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«2023 WAVE ELECTRONICS AND ITS APPLICATION IN INFORMATION AND TELECOMMUNICATION SYSTEMS»

(IEEE Conference Record #57201)

29 May to 02 June 2023

CONFERENCE PROGRAM

St-Petersburg
2023

CONFERENCE ORGANIZERS

SAINT PETERSBURG STATE UNIVERSITY OF AEROSPACE INSTRUMENTATION (ST. PETERSBURG, RUSSIA)

IEEE – INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

INSTITUTE OF RADIO AND INFORMATION SYSTEMS – IRIS (VIENNA, AUSTRIA)

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CONFERENCE SECTIONS*

CHAPTER 1. Acoustooptics (*Акустооптика*)

CHAPTER 2. Acoustoelectronics (*Акустоэлектроника*)

CHAPTER 3. Methods and devices of information processing
(*Методы и устройства обработки информации*)

CHAPTER 4. Data processing and transmission in information and telecommunication systems
(*Обработка и передача информации в инфокоммуникационных системах*)

CHAPTER 5. Round table «Acoustoelectronics and acoustooptics: problems, prospects and applications»
(*Круглый стол «Акустооптика и акустоэлектроника: проблемы, перспективы и области применения»*)

CHAPTER 6. Electromechanics and control systems
(*Встроенные микроэлектронные системы*)

CHAPTER 7. Microelectronic Embedded Systems
(*Электромеханика и системы управления*)

CHAPTER 8. Modeling and situational quality management in electronics and instrumentation
(*Моделирование и ситуационное управление качеством в радиоэлектронике и приборостроении*)

CHAPTER 9. Instrumentation and Intelligent Transportation Systems
(*Приборостроение и интеллектуальные транспортные системы*)

CHAPTER 10. Quantum telecommunications
(*Квантовые телекоммуникации*)

*Доклады в программе внутри секций перечислены в алфавитном порядке по фамилии первого автора. По согласованию с председателем секции порядок следования докладов может быть изменен.

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MAY 29
(10:30 – 15:00)

10:00 – 10:30 REGISTRATION OF PARTICIPANTS

10:30 – 15:00 PLENARY SESSION

MAY 30 – JUNE 1

SECTION MEETINGS

JUNE 2
(11:00 – 12:00)

CLOSING OF THE CONFERENCE. SUMMING UP, AWARDING THE BEST SPEAKERS

MAY 30 (10:00 – 17:00)

CHAPTER 1
ACOUSTOOPTICS

V.I. Balakshy, S.N. Mantsevich, M.I. Kupreychik
Lomonosov Moscow State University, Moscow, Russia
DYNAMIC PROCESSES IN A COLLINEAR ACOUSTO-OPTIC GENERATOR BASED ON THE EFFECT OF OPTICAL HETERODYNING

Vladimir N. Belyi, Nikolai A. Khilo, Piort I. Ropot
Institute of Physics of the NAS of Belarus, Minsk, Belarus
Piotr A. Khilo
Sukhoi State Technical University of Gomel, Gomel, Belarus
Sergey V. Kulakov
Saint-Petersburg State University of Aerospace Instrumentation, Saint-Petersburg, Russia
ACOUSTO-OPTIC INTERACTION OF BESSEL LIGHT BEAMS IN THE $LiBi(MoO_4)_2$ CRYSTAL

A.A. Bykov, D.D. Khohlov, A.Yu. Marchenkov
NRU "Moscow Power Engineering Institute", Moscow, Russia;
Scientific and Technological Center of Unique Instrumentation of RAS, Moscow, Russia
Y.A. Eliovich, V.I. Akkuratov
FSRC «Crystallography and Photonics» of RAS, Moscow, Russia
MUELLER-MATRIX STRAIN MAPPING IN TeO_2

Ekaterina I. Kostyleva, Sergey N. Mantsevich
M.V. Lomonosov Moscow State University, Moscow, Russia
QUASICOLLINEAR GEOMETRY OF ACOUSTO-OPTICAL INTERACTION IN MERCURY HALIDE CRYSTALS

M.I. Kupreychik, V.I. Balakshy
Lomonosov Moscow State University, Moscow, Russia
INFRARED ACOUSTO-OPTIC FILTERS BASED ON A BIAXIAL CRYSTAL OF INDIUM IODIDE FOR COMBINED SPECTRAL-POLARIZATION ANALYSIS OF OPTICAL IMAGES

Sergey N. Mantsevich, Grigory D. Slinkov, Vladimir I. Balakshy
M.V. Lomonosov Moscow State University, Moscow, Russia
OPTOELECTRONIC FEEDBACK INFLUENCE ON THE SPECTRAL TRANSMISSION OF COLLINEAR ACOUSTO-OPTIC DIFFRACTION

Pavel A. Nikitin
Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow, Russia; National Research University "Moscow Power Engineering Institute", Moscow, Russia
GAP EFFECT WIDTH BETWEEN ELECTRODE SECTIONS ON THE ACOUSTO-OPTIC DEFLECTOR CHARACTERISTICS BASED ON OPTICALLY ISOTROPIC MEDIUM

N.V. Polikarpova
M.V. Lomonosov Moscow State University, Moscow, Russia
TRANSFORMING ACOUSTIC WAVES TO CREATE ACOUSTO-OPTIC DEVICES

V.E. Pozhar, O.A. Kananykhin
Scientific and Technological Centre of Unique Instrumentation of the Russian Academy of Sciences (STC UI RAS), Moscow, Russia
TWO-CHANNEL SPECTRAL ACOUSTO-OPTICAL SYSTEMS

M.V. Marunin, N.V. Polikarpova
M.V. Lomonosov Moscow State University, Moscow, Russia
NONRECIPROCAL REFLECTION OF ELASTIC WAVES FROM A FREE BOUNDARY IN A PARATELLURITE CRYSTAL

Ildus Sh. Khasanov, Dmitry V. Churikov, Oleg D. Volpyan
Scientific and Technological Centre of Unique Instrumentation of the Russian Academy of Sciences, Moscow, Russia
POLYNOMIAL PROFILE RECONSTRUCTION OF GRADIENT-INDEX THIN FILMS BY SURFACE PLASMON MICROSCOPY BASED ON ACOUSTO-OPTICAL TUNABLE FILTER

V.S. Khorkin
Lomonosov Moscow State University, Moscow, Russia
M.S. Kuznetsov, K.S. Zaramenskikh
State Scientific-Research and Design Institute of Rare-Metal Industry "Giredmet", Moscow, Russia
K.A. Subbotin
Prokhorov General Physics Institute of the Russian Academy of Sciences, Moscow, Russia
ACOUSTIC PROPERTIES OF KRS-5 CUBIC CRYSTAL

MAY 30 (10:00 – 17:00)

CHAPTER 2
ACOUSTOELECTRONICS

Sergei Doberstein (*Member IEEE***), Ivan Veremeev, Vladimir Razgonyaev**
JSC «ONIIP», Omsk, Russia;
Omsk Scientific Center SB RAS (Institute of Radiophysics and Physics Electronics), Omsk, Russia
ASYNCHRONOUS HIGH QUALITY FACTOR STW-RESONATORS WITH SECTIONED REFLECTORS AND GRADUALLY INCREASING PERIOD OF THE ELECTRODES

A.G. Kozlov, T.N. Torgash
Omsk Scientific Center SB RAS (Institute of Radiophysics and Physical Electronics), Omsk, Russia
ANALYSIS OF RESONANT CHARACTERISTICS OF MICROELECTRONIC PIEZOELECTRIC RESONATORS WITH A TOP MOLYBDENUM-ALUMINUM ELECTRODE

Nikolai A. Khilo, Vladimir N. Belyi
Institute of Physics of the NAS of Belarus, Minsk, Belarus
Oleg V. Shakin
Saint-Petersburg State University of Aerospace Instrumentation, Saint-Petersburg, Russia
Piotr A. Khilo
Sukhoi State Technical University of Gomel, Gomel, Belarus
BESSEL ACOUSTIC BEAMS IN TRANSVERSELY ANISOTROPIC TETRAGONAL CRYSTALS

MAY 31 (10:00 – 17:00)

CHAPTER 3.
METHODS AND DEVICES OF INFORMATION PROCESSING

Nikita Andriyanov, Yulia Kamalova
Financial University under the Government of the Russian Federation, Moscow, Russia
Vitaly Dementiev
Ulyanovsk State Technical University, Ulyanovsk, Russia
COMPARISON OF MS CUSTOM VISION AUTO MACHINE LEARNING WITH ALGORITHMS IMPLEMENTATION METHODS

Mikhail Bakulin, Vitaly Kreyndelin, Taoufik Ben Rejeb, Denis Pankratov, Aleksei Smirnov
Moscow Technical University of Communications and Informatics, Moscow, Russia
ITERATIVE DEMODULATION ALGORITHMS IN NOMA SYSTEMS WITH SPARSE CODE SEQUENCES

Viktoriya V. Bozhenko, Tatiana M. Tatarnikova
Saint Petersburg State University of Aerospace Instrumentation "SUAI", Saint-Petersburg, Russia
APPLICATION OF DATA PREPROCESSING IN MEDICAL RESEARCH

Valeriya Bukova, Anastasia Guryleva
Scientific and Technological Center of Unique Instrumentation, Russian Academy of Sciences, Moscow, Russia
APPLICATION SOFTWARE FOR CARDIOVASCULAR AND MUSCULAR STUDIES OF ZEBRAFISH LARVAE

S.E. Grychkin, E.P. Stroganova
Moscow Technical University of Communications and Informatics, Moscow, Russia
"SMART CITY": ELECTROMAGNETIC COMPATIBILITY PROBLEM

Anastasia Guryleva
Scientific and Technological Center of Unique Instrumentation, Russian Academy of Sciences, Moscow, Russia
Mikhail Volkov
Scientific and Technological Center of Unique Instrumentation, Russian Academy of Sciences, Moscow, Russia; ITMO University, Saint-Petersburg, Russia
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Moscow State Scientific and Practical Center for Allergology and Immunology City clinical hospital №52 Ministry of Healthcare of Moscow, Moscow, Russia
Inna Danilycheva
NRC Institute of Immunology FMBA of Russia, Moscow, Russia
DIGITAL IMAGE PROCESSING FOR THE DIAGNOSIS OF THE COLD INDUCIBLE URTICARIA BY PHOTOPLETHYSMOGRAPHY-BASED METHODS

A.E. Denisov, D.P. Danilaev
Kazan National Research Technical University named after A. N. Tupolev – KAI, Kazan, Russia
ESTIMATION OF PARAMETERS OF PHOTONIC ANALOG-TO-DIGITAL CONVERTERS

Aleksandr N. Zabelin, Oleg S. Litvinov
Bauman Moscow State Technical University, Moscow, Russia
RECURRENT NEURAL NETWORK APPLICATION FEATURES TO SUPPRESS NON-STATIONARY INTERFERENCE IN AN ADAPTIVE ARRAY

I.I. Kochegarov, E.A. Danilova, A.V. Lysenko, I.M. Rybakov, N.K. Yurkov
Penza State University, Penza, Russia
A TECHNIQUE FOR DETERMINING RESONANT FREQUENCIES OF THIN-WALLED CYLINDRICAL STRUCTURES FOR ON-BOARD RADIO-ELECTRONIC EQUIPMENT

Vitaly Kreyndelin, Mikhail Bakulin, Taoufik Ben Rejeb, Denis Pankratov, Aleksei Smirnov
Moscow Technical University of Communications and Informatics, Moscow, Russia
COMBINATION OF SPATIAL MULTIPLEXING AND NON-ORTHOGONAL MULTIPLE ACCESS NOMA

MAY 30 (10:00 – 17:00)
MAY 31 (10:00 – 17:00) (резервный день)

CHAPTER 4.
DATA PROCESSING AND TRANSMISSION IN INFORMATION AND TELECOMMUNICATION SYSTEMS

Ilya Averin, Olesya Bolkhovskaya, Anton Elokhin
Lobachevsky University, Nizhny Novgorod, Russia
SIMPLE ANGLE-OF-ARRIVE BASED ALGORITHM FOR INDOOR POSITIONING IN 5G SYSTEMS

S.V. Bezzateev, S.G. Fomicheva
Saint Petersburg University of Aerospace Instrumentations, Saint Petersburg, Russia
G.A. Zhemelev
SPbPU, Saint Petersburg, Russia
TECHNIQUES FOR ACCELERATING ALGEBRAIC OPERATIONS IN AGENT-BASED INFORMATION SECURITY SYSTEMS

T.N. Yelina, S.V. Bezzateev, N.S. Krasnikov
St. Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russia
ANALYSIS OF THE EFFICIENCY OF NEURAL NETWORK TEACHER LEARNING METHODS FOR SOLVING IMAGE CLASSIFICATION PROBLEMS

Ben Rejeb Sofien, Vitaly Kreyndelin
Moscow Technical University of Communications and Informatics, Moscow, Russia
INVESTIGATION OF THE NOISE IMMUNITY OF MMSE AND ZF ALGORITHMS IN MIMO SYSTEMS UNDER CONDITIONS OF CORRELATED FADING

V.A. Bogatyrev
Saint-Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
S.V. Bogatyrev, V.V. Sivov
ITMO University, Saint-Petersburg, Russia
CLUSTER AVAILABILITY MODEL WITH INFORMATION UPDATE FOLLOWING NODE RECOVERY

Olesya Bolkhovskaya, Victor Sergeev, Alexander Maltsev
Lobachevsky University, Nizhny Novgorod, Russia
CRAMER-RAO LOWER BOUNDS FOR THE TASK OF JOINT ESTIMATION OF SIGNAL INITIAL PHASE AND AOA IN MULTI-ELEMENT ANTENNA ARRAYS

MAY 31 (10:00 – 13:00)

CHAPTER 6.
ELECTROMECHANICS AND CONTROL SYSTEMS

I.G. Mamedov (*Member IEEE***), A. J. Abdullayeva (***Member IEEE***)**
Institute of Control Systems ANAS, Baku, Azerbaijan
B.G. Ibrahimov (*Member IEEE***)**
Azerbaijan Technical University, Baku, Azerbaijan
SOME GENERAL CLASSES WELL-POSED THREE-DIMENSIONAL BOUNDARY VALUE PROBLEMS IN THE MIDDLE OF THE DOMAIN FOR HYPERBOLIC EQUATIONS

Oleg G. Morozov (*Senior Member IEEE***), Jerdawi Dahham, Aida Z. Petrova**
Kazan National Research Technical University named after A.N. Tupolev-KAI, Kazan, Russia
Nikita E. Kuvshinov, Rinat Sh. Misbakhov
Innopolis University, Innopolis, Russia
REMOTE TEMPERATURE MONITORING OF MATERIALS PROCESSING IN MICROWAVE REACTOR BASED ON CALORIMETRIC METHOD AND MATRIX OF THERMO-CONVERTERS

Vyacheslav B. Rogozhin
Saint-Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russia
SYSTEM OF ELECTROMECHANICAL PUMPING OF AN OSCILLATORY CIRCUIT WITH ACTIVE RESISTANCE SUPPRESSION

Ayrat Zh. Sakhabutdinov, Oleg G. Morozov (*Senior Member IEEE***), Rustam Sh. Misbakhov**
Kazan National Research Technical University named after A.N. Tupolev-KAI, Kazan, Russia
Alexandr A. Potanin, Ildus U. Kurbiev
SPC "Sensorika", Ltd., Skolkovo, Moscow, Russia
MICROWAVE PHOTONIC APPROACH FOR OPTIC DIFFERENTIAL FLOWMETERS ON TWO FIBER BRAGG GRATINGS

Nikita Tretyakov, Aleksey Bobryshov, Vladimir Kuzmenko, Oksana Solenaja
St. Petersburg State University of Aerospace Instrumentation, Saint-Petersburg, Russia
CONTROL SYSTEM MODELING AND SIMULATION FOR ACTIVE FILTERS OF THE HIGH-FREQUENCY HARMONICS

MAY 30 (15:00 – 18:00)

CHAPTER 7.
MICROELECTRONIC EMBEDDED SYSTEMS

Dmitriy Kleimenkin, Nikolay Prokopenko, Vladislav Chumakov, Marsel Sergeenko
Don State Technical University, Rostov-on-Don, Russia
HIGH-SPEED OPERATIONAL AMPLIFIER WITH NONLINEAR TRANSIENT CORRECTION CIRCUITS IN THE INPUT AND INTERMEDIATE STAGES

Danila A. Luzhaitsev, Artyom O. Turov, Yuri A. Miller, Dmitry S. Hohol, Pavel E. Troyan
Tomsk State University of Control System and Radioelectronics, Tomsk, Russia
DESIGN COMPARING OF MONOLITHIC INTEGRATED CIRCUIT A SINGLE-STAGE TRANSISTOR AMPLIFIER WITH INTEGRATED POWER LIMITER

V.M. Novikov, N.I. Sel'vesyuk
State Research Institute of Aviation Systems (GosNIIAS), Moscow, Russia
V.L. Olenev, E.A. Suvorova
Saint-Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
METHODS FOR THE RELIABILITY AUGMENTATION OF DETERMINISTIC OPTICAL REAL-TIME NETWORKS

Nikolay Prokopenko, Vladislav Chumakov, Marsel Sergeenko
Don State Technical University, Rostov-on-Don, Russia
DIFFERENTIAL AMPLIFIERS AND DAC DISCHARGING CURRENT SWITCHES WITH DIFFERENTIATING TRANSIENT CORRECTION CIRCUITS

Khusen K. Begimov
Tajik State Pedagogical University mamed after Sadriddin Aini, Dushanbe, Tajikistan
Lolai Husenzoda
International University of Tourism and Entrepreneurship of Tajikistan, Dushanbe, Tajikistan
Dilshod C. Ravshanov (*Member IEEE***), Jamoliddin B. Kamolidinov, Asliya S. Rajabova**
Tajik Technical University named after academician M.S. Osimi, Dushanbe, Tajikistan
1 GHZ POWER DIVIDER WITH REDUCED BOARD DIMENSIONS

Lolai Husenzoda
International University of Tourism and Entrepreneurship of Tajikistan, Dushanbe, Tajikistan
Nuriddini Fayz, Dilshod C. Ravshanov (*Member IEEE***), Bahriddin S. Safarov, Rajab S. Umaralizoda**
Tajik Technical University named after academician M.S. Osimi, Dushanbe, Tajikistan
INVESTIGATION OF THE EFFECT OF BOARD THICKNESS ON TAP MINIATURIZATION PERFORMANCE

Elena Suvorova
Saint-Petersburg State University of Aerospace Instrumentation, Saint Petersburg, Russia
DYNAMICALLY RECONFIGURABLE AUTOMATA FOR ESTIMATING INTERACTION BETWEEN DATA FLOWS IN HIGH-PERFORMANCE COMPUTING SYSTEMS

V. E. Chumakov, N.N. Prokopenko, M. A. Sergeenko
Don State Technical University, Rostov-on-Don, Russia
A.V. Kunts
Institute of nuclear problems Belarusian state university, Minsk, Belarus
ARCHITECTURES AND CIRCUITRY OF GAAS OPERATIONAL AMPLIFIERS FOR INSTRUMENTATION AND INTEGRATED MICROELECTRONIC SYSTEMS

N. Yu. Chumakova, E.A. Suvorova
Saint-Petersburg State University of Aerospace Instrumentation, Saint-Petersburg, Russia
DEPENDENCE OF BROADCAST PROPAGATION TIME IN SPACEFIBRE NETWORKS WITH DIFFERENT SPATIAL REDUNDANCY

MAY 31 (10:00 – 13:00)

CHAPTER 9.
INSTRUMENTATION AND INTELLIGENT TRANSPORTATION SYSTEMS

Mikhail Gorodnichev, Moseva Marina
Moscow Technical University of Communications and Informatics, Moscow, Russia
ON THE PROBLEM OF DEVELOPING A FAULT-TOLERANT HIGH-LOADED CLUSTER OF SUPPORT FOR AN INTELLIGENT TRANSPORTATION SYSTEM

M. Yu. Karelina, Doctor of Technical Sciences, Professor
GUU, Moscow, Russia
A.A. Terentyev, V.V. Filatov, A.A. Akulov, D.S. Taldykin
MADI, Moscow, Russia
COMPREHENSIVE DEVELOPMENT OF THE ZONING METHOD WITH ITS SUBSEQUENT IMPLEMENTATION IN A MULTI-CRITERIA VEHICLE LIFE MANAGEMENT SYSTEM

Sergey V. Kozlov, Alexander P. Shabanov
Federal Research Center "Computer Science and Control" Russian Academy of Sciences, Moscow, Russia
Alexander N. Kubankov
Moscow Technical University of Communications and Informatics, Moscow, Russia
UNMANNED AIRCRAFT SYSTEMS IN LOGISTICS PROCESSES WITH NETWORK MANAGEMENT

Mikhail F. Mitsik, Marina V. Byrdina, Igor M. Maltsev, Victoria S. Belysheva
Institute of Service and Entrepreneurship (branch) of DSTU, Shakhty, Russia
APPLICATION OF ROBOTIC DEVICES FOR INFORMATION MODELING IN CIVIL CONSTRUCTION

Grach Mkrtchian, Mikhail Gorodnichev, Sergey Simonov
Moscow Technical University of Communications and Informatics, Moscow, Russia
ABOUT CHOOSING THE AUDIO SIGNAL REPRESENTATION IN THE TASK OF VEHICLE PATTERN RECOGNITION

Marina Moseva, Ksenia Polyantseva
Moscow Technical University of Communications and Informatics, Moscow, Russia
ON METHODS OF VERIFICATION OF MATHEMATICAL MODELS OF TRAFFIC FLOWS ON REAL DATA

MAY 30 (10:00 – 13:00)

CHAPTER 10.
QUANTUM TELECOMMUNICATIONS

E. V. Burlakov, A. V. Korobov
Moscow Technical University of Communications and Informatics, Moscow, Russia
CONTINUOUS-VARIABLE QUANTUM KEY DISTRIBUTION: BACKGROUND AND PERSPECTIVES

G.S. Grishkin, Y.A. Ryvkina, V.I. Kazakov, A.A. Shakhov
St. Petersburg State University of Aerospace Instrumentation (SUAI), Saint Petersburg, Russia
QUANTUM EFFICIENCY OF A SINGLE PHOTON DETECTOR EXPERIMENTAL ESTIMATION

Sergey Ermak, Vladimir Semenov, Olga Ermak
Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia
Alexander Kryachko, Oleg Shakin
Saint-Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russia
USE OF OPTICALLY PUMPED QUANTUM MAGNETOMETERS AS SIGNAL RECEIVERS IN THE ULTRA-LONG WAVELENGTH RANGE

Zaitcev A., Kolesnikov O., Kazieva T., Isaeva L., Yerokhin K.
Moscow Technical University of Communications and Informatics, Moscow, Russia
QUANTUM KEY DISTRIBUTION THROUGH A MULTI-CORE OPTICAL FIBER

N. Ivankov, D. Tupyakov
ITMO University, Saint Petersburg, Russia
R. Goncharov
ITMO University, Saint Petersburg, Russia;
SMARTS-Quanttelecom LLC., Saint Petersburg, Russia
SOLUTION OF THE CONVEX OPTIMIZATION PROBLEM FOR SUBCARRIER WAVE CONTINUOUS-VARIABLE QUANTUM KEY DISTRIBUTION PROTOCOL WITH DISCRETE MODULATION

D.V. Bolotov, S.Y. Kazantsev, N.V. Pchelkina
Moscow Technical University of Communications and Informatics, Moscow, Russia
S.N. Kuznetsov, M.Y. Kernosov
MOSTCOM JSC, Ryazan, Russia
MODULAR FACILITY OF QUANTUM KEY DISTRIBUTION IN A FREE SPACE

T.V. Kazieva
Moscow Technical University of Communications and Informatics, Moscow, Russia;
National Research Nuclear University MEPhI, Moscow, Russia
O.S. Belova, A.G. Temnikov
National Research University "Moscow Power Engineering Institute", Moscow, Russia
D.V. Bolotov, O.V. Kolesnikov
Moscow Technical University of Communications and Informatics, Moscow, Russia
LABORATORY SETUP FOR STUDYING THE EFFECT OF ATMOSPHERIC DISCHARGES ON COMMUNICATION LINES PROTECTED BY QUANTUM KEY DISTRIBUTION TECHNOLOGY

Vladimir G. Popov
JSC Infotecs, Moscow, Russia;
Moscow Institute of Physics and Technology, Dolgoprudniy, Moscow region, Russia;
Financial University, Moscow, Russia
Sergey V. Alferov
JSC Infotecs, Moscow, Russia
Stepan B. Bychkov
All-Russian Research Institute for Optical and Physical Measurement, Moscow, Russia
TESTING OF FIBER-OPTIC LINES FOR QUANTUM KEY DISTRIBUTION

J. Rabenandrasana (*Member IEEE***), N.V. Pchelkina , S.Y. Kazantsev**
Moscow Technical University of Communications and Informatics, Moscow, Russia
P.M. Bokov
North-West University, Potchefstroom, South Africa;
The South African Nuclear Energy Corporation SOC Ltd, Pelindaba, South Africa
K. Matabane
The South African Nuclear Energy Corporation SOC Ltd, Pelindaba, South Africa
WAVEFRONT CONTROL OF WIDE APERTURE LASER BEAMS FOR QUANTUM KEY DISTRIBUTION PROBLEMS IN FREE SPACE

Roman Shakhovoy
Moscow Technical University of Communications and Informatics, Moscow, Russia
NTI Center for Quantum Communications, Moscow, Russia;
NUST MISIS, Moscow, Russia
DIGITIZATION OF A RANDOM SIGNAL FROM THE INTERFERENCE OF LASER PULSES. ISSUE OF RANDOMNESS EXTRACTION FOR A QUANTUM RANDOM NUMBER GENERATOR