, 0T, 1E
 Mądry, Mateusz, 77
 Magalhães, Filipe, 75
 Maier, Robert R. J., 0Q, 0T, 1E
 Manabe, Tetsuya, 1V
 Manogharan, Prabhakaran, 0S
 Mao, Jia, 6W
 Marć, P., 5O
 Marcandella, C., 4V, 7Z
 Marcato, G., 82
 Marchi, G., 58
 Margulis, Walter, 3D
 Marín, E., 4V, 6U, 7Z
 Mariñelarena, Jon, 6O
 Marini, D., 5E
 Marín, Gabriela C., 25
 Markos, Christos, 2L, 3G
 Markowski, Konrad, 77
 Markowski, P., 83
 Marques, C. A. F., 5V
 Marques, Manuel B., 1G, 2Q, 3I, 7H
 Martelli, Cicero, 42, 43, 4H, 4L

Martínez Manuel, R., 37
 Martín-López, Sonia, 19, 2E, 30, 3Y, 6L, 6R, 7X
 Martin-Mateos, P., 22
 Martins, H. F., 7X
 Martins, Paulo, 75
 Martynkien, Tadeusz, 1Z
 Maruyama, Fujinosuke, 1A
 Mathew, Jinesh, 0Q, 0T
 Matias, Ignacio R., 3J, 7M
 Matsui, Takashi, 3M
 McCalden, David J., 3X
 McCulloch, S., 55
 Mckeeman, I., 5I, 66
 Medeiros, E. S., 6E
 Melin, G., 7Z
 Mencaglia, A. A., 0U
 Mendez, Alexis, xlix
 Mendizabal, D., 7M
 Mendoza, Edgar, 6T
 Mennella, F., 2P
 Mergo, Pawel, 1Z
 Mesquita, E., 5M
 Mezzadri, Felipe, 42
 Miao, Yinpeng, 53, 6W, 7U
 Micco, A., 86
 Michelotti, Francesco, xlix
 Mignani, A. G., 0U
 Mihailov, Stephen J., 3X
 Mikulic, Predrag, 26, 56
 Milczewski, Maura Scandelari, 25, 4B
 Miliar, M. M., 1E
 Minakawa, Kazunari, 2Z
 Minneman, M. P., 2B
 Mirapeix, Jesús, 87
 Mizuno, Yosuke, 1R, 2V, 2Z
 Moayyed, H., 6B
 Molin, S., 0M
 Montereali, Rosa Maria, 40
 Morana, A., 6U, 7Z
 Moreira, C. S., 6E
 Morgan, S. P., 35
 Morikawa, Sergio, Ricardo Kokai, xlix
 Mosquera, L., 0V
 Motil, Avi, 0P, 6Q
 Moura, J. P., 2R
 Mozzini, M. H., 6E
 Muanenda, Y., 2C
 Muller, Marcia, 2O, 7S
 Mundendhar, Pathi, 3V
 Munera Ortiz, Natalia, 7A
 Murawski, Michał, 4P
 Naeem, Khuram, 7K
 Nakajima, Kazuhide, 3M
 Nakamura, Kentaro, 1R, 2V, 2Z
 Nannipieri, Tiziano, 2C, 46
 Napierata, Marek, 4P
 Naruse, Hiroshi, 4W
 Nascimento, I. M., 5T
 Nascimento, Micael, 7V
 Nasitowski, Tomasz, 4P, 5A, 7O

Navarrete, M. C., 6D
 Neal, Ron, 0K
 Negri, Lucas Hermann, 7S
 Neto, Anselmo Frizera, 68, 7W
 Neto, Victor F., 3U
 Newe, Thomas, 4J
 Ngo, Tang Tung, 3Q
 Nguyen, T. Hien, 4M
 Nielsen, Kristian, 2L, 5V, 6I, 7Y
 Nieto-Callejas, María Julia, 49
 Niewczas, Paweł, 1H, 5I, 66
 Nikbakht, Hamed, 4C
 Niklès, Marc, 5Z
 Nogueira, Rogério N., 0V, 2U, 3U, 4X
 Norris, A., 35
 Novais, Susana, 7V
 Novo, C. C., 55
 Numata, G., 1R
 O'Keeffe, S., 2I
 Oliveira, Ricardo, 0V, 4X
 Oliveira, Rui, 7H
 Oren, Ziv, 2J
 Ortigosa, A., 18
 Osório, Jonas H., 0V, 3B
 Othonos, Andreas, 3N
 Oton, C. J., 2C
 Ott, Konstantin, 1L
 Ou, Yiwen, 69
 Ouerdane, Y., 4V, 6U, 7Z
 Paillet, P., 4V, 7Z
 Paixão, T., 5M
 Palmieri, L., 1U, 3O
 Pan, Zhengqiang, 6V
 Pang, Fufei, 5G, 74, 7T
 Partridge, M., 2S
 Pastor, Daniel, 4S, 73, 78
 Pastor-Graells, J., 7X
 Pasuto, A., 3O, 82
 Paterno, Aleksander Sade, 5X, 7S
 Patusco, Guilherme B., 4I
 Pechstedt, Ralf D., xlix
 Pegorini, Vinicius, 27
 Peigné, A., 0M
 Pelletier, F., 13
 Peng, Feng, 52, 5Y, 6S, 81
 Peng, Gang-Ding, 36, 3E, 48, 4F, 4I, 5G, 80
 Peng, Zu, 4O
 Penze, R. S., 6P
 Pereira, João M. B., 38
 Perez-Herrera, R. A., 15, 2H, 3Y
 Périssé, J., 6U, 7Z
 Perry, M., 5I, 66
 Pilorget, G., 32
 Pinto, A. M. R., 3Y
 Pinto, João L., 24, 7V
 Piote, D., 7X
 Pisco, Marco, 1N
 Plant, Genevieve, 14
 Plath, Ronald, 3W
 Poeggel, Sven, 28, 2N, 4J
 Pohl, Alexandre A. P., 20
 Polimadei, Andrea, 40
 Polis, Michael, 3N
 Polyzos, Dimitrios, 0Q
 Polz, Leonhard, 5Q
 Pontes, Maria José, 68, 7W
 Pospóri, A., 5V
 Postvoll, W., 7X
 Poulin, M., 13
 Prada, Dario, 4H
 Prats, Sergio, 2U
 Preter, Eyal, 2J
 Przybysz, N., 5O
 Qi, Chongjie, 6J
 Qiao, Xueguang, 0R, 63
 Qiu, Tiequn, 1O
 Qiu, Xuhui, 6G
 Qu, Ronghui, 6V
 Queiroz, Vanessa M., 2M
 Quero, Giuseppe, 1N, 23, 2G
 Quintela, A., 5K
 Quintela, M. A., 5D
 Quintero, Sully M. M., 4I
 R. Zamarreño, C., 7M
 Rajagopal, Prabhu, 0S
 Rajan, Ginu, 80
 Ramírez, Jaime A., 2D
 Ramos, António, 2Q
 Ramos, Rogerio T., xlix
 Ran, Zengling, 59
 Ranjbar Naeini, O. R., 72
 Ranjbar, B., 4E
 Rao, Yunjiang, 4Q, 59
 Rasmussen, H. K., 2L
 Ravet, Fabien, 5Z
 Ravikumar, Raghunandhan, 4O
 Ray, Pabitra, 0S
 Rego, G., 6K
 Rehman, Saeed, xlix
 Reichel, Jakob, 1L
 Reid, Zane, 3E
 Ren, Meiqi, 0L
 Rente, Bruno, 5R
 Residori, S., 0M
 Reyes-Vera, Erick, 50
 Ribeiro, Bessie A., 44, 5U
 Ribeiro, J., 3Y
 Ribeiro, Moisés R. N., 68
 Ribeiro, Richardson, 27
 Ricciardi, A., 23, 3H, 86
 Rizzolo, S., 6U, 7Z
 Robin, T., 7Z
 Rocha Pitta, Christiano Santos, 27
 Rochat, Etienne, 3I, 5Z
 Rodrigues Ribeiro, R. S., 2K
 Rodrigues, Domingos M. C., 2M
 Rodriguez, Carlos A., 7B
 Rodríguez-Cobo, L., 3R, 5D, 5K, 7J
 Rodríguez-Schwendtner, E., 6D
 Rohwetter, Philipp, 1C, 3W

Ronen, Maria, 2J
 Rong, Qiangzhou, 0R, 63
 Roriz, Paulo, 2Q, 3P, 7H
 Rose, B., 45
 Rosenbusch, Peter, 1L
 Rosolem, Joao B., 6P, 7Q
 Rossi, Lucieli, 7I
 Rota-Rodrigo, S., 2H, 4A
 Roth, Bernhard, 5W
 Rothhardt, Manfred, 20, 3C, 3I
 Roths, Johannes, 58, 5Q
 Roufael, H. G. S., 5K
 Rougier, S., 3Y
 Roy, P., 3Y
 Rubini, J., Jr., 5I
 Rugeland, Patrik, 3D
 Ruiz-Lombera, Rubén, 87
 Russo, M. T., 0U
 Ruvo, M., 23, 2G
 Saafi, M., 66
 Sáez-Rodríguez, D., 5V
 Sagues, Mikel, 33, 4U, 4Z, 6O, 87
 Sakamoto, João M. S., 7I
 Sakamoto, Taiji, 3M
 Sales, Salvador, 4S
 Salgado, Felipe C., 54
 Sanchez, P., 7M
 Sanders, Glen A., 1O
 Sandmann, Andre, 5W
 Sandomenico, A., 23, 2G
 Sansone, L., 23
 Santiago, M. F. S., 6E
 Santos, D. F., 6Z
 Santos, J. C., 5I
 Santos, José L., 0N, 1W, 3P, 3Y, 6B
 Santos, Murilo F. M., 3Z, 4D
 Sasaki, Kin'ichi, 5P
 Sauser, Florian, 1D, 3I
 Schenato, L., 3O, 82
 Schenkel, Egont A., 3Z, 4D
 Schiefer, Elberth Manfron, 7S
 Schneider, Neblyssa, 4B
 Schuster, Kay, 2R, 3C, 3P, 3S
 Sebern, Renan, 5X
 Segatto, Marcelo E. V., 68
 Semenova, Yuliya, 3F
 Serrão, Valdir Augusto, 5R, 7O
 Severino, R., 23, 2G
 Sezerman, O., 6I
 Shahmoon, E., 2X
 Shang, Chao, 7L
 Shao, Zhihua, 0R
 Shapira, Osher, 0P
 Shen, Yonghang, 1M
 Shephard, J. D., 55
 Shi, Jinhui, 2I
 Shiloh, Lih, 16, 1B
 Shim, Young Bo, 2G
 Shlyagin, M. G., 37
 Shum, Perry, 7F
 Siebler, Daniel, 3W
 Signorini, Alessandro, 2C, 46
 Silbiger, Maayan, 6N
 Silva, L. P. C., 5I
 Silva, Ricardo E., 20
 Silva, Susana O., 1G, 2R, 3Y
 Silva, T. B., 6E
 Simioni Assmann, Tangriani, 27
 Simões, José A., 2Q
 Simpson, George, 5L
 Smiciklas, Marc, 1O
 Śmietana, Mateusz, 26, 56
 So, Ping Lam, 4O, 67, 6F
 Soares, Larissa M. B., 38
 Socorro, Abian B., 3J
 Song, Binbin, 53, 6W, 7U
 Song, Hongliang, 6Y
 Song, Kwang Yong, 0I
 Soppera, O., 2K
 Soto, Marcelo A., 0J, 1D, 2D, 2E, 33, 34
 Sousa, Kleiton de Moraes, 43
 Souza, Mauren A., 25
 Sovran, Ido, 0P, 6Q
 Spadof, Danilo H., 54
 Sperandio, Vinicius Martinelli, 7W
 Spittel, Ron, 3C
 Srinivasan, Balaji, 0S
 Stańczyk, Tomasz, 4P
 Stasiewicz, K., 5O
 Stefani, Alessio, 2L, 3G
 Steinberg, Idan, 16, 1B
 Stephan, V., 58
 Stepień, Karol, 7O
 Strandjord, Lee K., 1O
 Sullivan, F. J., 2I
 Sun, J. N., 1E
 Sun, Miao, 4R
 Sun, Sunjian, 6T
 Sun, Tong, 17, 29, 4M, 62, 65, 6C
 Suzuki, Carlos K., 3Z, 4D
 Szustakowski, M., 83
 Szymański, Michał, 4P
 Tabaru, M., 1R
 Takahashi, Hiroshi, 1V
 Takahashi, Masao, 5P
 Takahashi, Nobuaki, 1F, 3Q
 Talataisong, W., 5B
 Tam, Hwa-Yaw, 1M, 6G
 Tanaka, Akihiro, 14
 Tanaka, Satoshi, 1F, 3Q
 Tang, Jieyuan, 6H
 Tang, Ming, 7F
 Tang, Yuquan, 4R
 Tatam, Ralph P., 0Y, 1Q, 2S, 4K, 4N
 Tateda, Mitsuhiro, 4W
 Tejedor, J., 7X
 Tenderenda, Tadeusz, 4P, 5A
 Teng, Lei, 6M
 Thévenaz, Luc, 0J, 1D, 2D, 2E, 33, 34, 7D
 Thomson, R. R., 55

Thotath, Bhadra, 4M
 Tian, Hui, 69
 Tian, Tao, 69
 Tian, Yue, 14
 Tiess, Tobias, 20
 Tikhomirov, Alexei, 2F
 Toccafondo, Iacopo, 46
 Tong, Limin, xlvii
 Toge, Kunihiro, 1V
 Tokay, Begum, 4N
 Tokunaga, Tomochika, 3T
 Tong, Peilin, 6M
 Torres, Pedro, 49, 50, 79, 7B
 Tosi, Daniele, 28, 2N
 Tou, Zhi Qiang, 4O, 67
 Triana, Cristian, 73, 78
 Tsukida, Osamu, 3Q
 Tur, Moshe, 0P, 1I, 2X, 6Q
 Ul Hassan, Hafeez, 6I
 Urbanczyk, Wacław, 1Z
 Ulrich, A., 55
 Urricelqui, Javier, 33, 34, 4U, 4Z, 6O, 87
 Vaiano, P., 2G
 Valente, Luiz C. G., 41
 Van Roosbroeck, J., 3S
 van Velzen, John, 2F
 Varón, Margarita, 73, 78
 Varum, H., 5M
 Velasquez-Botero, Fabian, 50
 Vidakovic, M., 65
 Viegas, D., 0N, 6B
 Villnow, Michael, 1X
 Vincenti, Maria Aurora, 40
 Viveiros, D., 3Y
 Vlekken, J., 3S
 Vollrath, Fritz, 7D
 Wada, Atsushi, 1F, 3Q
 Walker, Robert B., 3X
 Wang, Benzhang, 4T
 Wang, Bin, 2Y
 Wang, C., 5B
 Wang, Changle, 0K
 Wang, Chaodong, 7F
 Wang, D. N., 5B
 Wang, Gaopeng, 6J
 Wang, Jie, 1M
 Wang, Pengfei, 21, 6A
 Wang, Qiaoni, 60
 Wang, Shuai, 2W
 Wang, Ting, 14
 Wang, Tingyun, 5G, 6Y, 7T
 Wang, Wen N., 5G
 Wang, Yiping, 60
 Wang, Zhaogang, 7N
 Wang, Zhenzhen, 1S
 Weaver, J., 1T
 Webb, David J., 0K, 3K, 5V
 Webster, Lucas Gonçalves, 7W
 Wei, Fang, 6V
 Wei, Jin, 0W, 10, 1K, 3A
 Wei, Yong, 7P
 Wen, Jianxiang, 5G, 74
 Wen, Xiaoyan, 6J
 Werneck, Marcelo M., 2M, 44, 5R, 5U
 Willsch, Michael, 1X
 Wojcik, Grzegorz, 1Z
 Woliński, Tomasz R., 5F, 64
 Wondraczek, Katrin, 2R, 3P
 Wong, R., 0Y
 Woulfe, P., 2I
 Woyessa, Getinet, 2L, 7Y
 Wren, Stephen P., 29, 4M, 6C
 Wu, Bing, 52, 5Y, 6S, 81
 Wu, Chongqing, 7L
 Wu, Huijuan, 4Q
 Wu, Jiangfeng, 1O
 Wu, Jixuan, 53, 6W
 Wu, Qiang, 3F, 5N
 Wu, Xuezhong, 59
 Wu, Yu Tzu, 3Z
 Wysocki, Gerard, 14
 Wysokiński, Karol, 4P
 Xie, Weijing, 84
 Xu, Pengbai, 4Y, 85
 Xu, Yanping, 0L
 Yamamoto, Fumihiko, 3M
 Yan, Dekai, 5Y
 Yan, Donglin, 53
 Yang, Fan, 0W, 10, 1K
 Yang, Haibo, 21
 Yang, Jingyi, 67, 6F
 Yang, Jun, 36, 48, 52, 5Y, 6S, 7G, 7P, 81
 Yang, Minghong, 2A, 6J, 7E, 84
 Yang, Mingwei, 3A
 Yang, Shuang, 4R
 Yang, Xinghua, 7C
 Yang, Yuanhong, 3A, 60
 Yang, Zhisheng, 0J, 1D, 2E
 Yanzhen, Tan, 1K
 Yaron, L., 2X
 Ye, Qing, 6V
 Yoo, Kwang Wook, 6X
 Yoon, Min-Seok, 3L, 5J, 6X
 Yu, F., 55
 Yu, Haihu, 2A, 7E
 Yu, Jianhui, 6H
 Yu, Kuanglu, 7L
 Yu, Zhangjun, 52, 6S, 81
 Yuan, Libo, 1S, 1Y, 21, 36, 48, 52, 57, 5Y, 6A, 6S, 7C, 7G, 7P, 81
 Yuan, Tingting, 21, 7C
 Yuan, Yonggui, 52, 5Y, 6S, 81
 Zadok, Avi, 0G, 2J, 5C, 6N
 Zareanborji, Amirhassan, 4F
 Zen Karam, Leandro, 27, 7R
 Zhang, A. Ping, 1M
 Zhang, Chenglin, 85
 Zhang, Chunyu, 0H
 Zhang, Hao, 53, 6W, 7U
 Zhang, Hongying, 4T, 4Y, 6M, 85

Zhang, Jianzhong, 36, 48, 81
 Zhang, Jun, 6H
 Zhang, Kailiang, 6W
 Zhang, Liang, 6Y
 Zhang, Linqiang, 4Q
 Zhang, Wei, 3K
 Zhang, Weiwei, 4M
 Zhang, Wentao, 7N
 Zhang, Xiaotong, 57, 7C
 Zhang, Yaxun, 1S, 1Y, 7G, 7P
 Zhang, Yu, 1S, 1Y, 7G, 7P, 52, 81
 Zhang, Yu, 52
 Zhang, Zhaochuan, 5N
 Zhao, Enming, 1S, 1Y, 7G, 7P
 Zhao, Hao, 6V
 Zhao, Haoyu, 57, 6A
 Zhao, Yanshuang, 36
 Zhao, Yao, 7L
 Zhao, Ziwen, 74, 7T
 Zheng, Yangzi, 67, 6F
 Zhong, Xing, 21
 Zhou, Ai, 1S, 52, 81
 Zhou, Ciming, 69
 Zhou, Dengwang, 4T, 85
 Zhou, Wuzong, 5A
 Zhou, Yaling, 7F
 Zhu, Shan, 74
 Ziaee, Farzaneh, 4C
 Zibaii, M. I., 0X, 3I, 4E, 72
 Zou, L., 61
 Zucolotto, Valtencir, 2T
 Zuppolini, S., 2G
 Zyczkowski, M., 83

Conference Committees

Conference Chairs

Hypolito José Kalinowski, *General Chair*, Universidade Tecnológica Federal do Paraná (Brazil)
José Luís Fabris, *Technical Co-Chair*, Universidade Tecnológica Federal do Paraná (Brazil)
Wojtek J. Bock, *Technical Co-Chair*, Université du Québec en Outaouais (Canada)

International Steering Committee

Alexis Mendez, MCH Engineering LLC (United States)
Glen A. Sanders, Honeywell International (United States)
Hypolito José Kalinowski, Universidade Tecnológica Federal do Paraná (Brazil)
John Canning, The University of Sydney (Australia)
José Luis Santos, Universidade do Porto (Portugal)
José M. López-Higuera, Universidad de Cantabria (Spain)
Julian D. C. Jones, Heriot-Watt University (United Kingdom)
Luc Thévenaz, École Polytechnique Fédéral de Lausanne (Switzerland)
Nobuaki Takahashi, National Defense Academy (Japan) (retired)
Kentaro Nakamura, Tokyo Institute of Technology (Japan)
Wei Jin, The Hong Kong Polytechnic University (Hong Kong, China)
Wojtek J. Bock, Université du Québec en Outaouais (Canada)
Youngjoo Chung, Gwangju Institute of Science and Technology (Korea, Republic of)

Technical Program Committee

Christopher S. Baldwin, Weatherford International Ltd. (United States)
Clay Kirkendall, U.S. Naval Research Laboratory (United States)
Gabriele Bolognini, Consiglio Nazionale delle Ricerche (Italy)
Geoffrey A. Cranch, U.S. Naval Research Laboratory (United States)
Gilberto Brambilla, University of Southampton (United Kingdom)
João Batista Rosolem, CpqD – Telecommunication Research and Development Center (Brazil)
Juan Hernández-Cordero, Universidad Nacional Autónoma de México (Mexico)
Kazuhide Nakajima, NTT Corporation (Japan)
Pedro Alberto da Silva Jorge, INESC Porto (Portugal)
Pierre Ferdinand, Commissariat à l'Énergie Atomique (France)
Robert A. Lieberman, Lumoptix, LLC (United States)

Steve Sanders, Honeywell Technology (United States)
Takanori Saitoh, Anritsu Corporation (Japan)
Edgar A. Mendoza, Redondo Optics, Inc. (United States)
Koji Omichi, Fujikura Ltd. (Japan)
Anbo Wang, Virginia Polytechnic Institute and State University (United States)
Annamaria Cucinotta, Università degli Studi di Parma (Italy)
Bai-Ou Guan, Jinan University (China)
Bishnu P. Pal, Indian Institute of Technology Delhi (India)
Cicero Martelli, Universidade Tecnológica Federal do Paraná (Brazil) (Brazil)
David J. Webb, Aston University (United Kingdom)
Francis Berghmans, Vrije Universiteit Brussel (Belgium)
Gary R. Pickrell, Virginia Polytechnic Institute and State University (United States)
Hideaki Murayama, The University of Tokyo (Japan)
Jacques Albert, Carleton University (Canada)
José Luís Fabris, Universidade Tecnológica Federal do Paraná (Brazil)
Jürgen Popp, Leibniz Institute of Photonic Technology (Germany)
Katerina Krebber, Bundesanstalt für Materialforschung und –prüfung (Germany)
Kwang-Yong Song, Chung-Ang University (Korea, Republic of)
Li-Bo Yuan, Harbin Engineering University (China)
Manuel López-Amo, Universidad Pública de Navarra (Spain)
Marcelo A. Soto, École Polytechnique Fédérale de Lausanne (Switzerland)
Michel D. F. Digonnet, Stanford University (United States)
Miguel González-Herráez, Universidad de Alcalá (Spain)
Minghong Yang, Wuhan University of Technology (China)
Moshe Tur, Tel Aviv University (Israel)
Ole Bang, DTU Fotonik (Denmark)
Pedro Torres Trujillo, Universidad Nacional de Colombia Sede Medellín (Colombia)
Robert A. McLaughlin, The University of Western Australia (Australia)
Satoshi Tanaka, National Defense Academy (Japan)
Stephen F. Collins, Victoria University (Australia)
Tong Sun, City University London (United Kingdom)
Wacław Urbanczyk, Wrocław University of Technology (Poland)
Xiaoyi Bao, University of Ottawa (Canada)
Yosuke Mizuno, Tokyo Institute of Technology (Japan)
Young-Geun Han, Hanyang University (Korea, Republic of)
Yunjiang Rao, University of Electronic Science and Technology of China (China)
Zuyuan He, Shanghai Jiao Tong University (China)

International Honorary Committee

Alan D. Kersey, CIDRA (United States)
Anna Mignani, CNR IFAC (Italy)
Anthony Dandridge, U.S. Naval Research Laboratory (United States)
Gordon W. Day, IEEE (United States)
Herve Lefevre, iXBlue (France)
Richard Claus, NanoSonic Inc. (United States)
Ryozo Yamauchi, Fujikura Ltd. (Japan)
Thomas Bosselmann, Siemens AG (Germany)
Thomas Giallorenzi, U.S. Naval Research Laboratory (United States)
and The Optical Society (United States)
Marc Voet, FBGS International (Belgium)
Brian Culshaw, University of Strathclyde (United Kingdom)
Byoung Yoon Kim, KAIST (Korea, Republic of)
David D. Sampson, The University of Western Australia (Australia)
David Jackson, University of Kent (United Kingdom)
Eric Udd, Columbia Gorge Research (United States)
John Philip Dakin, University of Southampton (United Kingdom)
Kazuo Hotate, The University of Tokyo (Japan)
Leszek R. Jaroszewicz, Military University of Technology Warsaw
(Poland)
Masamitsu Haruna, Osaka University (Japan)
Ralf Th. Kersten, neuroConn GmbH (Germany)
Reinhardt Willsch, Leibniz Institute of Photonic Technology (Germany)
Wolfgang Ecke, Leibniz Institute of Photonic Technology (Germany)
Yanbiao Liao, Tsinghua University (China)

Brazilian Organizing Committee

Eduardo Fontana, Universidade Federal de Pernambuco (Brazil)
Josiel Urbaninho de Arruda, Instituto Tecnológico de Aeronáutica
(Brazil)
Josemir Coelho Santos, Universidade de São Paulo (Brazil)
Aleksander Sade Paterno, State University of Santa Catarina (Brazil)
Christiano José Santiago de Matos, Universidade Presbiteriana
Mackenzie (Brazil)
João Batista Rosolem, CpqD – Telecommunication Research and
Development Center (Brazil) (Brazil)
Luiz Carlos Guedes Valente, Ouro Negro S.A. (Brazil)

Local Committee

Ana Paula Gebert de Oliveira Franco
Lucieli Rossi
Maura Scandelari Milczewski
Alexandre de Almeida Prado Pohl
Angela Maria Rubel Fanini

Cícero Martelli
Ilda Abe
Ismael Chiamenti
Jean Carlos Cardozo da Silva
Keli Fabiana Seidel
Marcia Muller
Ricardo Canute Kamikawachi
Valmir de Oliveira

Session Chairs

- 1 Workshop on Optical Biosensing with Electromagnetic Surface Waves: SPP on Metals, Bloch Waves on Photonic Crystals
Francesco Michelotti, Università degli Studi di Roma La Sapienza (Italy)
- 2 Workshop on Fiber Optical Sensors in the Field of Electrical Power
Michael Willsch, Siemens AG (Germany)
- 3 Workshop on Fiber Optic Sensors for Oil and Gas Applications
Luiz Carlos Guedes Valente, Ouro Negro S.A. (Brazil)
Alexis Mendez, MCH Engineering LLC (United States)
- 4 Special Session: International Year of the Light and Light-based Technologies
Hypolito José Kalinowski, Universidade Tecnológica Federal do Paraná (Brazil)
- 5 Distributed Sensing
Marcelo A. Soto, École Polytechnique Fédérale de Lausanne (Switzerland)
Gabriele Bolognini, Consiglio Nazionale delle Ricerche (Italy)
- 6 Applications and Techniques
Tomasz R. Woliński, Warsaw University of Technology (Poland)
José M. López-Higuera, Universidad de Cantabria (Spain)
- 7 Sensors for Smart Structures
John Canning, The University of Sydney (Australia)
Steve Sanders, Honeywell Technology (United States)
- 8 Biological and Environmental Sensing
Andrea Cusano, Università degli Studi di Sannio (Italy)
Eduardo Fontana, Universidade Federal de Pernambuco (Brazil)

- 9 Poster Session I
Julian D. C. Jones, Heriot-Watt University (United Kingdom)
João Batista Rosolem, CpqD – Telecommunication Research and Development Center (Brazil) (Brazil)
- 10 New Sensing Concepts and Applications
Rogério Nogueira, Instituto de Telecomunicações - Aveiro (Portugal)
Marcos A. R. Franco, Instituto de Estudos Avançados (Brazil)
- 11 Multiplexed and Networked Sensors
Manuel López-Amo, Universidad Pública de Navarra (Spain)
Waclaw Urbanczyk, Wroclaw University of Technology (Poland)
- 12 Brillouin and Acoustic Sensing
Luc Thévenaz, École Polytechnique Fédéral de Lausanne (Switzerland)
Michel D. F. Digonnet, Stanford University (United States)
- 13 Sensing of Physical Parameters
José Luís Campos Oliveira Santos, Universidade do Porto (Portugal)
Katerina Krebber, Bundesanstalt für Materialforschung und –prüfung (Germany)
- 14 Poster Session II
Youngjoo Chung, Gwangju Institute of Science and Technology (Korea, Republic of)
Josemir Coelho Santos, Universidade São Paulo (Brazil)
- 15 Micro- and Nano-sensors
Wei Jin, The Hong Kong Polytechnic University (Hong Kong, China)
Mateusz J. Śmietana, Warsaw University of Technology (Poland)
- 16 Sensing with Interferometers
Leszek R. Jaroszewicz, Military University of Technology (Poland)
Moshe Tur, Tel Aviv University (Israel)
- 17 Non-conventional Fibre Sensors
Paweł Niewczas, University of Strathclyde (United Kingdom)
- 18 Fiber Devices and Systems
Cicero Martelli, University Tecnológica Federal do Paraná (Brazil)
Glen A. Sanders, Honeywell International (United States)
- 19 Poster Session III
Kentaro Nakamura, Tokyo Institute of Technology (Japan)
Aleksander Sade Paterno, Universidade Federal de Santa Catarina (Brazil)

- 20 Sensors for the Living State
Anna Grazia Mignani, Istituto di Fisica Applicata Nello Carrara (Italy)
Pedro Alberto da Silva Jorge, INESC Porto (Portugal)
- 21 Post-Deadline Papers
José Luís Fabris, Universidade Tecnológica Federal do Paraná (Brazil)
Wojtek J. Bock, Université du Québec en Outaouais (Canada)

Introduction

Since 1983, the International Conference on Optical Fibre Sensors (OFS) assumed the leadership role as a forum for reporting and discussing the latest progress in optical fibre sensors and, more recently, other photonic sensing techniques. The OFS series, held approximately every one and a half years in different venues across the world—rotating the host city between America, Asia and Europe—has established a tradition for providing professionals with a high-quality technical program accompanied by a friendly social schedule.

The 24th International Conference on Optical Fibre Sensors (OFS-24) takes place 28 September to 2 October 2015 at the Pestana Hotel & Convention Centre, Curitiba (Brazil). It is the first time that OFS travels to Brazil, and only the third

edition organized in the southern hemisphere. As with previous editions, highly distinguished plenary speakers, workshop lecturers and invited speakers will present the most recent advances in the field. Technical sessions are comprised of both oral and poster presentations, providing an exciting environment for the discussion of recent achievements and applications. Partners from the industry and services will also display their latest products in the associated Technical Exhibition.

The Brazilian Society for Microwaves and Optoelectronics (SBMO) organized OFS-24 with the cooperation from the Research Group on Photonic Devices and Applications (DIFOTON) of the Federal University of Technology – Paraná (UTFPR). The organizers welcome all attendees.

Hypolito José Kalinowski
OFS-24 General Chair

Conference Support

SPONSORS

PLATINUM SPONSOR

GOLD SPONSOR

INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY

GOLD SPONSOR

GOLD SPONSOR

SILVER SPONSOR

TECHNICAL CO-SPONSORS

SPIE. SICE®

ORGANIZATION