



**Third International Conference on  
Optical reflectometry, metrology & sensing 2020  
September, 23-24, Perm, Russia**

Conference schedule

**DAY 1, September, 23**

**Session 1 - Fiber Optic Distributed Measurements and Metrology  
2:00 PM (+5 GMT) Conference opening, welcome words**



**Avishay Eyal**  
- *Invited speaker*  
Professor, School of Electrical Engineering, Head of the Undergraduate Program,  
Faculty of Engineering, Tel Aviv University, Tel Aviv, ISRAEL  
Talk topic:  
Sinusoidal Frequency Scan OFDR

2:15 PM  
(+5 GMT)



**Soma Sankaran**  
- *Conference partner*  
Vice President of Denselight Semiconductors, SINGAPORE  
Talk topic:  
End to end platform agnostic solutions for sensing and datacom

2:45 PM  
(+5 GMT)



**Gilberto Brambilla**  
- *Invited speaker*  
Professor, Laboratory Head at Optoelectronics Research  
Centre (ORC), University of Southampton, Southampton,  
UNITED KINGDOM  
Talk topic:  
Enhanced-scattering optical fibres for next generation  
distributed sensing

3:00 PM  
(+5 GMT)



**Title and authors**

**Publ.**

**Talk  
mode**

**Qwstns  
mode**

3:30 PM  
(+5 GMT)

**Reflectometer for measuring losses in small-length  
optical fibers based on registration of low-frequency  
Raman scattering**  
*Gorshkov B. G., Gorshkov G. B., Zhukov K. M.*



3:45 PM  
(+5 GMT)

**Evaluation of temperatures and strains discrimination  
possibilities in data obtained by the P-BOTDA method**  
*F.L. Barkov, Yu.A. Konstantinov, V.V. Burdin, A.I.  
Krivosheev*



4:00 PM  
(+5 GMT)

**Some features of fiber optic lines monitoring using  
operating optical fibers**  
*Bobrov V.I., Greenstein M.L., Zyuzin M.S.*



4:15 PM  
(+5 GMT)

**On the minimum uncertainty of the attenuation coefficient measurement in a single-mode optical fiber, achievable using Rayleigh reflectometry**

*M.A. Taranov, B.G. Gorshkov, K.M. Zhukov, M.L. Grinshtein*



4:30 PM  
(+5 GMT)

**Reflectometry method for measuring the length of active optical fibers**

*Belokrylov M.E., Konstantinov Yu.A., Claude D., Seleznev D.A., Stepin A.A., Konin Yu.A., Shcherbakova V.A., Kashina R.R., Latkin K.P.*



## Session 2 - Distributed and other fiber optic sensors



**Boris G. Gorshkov -**

*- Invited speaker, Conference Co-Chair*

**Doctor of Engineering, A.M. Prokhorov Institute of General Physics, Russian Academy of Sciences, Moscow, RUSSIA**



5:00 PM  
(+5GMT)

**Talk topic:**

**Phase OTDR: signal recovery methods, comparative characteristics, sources of errors, applications**

5:30 PM  
(+5 GMT)

**Coherent Optical Frequency Domain Reflectometer Based on a Fiber Laser with Self-Sweeping Frequency for Sensory Applications**

*A. Yu. Tkachenko, N.N. Smolyaninov, M.I. Skvortsov, I.A. Lobach, S.I. Kablukov*



5:45 PM  
(+5 GMT)

**Reflectometric measurement of cryogenic temperatures by the method of bosonic components of the Raman scattering registration in an optical fiber**

*Gorshkov B. G., Gorshkov G. B., Zhukov K. M.*



6:00 PM  
(+5 GMT)

**Achieving an 85-km range of strain & temperature measurements using low coherence Rayleigh reflectometry**

*M.A. Taranov, B.G. Gorshkov, A.E. Alekseev*



6:15 PM  
(+5 GMT)

**Creation of the database for the Brillouin scattering characteristics in different kinds of single-mode optical fibers**

*Bogachkov I.V., Gorlov N.I.*



## Posters - 6:30-7:30 PM (+5GMT)

### Preliminary Reflectometric Configuration Of The WDM-PON Transport Domain Of The 5G Mobile Network Radio Access

Sakhabutdinov A.Zh., Morozov O.G., Morozov G.A., Nureev I.I., Lustina A.A., Anuchin V.O., Kurbiev I.U., Proskuryakov A.D., Kadushkin V.V., Alyushina S.G.



### Quasi-distributed acoustic sensor system for the media movement monitoring in the hollow tube

Feofilaktov S.V., Sakhabutdinov A.Zh., Morozov O.G., Morozov G.A., Nureev I.I., Kulikov E.V., Kurbiev I.U., Proskuryakov A.D., Kadushkin V.V.



### Phase reflectometer response accuracy

Alekseev A.E., Gorshkov B.G., Potapov V.T., Taranov M.A., Simikin D.E.



### Development And Study Of The Model Of A Distributed Calorimetric Fiber Dosimeter Based On The Effect Of Stimulated Brillouin Scattering

Tregubov A.V., Prikhodko V.V., Alekseev A.C., Zhukov A.V.



### Methods and instruments of optical reflectometers calibration with picosecond resolution

Kolmogorov O.V., Schipunov A.N., Donchenko S.S., Prokhorov D.V., Deikun A.V., Chemesova E.V.



### Improvement Of Metrological Methods For OTDRs

Grigoryev V.V., Mityurev A.K., Naumenko E.A., Pogonyshv A.O., Podyukova L.V., Savkin K.B., Tikhomirov S.V.



### Some aspects of modern optical reflectometers metrological support

Grigoryev V.V., Mityurev A.K., Naumenko E.A., Pogonyshv A.O., Podyukova L.V., Savkin K.B., Tikhomirov S.V.



## DAY 2, September, 24

### Session 2, Part 2 - Distributed and other fiber optic sensors



Zinan Wang

- Program Committee member, Invited Speaker  
Full Professor, University of Electronic Science and Technology of China, Chengdu, CHINA



1:30 PM  
(+5 GMT)

Talk topic:  
Single-shot COTDR for distributed strain sensing

2:00 PM  
(+5 GMT)

Creation of fiber tapers by chemical etching for application in fiber sensors and lasers  
Kuznetsov P.I., Sudas D.P., Saveliev E.A.



2:15 PM  
(+5 GMT)

The method of finding the area of an impact in composite material using fiber optical sensors of acoustic emission

S. D. Bochkova, S. A. Volkovsky M. E., Efimov, I. G. Deineka, D. S. Smirnov, E. V. Litvinov



2:30 PM  
(+5 GMT)

**Improvement of the accuracy characteristics of fiber-optic hydroacoustic sonar towed streamer for marine geophysical exploration and seismic surveys**  
*Vlasov A.A., Plotnikov M.Yu., Aleinik A.S., Lavrov V.S., Ashirov A.N., Nikitenko A.N., Varlamov A.V., Kikilich N.E., Kiselev S.S.*



**Macrogroup PHOTONICS LOTTERY! \***



2:45 PM  
(+5 GMT)

### Joint session with International Workshop on Fiber Lasers (Novosibirsk)



3:00 PM  
(+5 GMT)

**Andrei A. Fotiadi**  
*- Invited speaker, Program Committee member*  
**Professor, Laboratory Head at Department of Electromagnetism and Telecommunications, Université de Mons, Mons, BELGIUM**

**Talk topic:**  
**Distributed measurements of the vibration spectrum with a coherent reflectometer employing self-injection-locked semiconductor laser as a master oscillator**



3:30 PM  
(+5 GMT)

**Vladimir A. Burdin**  
*- Program Committee member, Conference Co-Chair*  
**Doctor of Engineering, Professor, Department Chair (PSUTI, Samara)**

**Talk topic:**  
**Algorithms For Processing Of Backscattering Polarization Characteristics Based On Prony Decomposition**



3:45 PM  
(+5 GMT)

**Research on temperature compensation of ultra-high-resolution FBG static strain sensor in crustal deformation observation**  
*Huang W.Z., Zhang W.T., Li F.*



4:00 PM  
(+5 GMT)

**Field Test Of Broadband Fiber Optic Interferometric Seismometer With Modulation Depth Feedback Control**  
*Zhang W.T., Huang W.Z., Wang Y.B., Zhang J.X., Lv B., Yao Y., Li F.*



### Posters, Part 2 - 5:15-6:30 PM (+5GMT)

**Methods of normalizing the response of a phase-sensitive chirp-reflectometer** *Yatseev V.A., Butov O.V.*



**The performance of a coherent reflectometer under conditions of strong local exposure to fiber** *D.M. Bengalski, D.R. Kharasov, E.A. Fomiryakov, S.P. Nikitin, O.E. Nanyi, V.N. Treshchikov*



**Development of an integral-photon interrogator based on a diffraction waveguide grating** *Kazakov I.A., Kontorov S.M., Shipulin A.V., Küppers F.*



**Fiber Optical Sensor For Simultaneous Temperature And Pressure Measurement Using A Fabry-Perot Interferometer And A Fiber Bragg Grating** *Fadeev K. M., Larionov D. D., Zhikina L. A., Minkin A. M., Shevtsov D. I.*



**Bases Of Information Security Of Physical Channels Of Optical Access Networks** *Gorlov N.I., Bogachkov I.V.*



**A Simple Method Of Localizing Events In A Group Of Optical Fibers Reflectograms At One Elementary Cable Part Of A Fiber-Optical Transmission Line** *Burdin A.V., Burdin V.A., Delmukhametov O.R., Evtushenko A.S., Zheludkov M.A., Zaitseva E.S.*



**Investigation of the properties of an all-fiber temperature sensor created using the melting effect** *Konin Yu.A., Bulatov M.I., Shcherbakova V.A., Garanin A.I. Tokareva Ya.D., Mosheva E.V.*



**Response Of The Phase Reflectometer To Homogeneous Influence** *Alekseev A.E., Gorshkov B.G., Potapov V.T., Simikin D.E., Taranov M.A.*



**Evaluation Of The Reflectometric Attenuation Measurements Accuracy Of The Optical Fibers** *Frolov I.V.*



- Means that the Abstracts in Russian or English were published in OR2020 abstracts book. No Full text have been published.



- Means that the Full Articles in Russian and English were published in Instruments and Scientific Techniques Journal as well as the Abstracts in Russian or English were published in OR2020 abstracts book. The titles in these journals may differ.



- Means that the speaker uses media files for the presentation.



- Means that the speaker uses online presentation.

\* MacroGroup invites participants to fill out a questionnaire before 2:00 PM (+5 GMT) on September 24, following the link [https://ru.surveymonkey.com/r/conference\\_mg](https://ru.surveymonkey.com/r/conference_mg). On September 24 at 5:00 PM

(+5 GMT) Macro Group will play the ASE-source of C-band by Denselight among the participants who have filled out the questionnaire. The draw will be randomized and the winner will be selected live. Using the contacts given by the participants in the questionnaire, MacroGroup will contact the winner to clarify the details of sending the prize.

The general sponsor of our conference is Macro Group company. MacroGroup is a supplier of integrated solutions, equipment and components for photonics, as well as a contract manufacturer and developer of electronics with 26 years of experience. The range of offered products includes both their own developments and equipment from the world-known manufacturers in the field of waveguide optics, laser generation systems, spectroscopy, visualization and photovoltaics.

Get more info at: <http://or-2020.permsc.ru/>  
<https://rfl20.iae.nsk.su/en/>  
<https://www.macrogroup.ru/en>

