

CONFERENCE PROGRAM

**«2026 Systems of Signal Synchronization,
Generating and Processing
in Telecommunications»
SYNCHROINFO**

IEEE Conference Record #70145

30 June – 03 July, 2026

**Petrozavodsk, Russia,
Hotel «Severnaya»,
Petrozavodsk, Lenin Ave., 21**

ORGANIZERS

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
RUSSIA SECTION ED/MTT/AES JOINT CHAPTER
RUSSIA SECTION CAS CHAPTER
INSTITUTE OF RADIO AND INFORMATION SYSTEMS (IRIS)

TECHNICAL PROGRAM COMMITTEE

Chairman of the Program Committee

Alexander V. Pestryakov: Doctor of Science (Engineering), Professor of Moscow Technical University of Communications and Informatics, Moscow, Russia

Vice-Chairman of the Program Committee

Oleg V. Varlamov: Doctor of Technical Sciences, Professor, Chairman of the Institute of Radio and Information Systems Association (IRIS), Senior Member, IEEE

Conference Publication Program Coordinator

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Andrei V. Grebennikov: Ph.D., Sumitomo Electric Europe, UK, Senior Member, IEEE

Oleg G. Morozov: Doctor of Technical Sciences, Professor, Head of the Department of Radiophotonics and Microwave Technologies of KNRTU-KAI, Senior Member, IEEE

Artem S. Adzhemov: Doctor of Technical Sciences, Professor, Member, IEEE

CONFERENCE REGULATIONS

June 30 (Tuesday)

10:00 – 10:30

REGISTRATION OF PARTICIPANTS

10:30 – 12:50

PLENARY SESSION (*конференц-зал, ресторан «Северный»*)

12:50 – 13:00

PHOTOGRAPHING

18:00 – 22:00

CONFERENCE BANQUET

(*Ресторан «Северный», гостиница «Северная»*)

July 01 (Wednesday)

10:00 – 18:00

SECTION MEETINGS*

10:00 – 14:30 Sections 1, 2 (*Малый зал*)

10:00 – 15:00 Section 3 Part I (*Большой зал*)

14:30 – 17:00 Sections 4, 5, 7 (*Малый зал*)

15:00 – 17:00 Section 6 Part I (*Большой зал*)

July 02 (Thursday)

10:00 – 15:00

SECTION MEETINGS*

10:00 – 15:00 Section 3 Part II (*Большой зал*)

10:00 – 13:00 Section 6 Part II (*Малый зал*)

July 03 (Friday)

EXCURSION PROGRAM

08:00 – 22:00

**Время выступления 15 минут (включая вопросы участников), в завершении каждой секции запланировано время на дискуссию*

JUNE 30
PLENARY SESSION

10-30 : 10-55

OPENING SPEECH BY THE CHAIRMAN OF PROGRAM COMMITTEE

«Current State of Measurement Equipment for Television and Radio Engineering»

Alexander V. Pestryakov, *Chairman of the Organizing Committee, Doctor of Technical Sciences, Professor, Moscow Technical University of Communications and Informatics, Moscow, Russia*

10-55 : 11-30

KEY ASPECTS OF DETERMINING THE LEVEL OF FRACTIONAL NOISE IN SYNTHESIZERS WITH FRACTIONAL VARIABLE FREQUENCY DIVIDERS USING DELTA-SIGMA MODULATORS

N.M. Tikhomirov, *Doctor of Technical Sciences, Professor, Voronezh State Technical University, Voronezh, Russia*

Co-authors: A.V. Lenshin, E.V. Shatalov, V.N. Tikhomirov, «Voronezh State University of Forestry and Technologies Named after G.F. Morozov» (VSUFT), Voronezh, Russia

11-30 : 12-05

A NOVEL GENETIC ALGORITHM FOR LOW-COMPLEXITY PAPR REDUCTION IN OTFS MODULATION

Eugeniy Rogozhnikov, *PhD., Associate Professor, Artyom Konovalchikov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia*

Co-authors: Hashem Khaled Rehab, Dmitriy Pokamestov, Kirill Dinochenko, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia

12-05 : 12-40

ON THE ISSUE OF AN INFORMATION MODEL FOR CAREER GUIDANCE IN THE FIELD OF ENGINEERING SCIENCES IN THE DIGITALIZATION OF SOCIETY

Ilya M. Lerner, *Doctor of Technical Sciences, Associate Professor, Aknulla Bashkir State Pedagogical University, Ufa, Russia; KNRTU-KAI, Kazan, Russia*

Co-authors: Marina A. Anikyeva, Siberian Federal University, Krasnoyarsk, Russia, Rashid F. Fayzullin, Yazilya F. Ziatdinova, KNRTU-KAI, Kazan, Russia

12-40 : 12-50

PUBLICATION PROGRAM AND CONFERENCE REGULATIONS: INFORMATION FOR PARTICIPANTS

Svetlana S. Dymkova

PhD., Conference Publication Program Coordinator, Chair of Russia Section TEM/GRS/ITSS Jt. Chapter, Member, IEEE, "Media Publisher" LLC

JULY 01

SECTIONS 1-2
Synchronization Systems and Devices
Signal Generating and Shaping Devices

SECTION CHAIR

Alexander V. Pestryakov, *Chairman of the Program Committee,
Doctor of Science (Engineering), Professor, Moscow Technical University
of Communications and Informatics, Moscow, Russia*

10:00 – 14:30

1. Nikita S. Borisov, Gleb A. Prokurat, Alexander V. Pestryakov

Moscow Technical University of Communications and Informatics, Moscow, Russia
**SIMULATION MODEL OF THE SYNCHRONIZATION SYSTEM IN A 5G
NETWORK**

2. Tammam Z. Dawood, Mikhail S. Stepanov, Hanin N. Karhili

Moscow Technical University of Communications and Informatics, Moscow, Russia

Ghanshyam Singh, Artwell R. Muzata

University of Johannesburg, Johannesburg, South Africa

**JOINT MODELING OF COMPUTING AND RADIO RESOURCES FOR
SMART CAMPUS APPLICATIONS IN NEXT-GENERATION NETWORKS**

3. Anastasia V. Ermakova, A. Y. Kudryashova, Irina S. Kretova, Svetlana N. Smirnova

Moscow Technical University of Communication and Informatics, Moscow, Russia

**APPLICATION OF NEURAL NETWORK ALGORITHMS FOR AUTOMATIC
ADJUSTMENT OF BASE STATION TRANSMITTER POWER BASED ON
SUBSCRIBER DEVICE TELEMETRY**

**4. Karina Khachaturovna Sokolova, Vladimir Vasilyevich Vasiliev, Alexander
Alexandrovich Morochko**

Moscow Technical University of Communications and Informatics, Moscow, Russia

**CONFIGURATION-DEPENDENT AMPLITUDE CHARACTERISTICS OF
A NONCOLLINEAR ANTENNA ARRAY**

5. A.L. Makarevich, S.M. Sokovnich, Yu.V. Zakharova

*State Educational Institution «PSU named after T.G. Shevchenko», Tiraspol, Moldova,
Transnistria*

**CHARACTERISTICS ELEMENT BASE OF QUANTUM DEVICES OPTICAL
INFORMATION TRANSMISSION SYSTEMS**

6. Egor Melikhov, Elena Stroganova

Moscow Technical University of Communications and Informatics, Moscow, Russia

LTE TRAFFIC STRUCTURES AND NETWORK ARCHITECTURE FOR MULTIMEDIA CONTENT DELIVERY OPTIMIZATION

7. Sergei Melnik

International Telecommunication Academy ITA, Moscow, Russia

Elena Petrova

Joint Stock Company TC DT, Moscow, Russia

TIME SYNCHRONIZATION FOR INFORMATION PROTECTION IN THE NEW ICTS

8. Denis Pankratov, Mikhail Bakulin, Vitaly Kreyndelin, Anastasiya Stepanova

Moscow Technical University of Communications and Informatics, Moscow, Russia

OPTIMIZATION OF APPROXIMATION PARAMETERS IN THE SYNTHESIS OF MASSIVE MIMO DEMODULATION ALGORITHMS

9. Alexander Pastukh, Olga Mironova

The M.I. Krivosheev National Research Centre for Telecommunication (NRCT), Moscow, Russia

Valerit Tikhvinskiy

HSE University, Moscow, Russia

PROTECTION OF TERRESTRIAL IMT BASE STATIONS FROM DIRECT-TO-DEVICE SATELLITE SYSTEMS

10. Alexander V. Pestryakov, Alexey E. Mikenin

Moscow Technical University of Communications and Informatics, Moscow, Russia

SPECTRAL CHARACTERISTICS OF A LINEAR PHASE-LOCKED LOOP MODEL WITH AN ADDITIONAL FREQUENCY FEEDBACK LOOP

11. Gleb A. Prokurat, Alexey E. Mikenin

Moscow Technical University of Communications and Informatics, Moscow, Russia

EVENT-BASED APPROACH TO MODELING LTE STACK SYNCHRONIZATION

12. Vladimir G. Sannikov, Valery P. Volchko

Moscow Technical University of Communications and Informatics, Moscow, Russia

STATISTICAL IDENTIFICATION OF LINEAR LINK CHARACTERISTICS

13. M. L. Schwartz, E. A. Bogdanov, V. M. Aladin

Moscow Technical University of Communications and Informatics, Moscow, Russia

SOME ASPECTS OF THE DISTRIBUTION OF TIME SCALES AT POWER FACILITIES OF ELECTRIC GRID COMPANIES

14. Ilya A. Senin, Anastasia V. Ermakova

Moscow Technical University of Communications and Informatics, Moscow, Russia

Vsevolod A. Senin

OOO "Telerend", Moscow, Russia

Artem D. Dymkov

MIREA – Russian Technological University, Moscow, Russia

DESIGN OF A UPMC TRANSMITTER AND RECEIVER FOR TRANSMISSION OVER FREQUENCY-SELECTIVE AND FADING CHANNELS

15. Alexey P. Smirnov, Sergey N. Stepanov, Mikhail S. Stepanov, Margarita G. Kanishcheva, Andrey S. Solomatin

Moscow Technical University of Communications and Informatics, Moscow, Russia

DEVELOPMENT AND ANALYSIS OF A RADIO RESOURCE ALLOCATION MODEL IN MOBILE COMMUNICATION NETWORK USING CARRIER AGGREGATION

16. Michael I. Vekselman

MAXNAVI, LLC, Moscow, Russia

M. L. Schwartz

Moscow Technical University of communications and Informatics, Moscow, Russia

MONITORING AND SELECTING GRANDMASTERS IN PTP V2 NETWORKS USING T4 TIMESTAMP ANALYSIS

17. Ekaterina S. Vetluzhskikh, Galina A. Altukhova, Daniil A. Frolov

National Research University "MPEI", Moscow, Russia

DEVELOPMENT AND SIMULATION OF QUARTZ BIHARMONIC OSCILLATOR CIRCUIT WITH FREQUENCY MULTIPLICITY OF TWO

DISCUSSION & QUESTIONS

JULY 01

SECTION 3 (PART I)
Signal Processing Devices

CHAIR OF SECTION 3 (PART I)

Denis S. Chirov, *Doctor of Science (Engineering), Professor, Moscow Technical University of Communications and Informatics, Moscow, Russia*

10:00 – 15:00

1. Nikita Andriyanov

Financial Univeristy under the Government of the Russian Federation, Moscow, Russia

Vitaly Dementiev

Ulyanovsk State Technical University, Ulyanovsk, Russia

ACCELERATING UAV-BASED AGRICULTURAL FIELD SEGMENTATION USING YOLOV11 AND ROCKCHIP NPU QUANTIZATION

2. Polina V. Apalina, Alexander B. Sergienko

Saint-Petersburg Electrotechnical University “LETI”, Saint Petersburg, Russia

NONCOHERENT RECEPTION OF SIGNALS IN FAST FADING RAYLEIGH CHANNEL USING A TRUNCATED GENERALIZED LIKELIHOOD RATIO TEST

3. M.G. Bakulin, V.B. Kreyndelin,

Moscow Technical University of Communications and Informatics, Moscow, Russia

A.A. Reznov

Moscow Technical University of Communications and Informatics, Moscow, Russia; JSC NTC Atlas, Moscow, Russia

EFFICIENT LOADING OF UNDERUTILIZED CHANNELS: A DISCRETE-INPUT PERSPECTIVE ON FTN AND NOMA

4. D.S. Chirov, A.V. Nikonenko, A.A. Frolov

Moscow Technical University of Communications and Informatics, Moscow, Russia

APPLICATION OF UAV-BASED HOLOGRAPHIC RADAR FOR MAPPING THE EARTH'S SURFACE

5. Dmitry Ivanov, Vladimi Ivanov, Natalya Ryabova, Vladimir Ovchinnikov

Volga State University of Technology, Yoshkar-Ola, Russia

FREQUENCY-TIME INTRAMODE DISPERSION OF HF CHANNELS UNDER CONDITIONS OF MULTIPLE EXCIDING THE COHERENCE BANDWIDTH

6. Vladimir A. Ivanov, Dmitriy V. Ivanov, Natalya V. Ryabova, Aleksey A. Kislitsin
Volga State University of Technology, Yoshkar-Ola, Russia

METHOD OF NETWORK SENSOR DIAGNOSTICS OF REGIONAL AND TEMPORAL VARIATIONS IN THE MAIN PARAMETERS OF THE CHIRPING EFFECT IN WIDEBAND TRANSIONOSPHERIC SATELLITE COMMUNICATION CHANNELS

7. Dmitrii M. Kovalev, Alexander B. Sergienko

Saint-Petersburg Electrotechnical University "LETI", Saint Petersburg, Russia

THROUGHPUT ANALYSIS OF CODED OTFS SYSTEM UNDER FAST FADING CHANNELS

8. Sergey A. Korolev, Nikita S. Borisov, Egor P. Voskresenskiy, Alexander V. Pestryakov

Moscow Technical University of Communications and Informatics, Moscow, Russia

DESIGN AND IMPLEMENTATION OF A NETWORK OF AUTONOMOUS LORA TAGS BASED ON ESP32 AND SX1262

9. Yuri Korchagin, Bogdan Nazarenko

Voronezh State University, Voronezh, Russia

MAXIMUM-LIKELIHOOD DETECTION OF CORRELATED SIGNALS WITH AMPLITUDE AND PHASE MODULATION

10. Vladimir V. Korshunov, Margarita A. Zaeva

National Research Nuclear University "MEPhI", Moscow, Russia

INVESTIGATION OF THE PEAK WINDOWING TECHNIQUE FOR LTE SIGNAL TRANSMISSION

11. V.B. Kreyndelin, E.D. Grigorieva

Moscow Technical University of Communications and Informatics, Moscow, Russia

MMSE DEMODULATOR IMPLEMENTATION WITH LOW NUMBER OF MULTIPLICATIONS

12. Denis Kutuzov, Alexey Osovsky, Nataliya Maltseva, Sergey Martynov, Georgy Popov

Astrakhan State Technical University, Astrakhan, Russia

FUZZY-LOGIC-BASED CONGESTION ESTIMATION IN NETWORK-ON-CHIP ARCHITECTURES USING THE MULTI-WINDOW DISPLAY BENCHMARK

13. **Maksim V. Laso Tuyeve, Sergey A. Podobuev, Andrey N. Serov, Alexandra D. Semenova, Vadim A. Loginov**

National Research University "MPEI", Moscow, Russia

REDUCING OF THE FREQUENCY MEASUREMENT ERROR FOR THE SIGNAL PHASE INCREMENT METHOD BY SUPPRESSING SPECTRAL LEAKAGE

14. **Evgeny M. Lobov, Anastasia D. Grigorieva, Vladimir O. Varlamov**

Moscow Technical University of Communications and Informatics, Moscow, Russia

COMPARISON OF NARROWBAND SUPPRESSION ALGORITHMS IN COMPLEX HF-RANGE CONDITIONS

15. **D.O. Mokhovikov, V.O. Varlamov, V.I. Lipatkin**

Moscow Technical University of Communications and Informatics, Moscow, Russia

COMPARISON OF OFDM AND OTFS SIGNAL ERROR PERFORMANCE IN A WATTERSON CHANNEL

16. **Maxim M. Podgornykh, Denis S. Chirov, Alexey A. Frolov**

Moscow Technical University of Communications and Informatics, Moscow, Russia

AN ALGORITHM FOR IMPROVING THE ACCURACY OF SUBSCRIBER LOCATION ESTIMATION IN LTE NETWORKS

17. **Sergey A. Podobuev, Akim D. Shcherbak, Dmitry A. Chumachenko, Kirill A. Ivanenko, Andrey N. Serov**

National Research University "MPEI", Moscow, Russia

HIGH-ACCURACY MODIFICATION OF THE SPECTRAL LEAKAGE REDUCTION METHOD BASED ON SAMPLE NUMBER ADJUSTMENT

18. **M.M. Ryabchitsky, D.S. Chirov, P.V. Illarionova, A.P. Zuravlev**

Moscow Technical University of Communication and Informatics, Moscow, Russia

UAV SELECTION METHOD IN LTE COMMUNICATION SYSTEMS

19. **Ben Rezheb Sofien, Vitaly Kreindelin**

Moscow Technical University of Communications and Informatics, Moscow, Russia

INVESTIGATING AN ITERATIVE APPROACH FOR HIGH-DIMENSIONAL MU-MIMO SYSTEMS

20. **A.P. Zhuravlev, A.A. Frolov**

Moscow Technical University of Communication and Informatics, Moscow, Russia

COMPARISON OF THE PSK/QAM SIGNAL DEMODULATION QUALITY WITH DIFFERENT CLOCK RECOVERY IMPLEMENTATION

DISCUSSION & QUESTIONS

JULY 02

SECTION 3 (PART II)
Signal Processing Devices

CHAIR OF SECTION 3 (Part II)

Natalia E. Poborchaya, *Doctor of Science (Engineering), Professor,*
Moscow Technical University of Communications and Informatics, Moscow, Russia

10:00 – 15:00

1. A.S. Adzhemov, E.V. Zorina

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ON SOME FEATURES OF SPECTRAL CHARACTERISTICS OF LINEAR
ERROR-CORRECTING CODES WITH MAXIMUM CODING RATE**

2. Grigory Fokin, Nikita Sheremet

*The Bonch-Bruевич Saint Petersburg State University of Telecommunications,
Saint Petersburg, Russia*

**DOA ESTIMATION ACCURACY COMPARISON OF SDR-BASED TESTBED
AND KRAKEN SDR**

3. Anastasiia Y. Kudriashova, Irina S. Kretova, German V. Shilov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**DEVELOPMENT OF A RADIO CONTROL SYSTEM FOR DISTRIBUTED
POWER SUPPLY OF ON-BOARD EQUIPMENT OF UAV**

4. Vladislav Lesnikov, Tatiana Naumovich, Alexander Chastikov

Vyatka State University, Kirov, Russia

MINIMUM-PHASE PROPERTY OF IIR DIGITAL FILTERS

5. Irina V. Manonina, Vladimir V. Shestakov, Ekaterina A. Potapova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**RESEARCH THE EFFICIENCY METHOD THRESHOLD PROCESSING
OF IMAGE**

6. V.Yu. Mikhailov, O.V. Vakulchik, R.B. Mazepa, E.V. Vitomsky

Institute "Radioelectronics, Infocommunications and Information Security", Moscow, Russia

**USING GALOIS FIELD TRANSFORMATIONS TO ACCELERATE DELAY
SEARCH IN A SUBCLASS OF M-SEQUENCES WITH ODD-DEGREE
GENERATING POLYNOMIALS**

7. A.A. Pishcherkov, N.E. Poborchaya

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF SUCCESSIVE INTERFERENCE CANCELLATION
ALGORITHM OPERATION IN RECEIVING A 16-QAM SIGNAL
IN A PD-NOMA SYSTEM WITH USER POWER ALLOCATION
BASED ON FIBONACCI NUMBERS**

8. N.E. Poborchaya, S.A. Zharkikh

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF PARAMETER ESTIMATION METHODS FOR M-QAM
SIGNALS UNDER CAUCHY NOISE**

9. O.B. Popov, T.V. Chernysheva, S.A. Litvin, P.S. Sapronov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**INCREASING THE ACCURACY OF SPECTRAL SIGNAL ANALYSIS
USING COMPLEX DISCRETE COSINE TRANSFORM**

10. Sergey L. Portnoy, Alexey M. Efremov, Andrey D. Voloshin

HSE University, Moscow, Russia

**OPTIMIZATION OF LIST-BASED REED–SOLOMON DECODING VIA
DEEP LEARNING**

**11. Danil V. Raklanov, Sergey L. Portnoy, Andrey D. Voloshin, Ilya A. Chavtaev,
Vladimir V. Kuzmin**

HSE University, Moscow, Russia

**A SOFT-DECISION LIST-DECODING ALGORITHM FOR ERROR
LOCALIZATION CODES**

12. Olga V. Semyonova

Russian Technological University – MIREA, Moscow, Russia

Vladimir O. Skripachev

Expert and Analytical Center, Moscow, Russia

Kirill A. Gaidukov

Russian Technological University – MIREA, Moscow, Russia

**TOEPLITZ CORRELATION MATRIX GENERATION FOR SUPER-
RESOLUTION ANGULAR ESTIMATION OF CORRELATED ARRAY
SOURCES**

13. A.O. Slutskiy, A.S. Adzhemov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**DEPENDENCE OF IMAGE DISTORTIONS ON THE METHOD CODING
DURING DIGITAL TRANSMISSION**

14. **A.S. Senina, T.P. Kosichkina**

Moscow Technical University of Communications and Informatics, Moscow, Russia

OPTIMIZING PARAMETERS IN 5G NR NETWORKS IN MULTI-BAND SCENARIOS

15. **Vladimir Starikov, Grigoriy Fokin**

The Bonch-Bruевич Saint Petersburg State University of Telecommunications, Saint Petersburg, Russia

Vladimir Sevidov

S.M. Budyonny VAS, Saint Petersburg, Russia

RAY TRACING IN RADIO ACCESS NETWORKS OF THE FIFTH AND SUBSEQUENT GENERATIONS. SBR METHOD REALIZATION

16. **Anton Tishkov, Grigoriy Fokin, Vladimir Starikov, Danila Meshcheriakov**

The Bonch-Bruевич Saint Petersburg State University of Telecommunications, Saint Petersburg, Russia

GNSS RTK MEASUREMENTS SPATIAL FILTERING FOR ACCURACY INCREASE IN NLOS SCENARIO

17. **Vladimir I. Tsarik, Sergei V. Smirnov, Victor I. Djigan**

Amungo Navigation, Yerevan, Armenia

CIRCULAR ANTENNA ARRAYS FOR GNSS INTERFERENCE CANCELLERS

18. **Georgii M. Veselov, Ekaterina A. Losikhina, Andrey N. Serov,**

Elizaveta V. Koniushenko, Olga I. Baidakova

National Research University "MPEI", Moscow, Russia

APPLICATION OF DFT WITH A TWO-FOLD REDUCTION IN CONVERSION TIME FOR THE PHASE INCREMENT FREQUENCY MEASUREMENT METHOD

19. **Valery P. Volchkov, Vladimir G. Sannikov**

Moscow Technical University of Communications and Informatics, Moscow, Russia

ALGEBRAIC APPROACH TO THE SYNTHESIS OF FAST ALGORITHMS FOR SIGNAL DECOMPOSITION AND RECONSTRUCTION IN THE HARTLEY-GABOR BASIS

20. **Alexey Volkov, Alexey Solodkov, Igor Sviridov, Ivan Zakharov**

National Research University of Electronic Technology, Moscow, Russia

CONCATENATED CI-BCH CODE CONSTRUCTION WITH INNER ALGEBRAIC CONVOLUTIONAL CODE

DISCUSSION & QUESTIONS

JULY 01

SECTIONS 4, 5, 7

**«Problems of microwave electronics» them V.A. Solntsev
Photonics and mathematics for moving objects
Optical Methods and Devices**

SECTION CHAIR

Andrey A. Yelizarov, *Doctor of Science (Engineering), Professor, National Research University Higher School of Economics, Moscow, Russia, Senior Member, IEEE*

14:30 – 17:00

1. A.V. Bahus, N.S. Kuznetsova, K.Yu. Erokhin, M.V. Sapozhnikov, S.Yu. Kazantsev

Moscow Technical University of Communications and Informatics, Moscow, Russia

CALCULATION OF THE AVAILABILITY OF ATMOSPHERIC OPTICAL COMMUNICATION AT A NUCLEAR ENERGY FACILITY IN JAPAN

2. B.G. Ibrahimov, *Member, IEEE*

Azerbaijan Technical University, Baku, Azerbaijan; National Defense University, Baku, Azerbaijan

R.S. Hasanli, *Member, IEEE*

Nakhchivan State University, Baku, Azerbaijani

A.A. Hamidova, *Member, IEEE*

Azerbaijan Technical University, Baku, Azerbaijan

A.A. Mehdiyev, *Member, IEEE*

Azerbaijan Technical University, Baku, Azerbaijan

RESEARCH OF THE PERFORMANCE FIBER-OPTIC COMMUNICATION NETWORKS UNDER THE IMPACT OF RADIOELECTRONIC INTERFERENCE SOURCES

3. Artemiy A. Ishchenko, *HSE University, Moscow, Russia*

Andrey A. Yelizarov, *Senior IEEE Member*

HSE University, Moscow, Russia; Moscow Technical University of Communications and Informatics, Moscow, Russia

Igor V. Nazarov, Elmira A. Zakirova, *HSE University, Moscow, Russia*

Margarita A. Mashkova, *Moscow Technical University of Communications and Informatics, Moscow, Russia*

RESEARCH OF AN SDR-BASED SPECTRUM VISUALIZATION AND MONITORING TOOL FOR ANALYSIS OF WIRELESS INFORMATION SYSTEMS

4. Ekaterina A. Karaeva, Margarita M. Mashkova

Moscow Technical University of Communications and Informatics, Moscow, Russia

Andrey A. Yelizarov, Senior IEEE Member

Moscow Technical University of Communications and Informatics, Moscow, Russia;

HSE University Moscow, Russia

Artemiy A. Ishchenko, Elmira A. Zakirova

HSE University, Moscow, Russia

COMPARATIVE ANALYSIS OF X-BAND WAVEGUIDE MATCHED LOAD MODELS

5. O.V. Kolesnikov, J. Rabenandrasana, K.I. Efimicheva, K.Sh. Avtandilov, K.Yu. Stepanov

Moscow Technical University of Communications and Informatics, Moscow, Russia

EXPERIMENTAL INVESTIGATION OF HOLLOW-CORE FIBER INTEGRATION IN QUANTUM KEY DISTRIBUTION SYSTEMS USING THE EMQOS 1.0 PLATFORM

6. Alexander S. Kukhareenko

Moscow institute of electronics and mathematics, High school of economics, Moscow, Russia

Gleb Chucha, Hussein Haddy

The school of computer engineering, High school of economics, Moscow, Russia

WAYS OF NUMERICAL MODELING OPTIMIZATION FOR STRUCTURES BASED ON MUSHROOM-TYPE METAMATERIAL

7. Michael M. Mann

RGM Global Ventures, Vienna, Austria

THE HUMAN AS STOCHASTIC ORACLE: DISTRIBUTED COMPUTATION IN SYNTHETIC SOCIAL NETWORKS

8. Alexey E. Mikenin, Gleb A. Prokurat, Anastasia V. Ermakova

Moscow Technical University of Communications and Informatics, Moscow, Russia

FIBER-OPTIC DELAY LINE NOISE IMPACT ON SYNTHESIZER SPECTRUM

9. U.V. Nadirov, Member, IEEE, B.G. Ibrahimov, Member, IEEE

Azerbaijan Technical University, Baku, Azerbaijan

L.M. Aliyeva, Member, IEEE

Nakhchivan State University, Baku, Azerbaijan

RESEARCH PERFORMANCE CHARACTERISTICS OF MULTISERVICE OPTICAL NETWORKS BASED ON MPLS AND WDM TECHNOLOGY

10. **Polina A. Popova, Anastasia A. Suslova**

HSE University, Moscow, Russia

Oleg V. Arinin

LLC NPP “Flix”, Moscow, Russia

Artem I. Katsnelson

HSE University, Moscow, Russia

**GENERATIVE ARTIFICIAL INTELLIGENCE APPROACHES FOR
AUTOMATED MICROWAVE FILTER DESIGN: CLASSIFICATION,
ANALYSIS, AND PERSPECTIVES**

11. **Anastasiya A. Suslova, Polina A. Popova**

HSE University, Moscow, Russia

Oleg V. Arinin

LLC NPP “Flix”, Moscow, Russia

Artem I. Katsnelson, Andrey A. Yelizarov, Senior IEEE Member

HSE University, Moscow, Russia

**INTERPRETABILITY OF NEURAL-NETWORK MODELS FOR THE
SYNTHESIS AND ANALYSIS OF MICROSTRIP MICROWAVE FILTERS:
APPLICATION OF SHAP AND LIME**

12. **Andrey M. Valuev**

*Mechanical Engineering Research Institute named after A.A. Blagonravov of RAS,
Moscow, Russia*

**SIMULATION OF VEHICLES’ MOVEMENT ON A LOCAL AREA
NETWORK WITH MULTIPLE TRAFFIC LIGHT SYSTEMS**

13. **Marina V. Yashina**

Moscow Automobile and Road Construction State Technical University;

Moscow Technical University of Communications and Informatics, Moscow, Russia

Alejandro Castillo

*Moscow Automobile and Road Construction State Technical University, Moscow,
Russia; Cinvestav Unidad Guadalajara, Zapopan, Jalisco, Mexico*

Alexander G. Tatashev, Peter A. Myshkis, Georgy D. Bogatyrev

Moscow Automobile and Road Construction State Technical University, Moscow, Russia

**ANALYSIS OF SPECTRUM FOR CLOSED BUSLAEV CHAIN WITH
ANASYMMETRIC LOCATION OF NODES**

DISCUSSION & QUESTIONS

JULY 01

SECTION 6 (PART I)

**Synchronization of information technology processes
and technological controlling**

SECTION CHAIR

Elena P. Stroganova, *Doctor of Science (Engineering), Professor,
Moscow Technical University of Communications and Informatics, Moscow, Russia*

15:00 – 18:00

1. Vadim Borzov, Egor Rybakov, Marina Moseva, Anastasia Lipatova
Moscow Technical University of Communications and Informatics, Moscow, Russia

**SYNTHETIC IMAGE DETECTION ACROSS DIFFERENT GENERATIVE
MODELS**

2. A.M. Borzenkov, C.B. Pronin, A.A. Podberezkin, A.V. Ostroukh
*Moscow Automobile and Road Construction State Technical University (MADI),
Moscow, Russia*

V.P. Shlyk

MIREA – Russian Technological University, Moscow, Russian Federation

**EXPLAINABLE MODULATION CLASSIFICATION OF RADIO SIGNALS
USING NLP-BASED SIGNAL CONCEPTS**

3. Evelin Bushuev, Sergey Grychkin, Elena Stroganova
Moscow Technical University of Communications and Informatics, Moscow, Russia

**ELECTROMAGNETIC INTERFERENCE IMMUNITY TESTING OF
QUANTUM CRYPTOGRAPHIC COMMUNICATION SYSTEM**

4. Sergei Degtyarev, Andrei Sergeev, Anastasia Lipatova
Moscow Technical University of Communications and Informatics, Moscow, Russia

**DEVOPS-BASED INFRASTRUCTURE FOR AUTOMATED BIG DATA
PROCESSING**

5. D.V. Gadasin, S.A. Palibza, L.A. Tremasova, V.V. Elina
Moscow Technical University of Communication and Informatics, Moscow, Russia
**USING THE LOGISTIC REGRESSION METHOD IN DATA CLUSTERING
TASKS**

6. Sergei Gaponenko, Sergei Degtyarev, Ksenia Polyantseva

Moscow Technical University of Communications and Informatics, Moscow, Russia
ARCHITECTURE OF SEPARATE STORAGE AND PROCESSING OF BIG DATA

8. Sergey E. Grychkin, Elena P. Stroganova

Moscow Technical University of Communications and Informatics, Moscow, Russia
ELECTROMAGNETIC INTERFERENCE IMMUNITY TESTING OF QUANTUM CRYPTOGRAPHIC COMMUNICATION SYSTEM

10. L.N. Isaeva, D.D. Borisova, D.A. Kulagin

Moscow Technical University of Communications and Informatics, Moscow, Russia
SECURITY CONSIDERATIONS IN THE DISTRIBUTED NETWORK ARCHITECTURES

11. Vasily P. Kirnos, Maksim A. Mogulev, Andrey L. Priorov

P.G. Demidov Yaroslavl State University, Yaroslavl, Russia
IMPACT OF TEMPORAL DESYNCHRONIZATION OF SENSOR DATA ON THE ACCURACY OF MODERN SLAM ALGORITHMS

12. Ksenia Polyantseva, Sergei Gaponenko, Sergei Degtyarev

Moscow Technical University of Communications and Informatics, Moscow, Russia
MODIFICATION OF THE GMAPPING ALGORITHM TO IMPROVE THE ACCURACY OF SLAM NAVIGATION USING LIDAR AND ODOMETRY DATA

13. Sergey Simonov, Anna Salova, Anastasia Lipatova, Mikhail Gorodnichev

Moscow Technical University of Communications and Informatics, Moscow, Russia
SMOKE AND WILDFIRE DETECTION USING

14. Andrei Sergeev, Ksenia Polyantseva

Moscow Technical University of Communications and Informatics, Moscow, Russia
A UNIVERSAL MECHANISM FOR MANAGING DATA MART CALCULATION ALGORITHMS

DISCUSSION & QUESTIONS

JULY 02

SECTION 6 (PART II)

**Synchronization of information technology processes
and technological controlling**

SECTION CHAIR

Tatyana A. Kuzovkova, *Doctor of Science, Professor,
Moscow Technical University of Communications and Informatics, Moscow, Russia*

10:00 – 13:00

1. Daniil Glazkov, Kirill Shiskin, Alexander Morochko, Sergey Simonov
Moscow Technical University of Communications and Informatics, Moscow, Russia

**DEPTH-BASED DETECTION VERIFICATION AND ADAPTIVE
SEMANTIC TRAJECTORY PLANNING FOR AUTONOMOUS
OBSTACLE AVOIDANCE OF MINI-UAVS**

2. Dmitry V. Hachatryan, Anton O. Shmanev, E.V. Zhakhovsky, Dmitry A. Krasikov
Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF TRAINING DATASET GENERATION FOR ARTIFICIAL
NEURAL NETWORKS IN ACOUSTIC DIRECTION FINDING**

3. Nikita S. Klyuev, Sergey L. Portnoy, HSE University, Moscow, Russia
Sergey A. Karasev, MT-INTEGRATION, LLC, Moscow, Russia

CONVERGENCE RAILWAY NETWORK MODEL DEVELOPMENT

4. Tatyana A. Kuzovkova, Olga I. Sharavova

Moscow Technical University of Communications and Informatics, Moscow, Russia

Valery O. Tikhvinskiy

Krivosheev National Research Centre for Telecommunication, Moscow, Russia;

The International Information Technology University, Almaty, Kazakhstan

Evgeny E. Devyatkin

Krivosheev National Research Centre for Telecommunication, Moscow, Russia

**THE IMPACT OF SYNCHRONIZATION OF GENERAL AND
TECHNOLOGICAL DEVELOPMENT OF MOBILE COMMUNICATIONS
ON THE EFFECTIVENESS OF BUSINESS MODELS**

5. S.V. Matseevich, A.S. Zakharov, A.Yu. Perlov, N.A. Andrianov

Financial University under the Government of the Russian Federation, Moscow, Russia

**A MULTI-CRITERIA METHOD FOR ASSESSING THE FEASIBILITY OF
QUANTUM COMPUTING IN FINANCIAL TIME SERIES FORECASTING**

6. Said Muratchaev, Alexander Bakhtin, Damir Shaymardanov, Sergey Grigo, Anastasia Volkova
National Research University of Electronic Technology, Moscow, Russia
**DEVELOPMENT OF A STREAMING VIDEO TRANSMISSION SYSTEM
BASED ON MANET**

7. E.A. Parshin, A.S. Zakharov, A.V. Timoshenko, N.N. Fedorov
Financial University under the Government of the Russian Federation, Moscow, Russia
M.F. Bulatov, Lomonosov Moscow State University, Moscow, Russia
**RISK-BASED MODEL OF A DATA TRANSMISSION SYSTEM IN CREDIT
AND FINANCIAL INSTITUTIONS USING QUANTUM COMMUNICATIONS**

8. D.A. Potapchuk, O.A. Tetchenko, A.A. Podberezkin, A.V. Ostroukh
Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia
V.P. Shlyk, MIREA – Russian Technological University, Moscow, Russia
**IEEE 1588 PTP ACCURACY DEGRADATION IN VIRTUALIZED
ENVIRONMENTS WITH SOFTWARE TIMESTAMPING**

9. Tatyana Y. Salutina, Olga I. Sharavova, Tatyana A. Kuzovkova, Galina P. Platunina
Moscow Technical University of Communications and Informatics, Moscow, Russia
**A MECHANISM FOR SYNCHRONIZING THE INFRASTRUCTURE AND
OVERALL DEVELOPMENT OF THE DATA ECONOMY**

10. Elena Suvorova
Saint-Petersburg State University of Aerospace Instrumentation, Saint-Petersburg, Russia
**EVALUATING THE IMPACT OF TIME SYNCHRONIZATION
ACCURACY ON THE QUALITY OF MULTI-AGENT COMPUTER
NETWORK CONTROL SYSTEMS**

11. Polina V. Velmakina, Elena A. Skorodumova
Moscow Technical University of Communications and Informatics, Moscow, Russia
**COMBINATION STRUCTURE AS A FACTOR IN ALGORITHM SELECTION
IN MULTI-LABEL TEXT CLASSIFICATION FOR IT INCIDENT
CATEGORIZATION**

12. A.S. Zakharov, V.P. Ryazansky, N.Yu. Gushan
Financial University under the Government of the Russian Federation, Moscow, Russia
S.F. Boev, Tver State Technical University, Tver, Russia
**METHOD OF SYNCHRONIZATION AND INTEGRATION OF
INFORMATION TO IMPROVE THE EFFICIENCY OF REPAIR
FIELD TEAMS OF AGRICULTURAL HOLDINGS**

DISCUSSION & QUESTIONS