

Institute of Radio and Information Systems (IRIS)
Institute of Electrical and Electronics Engineers (IEEE)
Media Publisher Ltd

International Scientific Conference

**«2026 SYSTEMS OF SIGNALS GENERATING
AND PROCESSING IN THE FIELD
OF ON BOARD COMMUNICATIONS»**

(IEEE Conference # 68869)

10-12 March 2026

CONFERENCE PROGRAM

**Moscow
2026**

CONFERENCE ORGANIZERS

INSTITUTE OF RADIO AND INFORMATION SYSTEMS (IRIS)
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
MEDIA PUBLISHER LTD

CONFERENCE SECTIONS *

1. Antennas and Radio Waves Propagation.
2. Navigation and Mathematical Algorithms of an Object Space Orientation.
3. Radiofrequency Applications.
4. Wire and Optical Communication and Control Systems.
5. Intelligent Transport Systems
6. Digital signal processing in on-board radio systems
7. Electrical and electronic engineering pedagogy

* The reports in the program inside the sections are listed in alphabetical order by the name of the first author. By agreement with the chairman of the section, the order of reports may be changed
(Доклады в программе внутри секций перечислены в алфавитном порядке по фамилии первого автора. По согласованию с председателем секции порядок следования докладов может быть изменен).

CONFERENCE SCHEDULE

CONGRESS CENTER AVIA-PLAZA
Moscow, Aviamotornaya st., 10, bldg. 2, 4th floor

10 March 2026 (Tuesday)

10-00 — 18-00 Visit to the International Festival of Industry Science «CIFR 2026»

11 March 2026 (Wednesday)

10-00 — 10-30 Registration of participants (*регистрация участников*) **Congress Center Hall**

10-30 — 12-30 Plenary session (*пленарное заседание*) **Conference Hall**

12-30 — 15-30 Conference section 1-3 (*работа секций 1-3*) **Conference Hall**

12-30 — 20-00 Conference section 4 (*работа секции 4*) **Room No. 1**

12-30 — 17-30 Conference section 5 (*работа секции 5*) **Room No. 2**

12-30 — 20-00 Conference section 6 (*работа секции 6*) **Room No. 3**

12-30 — 17-30 Conference section 7 (*работа секции 7*) **Room No. 4**

17-30 — 20-00 Annual Reporting Meeting of the IEEE
Russia Section TEM/GRS/ITSS Joint Chapter
(*ежегодное отчетное заседание IEEE Russia Section*
TEM/GRS/ITSS Joint Chapter) **Room No. 4**

12 March 2026 (Thursday)

11-00 — 16-00 Workshops (International Festival of Industry Science «CIFR 2026»)

Moscow, Aviamotornaya st., 10, bldg. 2, 4th floor
March 11, 2026 (Wednesday)
10-30 – 12-30

PLENARY SESSION

10-30 – 10-35 WELCOMING REMARKS

10-35 – 11-05

Report «ELECTRICAL AND ELECTRONIC ENGINEERING PEDAGOGY»

Sarah Malaeb

*Laboratoire Paragraphe EA 349, Ecole Doctorale ED 224 CLI Cognition, Langage, Interaction,
Université Paris 8 Vincennes-Saint-Denis, Saint-Denis, France*

11-05 – 11-30

**Report «FMCW RADAR WITH SIN-FORMED RAMP MODULATION
FOR ADAS»**

Grigory M. Itkin, Principle System Architect ADAS

11-30 – 11-50

**Report «ENERGY-BASED SIGNAL DETECTION IN IRS-ASSISTED
COMMUNICATIONS OVER INVERSE POWER LOMAX FADING
CHANNELS»**

Aleksey S. Gvozdarev, Member, IEEE

P.G. Demidov Yaroslavl State University, Yaroslavl, Russia

co-authors: Tatiana K. Artemova, Dmitry M. Murin, Mikhail A. Bokov,

P.G. Demidov Yaroslavl State University, Yaroslavl, Russia

11-50 – 12-10

**Report «RESEARCHING ALGORITHMS USED TO PREDICT DEFECTS
IN THE SOFTWARE CODE OF TELECOMMUNICATIONS EQUIPMENT»**

Timur Fatkhulin

Moscow Technical University of Communications and Informatics, Moscow, Russia

co-authors: Yuri Leokhin, Svetlana Dymkova, Member, IEEE, Albina Myalicheva

Moscow Technical University of Communications and Informatics, Moscow, Russia

12-10 – 12-20

INFORMATION MESSAGE

Svetlana S. Dymkova

Chair of Russia Section TEM/GRS/ITSS Joint Chapter

*Publication program coordinator of conference «Systems of signals generating and processing
in the field of on board communications», Member, IEEE, Ph.D., CEO of Media Publisher LLC*

12-20 – 13-00 «PHOTO SESSION OF PARTICIPANTS»

March 11, 2026 (Wednesday)
12-30 – 15-30

SECTION 1-3
Antennas and Radio Waves Propagation.
Navigation and Mathematical Algorithms of an Object Space Orientation
Radiofrequency Applications

SECTION CHAIRMENS: **Andrey S. Kryukovsky**, *Doctor of Physical and Mathematical Sciences (radiophysics), professor, USSR State Prize laureate, Head of Department, Russian New University*
Leading Researcher at IRE RAS

Oleg V. Varlamov, *Doctor of Sciences (Engineering), IEEE Region 8, Chair of Russia Section CAS Chapter, Professor of Moscow Technical University of Communications and Informatics, Senior Member, IEEE*

SECTION 1
Antennas and Radio Waves Propagation

1. Vladimir M. Artyushenko

Moscow State University of Geodesy and Cartography, Moscow, Russia

Vladimir I. Volovach

Volga Region State University of Service, Togliatti, Russia;
MIREA – Russian Technological University, Moscow, Russia

STUDY OF THE INFLUENCE OF SLOPES ON A STATISTICALLY UNEVEN SURFACE ON DETERMINING THE SPECIFIC SCATTERING CROSS-SECTION

2. Alexander V. Eponeshnikov, Amir I. Sulimov

Institute of Physics, Kazan Federal University, Kazan, Russia

STATISTICAL RAY TRACING-BASED CHANNEL IMPULSE RESPONSE SIMULATION FOR URBAN ENVIRONMENTS

3. A. F. Kryachko, G. M. Revunov

Saint Petersburg State University of Aerospace Instrumentation, SUAI, St. Petersburg, Russia

VOLUMETRIC INTEGRAL EQUATIONS OF MACROSCOPIC ELECTRODYNAMICS

4. Andrew S. Kryukovsky, Dmitry V. Rastyagaev

Institute of Information System and Engineer-Computer Technology, Moscow, Russia;
Russian New University, Moscow, Russia

MATHEMATICAL MODELING OF THE PROPAGATION OF DECAMETER RADIO WAVES IN MAGNETOACTIVE COLD PLASMA BASED ON THE BICHARACTERISTIC SYSTEM AND SPATIO-TEMPORAL GEOMETRIC DIFFRACTION THEORY

5. S. A. Manenkov, D. V. Krysanov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**GENERALIZATION OF THE MODIFIED METHOD OF DISCRETE SOURCES
TO THE PROBLEM OF WAVE DIFFRACTION BY AN ARBITRARY
THREE-DIMENSIONAL COMPACT SCATTERER**

6. Georgii Reznev

Lomonosov Moscow State University, Moscow, Russia

**CLOSED FORM EXPRESSIONS FOR 2D LOCALIZATION PROBLEM
IN ELECTROMAGNETIC NEAR-FIELD**

SECTION 2

Navigation and Mathematical Algorithms of an Object Space Orientation

1. Yuri Leokhin, Timur Fatkhulin, Svetlana Dymkova, Member, IEEE, Irina Zozulya

Moscow Technical University of Communications and Informatics, Moscow, Russia

**RESEARCHING ALGORITHMS USED TO FORECAST SALES VOLUMES
OF TELECOMMUNICATIONS EQUIPMENT**

2. Danila Meshcheryakov, Grigory Fokin

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

**EXPERIMENTAL STUDY OF GNSS RTK ACCURACY IN LOS
AND NLOS SCENARIO**

3. Nawar Faesal Mohammad, Lilia I. Voronova, Vyacheslav I. Voronov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**EFFICIENCY ANALYSIS OF THE NEWTON-RAPHSON METHOD FOR
SOLVING INVERSE KINEMATICS PROBLEM OF THE KUKA MANIPULATOR**

**4. Alexey E. Mikenin, Gleb A. Prokurat, Artemiy Yu. Fetisov, Anastasia V.
Ermakova, Egor M. Karabasov**

Moscow Technical University of Communications and Informatics, Moscow, Russia

**SOFTWARE MODELING OF A LORA-COMPLIANT TRANSMITTER
IN GNU RADIO**

SECTION 3.
Radiofrequency Applications

1. Nikolay S. Bekushev, Quoc Fung Ngo, Oleg V. Varlamov, Senior Member, IEEE
Moscow Technical University of Communications and Informatics, Moscow, Russia

**DESIGN METHODS OF OUTPHASING TRANSMITTER EXCITER FOR LAB
PROTOTYPING**

2. Margarita A. 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, Electronic Engineering Dept, Moscow, Russia

Oleg V. Arinin

Moscow Technical University of Communications and Informatics, Moscow, Russia

Nikita O. Bulatov, Denis V. Kolyuzhnov

NTS-RRL, Moscow, Russia

**MODELING OF A GNSS PATCH ANTENNA WITH A METAMATERIAL-BASED
FREQUENCY-SELECTIVE SURFACE**

3. D. V. Nikerov, A. P. Zhuravlev, D. V. Grishin, N. V. Pokusin, K. Yu. Ryumshin

Moscow Technical University of Communication and Informatics, Moscow, Russia

**SIMULATION MODELING OF ORBITAL CONSTELLATIONS FOR THE
PERFORMANCE ESTIMATION OF RADAR SATELLITE SYSTEMS**

4. Oleg V. Varlamov, Senior Member, IEEE

Moscow Technical University of Communications and Informatics, Moscow, Russia

**MODELING OF ENVELOPE ELIMINATION AND RESTORATION
TRANSMITTER SIGNAL PROCESSING UNIT NODES**

5. A. A. Suslova, P. A. Popova, A. S. Kurbeteva

HSE University, Moscow, Russia

O. V. Arinin

Moscow Technical University of Communications and Informatics, Moscow, Russia

A. I. Katsnelson

HSE University, Moscow, Russia

**MACHINE LEARNING-BASED AUTOMATED SYNTHESIS OF MICROSTRIP
MICROWAVE FILTERS FOR RADIOFREQUENCY APPLICATIONS**

March 11, 2026 (Wednesday)
12-30 – 20-00

SECTION 4
Wire and Optical Communication and Control Systems

SECTION CHAIRMAN: Sergey N. Stepanov, *Doctor of Sciences (Engineering), Professor*
Moscow Technical University of Communications
and Informatics, Moscow, Russia

1. Vladimir Babkin, Elena Stroganova, Nikita Shagrov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**PROBLEMS OF UNIFIED METHOD DEVELOPING FOR ASSESSING
OF VIDEO DATA TRANSMISSION QUALITY**

2. Kseniya Chepenko, Yuri Leokhin, Timur Fatkhulin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ON THE TASK OF DETECTING DEFECTS IN EXTERNAL STRUCTURES
OF TELECOMMUNICATIONS FACILITIES**

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

Moscow Technical University of Communications and Informatics, Moscow, Russia

Ghanshyam Singh

University of Johannesburg, Johannesburg, South Africa

Artwell R. Muzata

University of Johannesburg, Johannesburg, South Africa

**JOINT RADIO-COMPUTING RESOURCE ALLOCATION MODELING
FOR NEXT-GENERATION NETWORKS**

4. Sergey Grychkin, Elena Stroganova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**TELECOMMUNICATION NETWORK MONITORING USING OF EXEMPLARY
INFORMATION FILES GENERATING METHOD**

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

Azerbaijan Technical University;

National Defense University, Baku, Azerbaijan;

Baku Engineering University, Baku, Azerbaijan

**RESEARCH EFFICIENCY MULTISERVICE TELECOMMUNICATION
SYSTEMS USING THE CONCEPT SDN**

6. L. N. Isaeva, V. I. Korotkova, D. D. Borisova, D. A. Kulagin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF TECHNOLOGIES FOR COUNTERING NETWORK ATTACKS
AT THE LOWER LAYERS OF THE OPEN SYSTEMS INTERCONNECTION
MODEL**

7. Vladimir N. Korshunov, Nikolay I. Likhachev, Nadezhda A. Shishova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**CALCULATION OF SPEED INDICATORS OF OPTICAL TRANSMISSION
SYSTEMS WITH MULTICHANNEL FIBERS**

8. Margarita G. Kanishcheva, Mikhail S. Stepanov, Sergey N. Stepanov,

Elena E. Malikova, Anton V. Savin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF SCENARIOS FOR DIFFERENTIATED SERVICE
OF HETEROGENEOUS TRAFFIC IN MULTI-SERVICE ACCESS NODES**

9. E. A. Knigin, R. F. Rafikov, Z. M. Afanasyev, E. E. Malikova, V. M. Antonova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**APPLYING ARTIFICIAL INTELLIGENCE IN TELECOMMUNICATION
NETWORKS**

10. P. S. Martyanov

*Scientific and Technological Center of Unique instrumentation of the Russia Academy of
Sciences (STC UI RAS), Moscow, Russia*

DETECRION OF HAZARDOUS GASES WITH A UNIVERSAL DEVICE

11. Egor Melikhov, Elena Stroganova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**MULTIMEDIA DATA DELIVERY IN 4G/5G MULTIZONE NETWORKS:
TOPOLOGY AND COVERAGE AREA CALCULATION**

12. A. N. Nabiyeva, Member, IEEE

Azerbaijan Technical University, Baku, Azerbaijan

B. G. Ibrahimov, Member, IEEE

*Azerbaijan Technical University, Baku Engineering University, National Defense University,
Baku, Azerbaijan*

V. P. Shuvalov, Member, IEEE,

Siberian State University of Telecommunications and Informatics, Novosibirsk, Russia

**RESEARCH ON THE PERFORMANCE OF WIRELESS OPTICAL NETWORKS
USING SYSTEM DWDM1**

13. Victor Netes

Moscow Technical University of Communications and Informatics, Moscow, Russia

AN APPROXIMATE METHOD FOR ASSESSING FULL-END AVAILABILITY OF COMMUNICATION NETWORKS

14. Yuriy V. Nemtsov

Russian University of Transport, Moscow, Russia

Konstantin S. Shvartsman

Moscow Technical University of Communications and Informatics, Moscow, Russia

Dmitry S. Stroev

Russian State Social University, Moscow, Russia

Nikita S. Khokhlov

Moscow Technical University of Communications and Informatics, Moscow, Russia

DEVELOPMENT PROSPECTS OF HARDWARE-SOFTWARE SYSTEM FOR MONITORING QUANTUM KEY DISTRIBUTION PARAMETERS

15. Sergey N. Stepanov, Knaj Nouma, Irina V. Stepanova, Tammam Z. Dawood, Margarita G. Kanishcheva

Moscow Technical University of Communications and Informatics, Moscow, Russia

COMPARATIVE STUDY OF STATIC SLICING AND OVERFLOW BASED RESOURCES SHARING FOR VOIP ORIENTED NETWORK

16. Sergei A. Sidnev, Galina S. Artemeva, Liudmila Y. Krasikova, Vladimir A. Tsarenko

Moscow Technical University of Communications and Informatics

DESIGN STUDY OF A FAULT-TOLERANT FIBER-OPTIC ACCESS NETWORK BASED ON THE HEAT SUPPLY INFRASTRUCTURE

17. Alexey N. Terekhov

Moscow Technical University of Communications and Informatics, Moscow, Russia

DATA STORAGE METHOD BASED ON UNARY CODE

March 11, 2026 (Wednesday)

**SECTION 5.
Intelligent transport systems**

12-30 – 17-30

SUBSECTION 1 CHAIRMAN: S.V. Zhankaziev, *Doctor of Technical Sciences, professor, head. Department “Traffic Organization and Safety, Intelligent Transport Systems”, MADI*

SUBSECTION 2 CHAIRMAN: M.V. Yashina, *Doctor of Technical Sciences, Member, IEEE Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia*

Subsection 1

1. Evgeny I. Burikov

LLC XOLOGIE, Khimki, Moscow Region, Russia

Roman S. Runets

Road Innovation Center, Institute of Transport Development, Moscow, Russia; Moscow Automobile and Road Construction State Technical University (MADI), Krasnodar, Russia

Yuri V. Trofimenko

Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia; Scientific and Technical Council of the Russian Highways State Corporation, Moscow, Russia

TECHNOLOGIES FOR MONITORING ENVIRONMENTALLY SIGNIFICANT PERFORMANCE INDICATORS OF PROMISING TRANSPORT SYSTEMS

2. N. G. Kuftinova, A. V. Ostroukh, C. B. Pronin, P. I. Pospelov, A. A. Kotov

Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia

HYBRID DOMAIN-SPECIFIC LARGE LANGUAGE MODEL FOR TRAFFIC ACCIDENT ANALYSIS AND ROAD SAFETY INDEX PREDICTION

3. Andrey A. Kotov, Pavel I. Pospelov

Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia

AI AS AN ENGINEERING SUBJECT: A THEORETICAL FRAMEWORK FOR INTEGRATING LARGE LANGUAGE MODELS INTO INTELLIGENT TRANSPORTATION SYSTEMS

4. Oleg G. Morozov, Senior Member, IEEE, Nikolai A. Petrov, Ilnur I. Nureev, Andrey D. Proskuryakov

Kazan National Research Technical University named after A. N. Tupolev – KAI, Kazan, Republic of Tatarstan, Russia

Aganiyaz Y. Jumaev

State Energy Institute of Turkmenistan, City Mary, Turkmenistan

ON BOARD HYDROSTATIC PRESSURE MONITORING SYSTEM BASED ON TWO CHIRPED FIBER BRAGG GRATINGS WITH A PHASE II-SHIFT FOR AUTONOMOUS UNDERWATER VEHICLES

5. Ilnur I. Nureev, Oleg G. Morozov, Senior Member IEEE, Igor Yu. Muravev, Andrey D. Proskuryakov, Serafim N. Nigmatullin

Kazan National Research Technical University named after A. N. Tupolev – KAI, Kazan, Republic of Tatarstan, Russia

MICROWAVE PHOTONIC UNMANNED AERIAL VEHICLES STRUCTURAL HEALTH MONITORING SYSTEM BASED ON ADDRESS FIBER BRAGG STRUCTURES

6. Roman S. Runets

Road Innovation Center, Institute of Transport Development;

Moscow Automobile and Road Construction State Technical University (MADI), Krasnodar, Russia

Vladislav A. Pastushkov

Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia

Yuri V. Trofimenko

Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia; Scientific and Technical Council of the Russian Highways State Corporation, Moscow, Russia

WAYS TO INCREASE THE ENERGY AND ECOLOGICAL EFFICIENCY OF INTELLIGENT TRANSPORT SYSTEMS OF THE REGION'S SUPPORT ROAD NETWORK

7. Gleb I. Tambovtsev, Pavel V. Plotnikov, Andrei G. Vladyko, Member, IEEE

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

DEEP REINFORCEMENT LEARNING FOR MOBILE RSU ORCHESTRATION IN URBAN V2X NETWORKS

8. S. V. Zhankaziev, A. I. Vorobyev, A.V. Zamytskyh, G. S. Korovin, G. A. Lebedev
Moscow Automobile and Road Construction State Technical University (MADI), Moscow, Russia
**DEVELOPMENT OF A MODULAR ON-BOARD UNIT V2X PROTOTYPE
FOR CONNECTED VEHICLES AND HIGHLY AUTOMATED VEHICLE**

Subsection 2

1. Maxim Fionin, Ksenia Polyantseva

Moscow Technical University of Communications and Informatics, Moscow, Russia
**ADAPTIVE MARITIME VESSEL DETECTION SYSTEM UNDER REDUCED
VISIBILITY CONDITIONS**

2. D. V. Gadasin, S. V. Shevelev, L. A. Tremasova, V. V. Elina

Moscow Technical University of Communications and Informatics, Moscow, Russia
**A METHOD FOR REDUCING THE DIMENSIONALITY OF DATA USED FOR
MACHINE LEARNING USING THE PRINCIPAL COMPONENT ANALYSIS**

3. Mikhail Gorodnichev

Moscow Technical University of Communications and Informatics, Moscow, Russia
**ON THE PROBLEM OF INTERPRETABILITY OF NEURAL ALGORITHMS
FOR PREDICTING MICROSCOPIC TRAFFIC FLOW DATA**

4. K. I. Gorokhov, L. A. Tremasova, D. V. Gadasin, D. D. Gadasin

Moscow Technical University of Communications and Informatics, Moscow, Russia
A SIGN LANGUAGE RECOGNITION MODEL FOR TRANSPORT SYSTEMS

5. Ivan A. Kuteynikov

*Moscow Automobile and Road Construction State Technical University (MADI);
Moscow Technical University of Communications and Informatics, Moscow, Russia*
Marina V. Yashina

*Moscow Automobile and Road Construction State Technical University (MADI);
Moscow Technical University of Communications and Informatics, Moscow, Russia;
Moscow Aviation Institute (Research University), Moscow, Russia*
**DATA-DRIVEN INTELLIGENT RETRIEVAL FOR STOCHASTIC AND
HYDRODYNAMIC TRAFFIC MODELING USING VIDEO ANALYSIS**

6. Marina Moseva, Vadim Borzov

Moscow Technical University of Communications and Informatics, Moscow, Russia
**SEMI-AUTOMATIC GENERATION OF DRIVABLE ROAD NETWORKS FROM
SATELLITE IMAGERY FOR CARLA**

7. Maxim Maslov, Ksenia Polyantseva

Moscow Technical University of Communications and Informatics, Moscow, Russia
**DATA AUGMENTATION AND SCORE FUSION FOR IMPROVED ROBUSTNESS
IN SPEECH DEEPPAKE DETECTION**

8. I. A. Pestova, A. A. Gorbenko, V. M. Zuev

Moscow Technical University of Communications and Informatics, Moscow, Russia

UNIVERSAL ONBOARD COMPLEX OF AN UNMANNED GROUND VEHICLE

9. S. A. Palibza, A.A. Rodina, D. V. Gadasin, D. V. Rulev

Moscow Technical University of Communications and Informatics, Moscow, Russia

**A MULTIMODAL MODEL FOR ANALYZING PUBLICATIONS
OF COPYRIGHTED WORKS**

10. D. I. Rakovskiy

Moscow Technical University of Communications and Informatics, Moscow, Russia

**DETECTION OF RARE ANOMALOUS EVENTS IN UNLABELED DATASETS
USING AUTOENCODERS WITH LSTM LAYERS**

11. O. I. Sheluhin, F. A. Matorin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**SYNTHESIS OF ANDROID APPLICATION NETWORK TRAFFIC USING THE
TABDDPM DIFFUSION MODEL**

12. Andrei Sergeev, Sergei Gaponenko, Ksenia Polyantseva

Moscow Technical University of Communications and Informatics, Moscow, Russia

**INTELLIGENT VEHICLE DAMAGE INSPECTION: DETECTION, MULTI-VIEW
REASONING, AND VLM-BASED REPORT GENERATION**

March 11, 2026 (Wednesday)

SECTION 6.

Digital signal processing in on-board radio systems

12-30-00 – 20-00

CHAIRMAN: Timofey Shevgunov, Ph.D., *Chair of IEEE MTT/ED/AES Moscow Chapter, Moscow Aviation Institute (National Research University), Moscow, Russia, Senior Member, IEEE*

1. A. A. Akhmetdinov, D. D. Lagutin, A. A. Klushin, A. M. Potashnikov
Moscow Technical University of Communications and Informatics, Moscow, Russia
**ANALYSIS OF THE IMPACT OF TRAINING DATASETS
ON THE PERFORMANCE OF SRCNN AND FSRCNN MODELS**

2. German Berezin, Anastasiia Lipatova
Moscow Technical University of Communications and Informatics, Moscow, Russia
**EFFICIENT RUSSIAN-ENGLISH NEURAL MACHINE TRANSLATION
WITH ARCHITECTURAL OPTIMIZATIONS**

3. D. S. Chirov, E. O. Kandaurova, A. A. Frolov, A. A. Tolasova
Moscow Technical University of Communications and Informatics, Moscow, Russia
APPLICATION OF FTN SIGNALS IN UAVS COMMUNICATION SYSTEMS

4. Victor I. Djigan
Institute of Microdevices and Control Systems National Research University of Electronic Technology, Moscow, Russia
**REAL-VALUED ARITHMETIC LINEARLY-CONSTRAINED ADAPTIVE
ARRAYS FOR GNSS APPLICATIONS**

5. Svetlana F. Gorgadze, Roman N. Gishchenkov
Moscow Technical University of Communications and Informatics, Moscow, Russia
**GENERATING AND PROCESSING BROADCAST SIGNALS OF RADIO
ACCESS SYSTEMS USING THE GENERALIZED FAST FOURIER
TRANSFORM**

6. Aleksey S. Gvozdarev, Member, IEEE, Tatiana K. Artemova, Dmitriy M. Murin
Institute of Information Security, P.G. Demidov Yaroslavl State University, Yaroslavl, Russia
Mikhail A. Bokov
P.G. Demidov Yaroslavl State University, Yaroslavl, Russia
**NUMERICAL ANALYSIS OF ERROR RATE REDUCTION IN IRS-ASSISTED
COMMUNICATIONS WITH HEXAGONAL QAM CONSTELLATIONS**

7. E. M. Lobov, A. D. Grigorieva, E. O. Lobova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**RESEARCH ON CHANNEL ESTIMATION PERFORMANCE DURING
ORTHOGONAL WIDEBAND SIGNAL ENSEMBLE PROCESSING
IN THE HIGH FREQUENCY RANGE**

8. O. B. Popov, T. V. Chernysheva, K. V. Orlov, P. S. Sapronov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ESTIMATION OF THE COMPLEX TRANSMISSION COEFFICIENT
OF ACOUSTIC SYSTEMS BASED ON A REAL SIGNAL**

9. Konstantin Yu. Ryumshin, Angela I. Sattarova

Moscow Technical University of Communications and Informatics, Moscow, Russia

**ANALYSIS OF CHANNEL ENCODERS AND ENERGY CHARACTERISTICS
PERFORMANCE OF LORA IN IOT APPLICATIONS**

10. Angela I. Sattarova, Konstantin Yu. Ryumshin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**SIMULATION OF THE C-OCHDM CASCADE MULTIPLEXING
COMMUNICATION SYSTEM BASED ON DE BRUIJN SEQUENCES**

11. Nikita Vasilev, Andrey Timchuk

Moscow Technical University of Communication and Informatics, Moscow, Russia

**RU-MIPHER: A SPEECH RESTORATION MODEL LEVERAGING SSL,
SPEAKER, AND LINGUISTIC REPRESENTATIONS**

12. Vsevolod Y. Vinetsky, Andrey V. Balobanov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**MULTI-CAMERA TRACKING OF MULTIPLE OBJECTS: ANALYSIS
OF FACTORS AFFECTING TRACKING ACCURACY**

13. Gleb A. Voronkov, Andrei V. Balobanov

Moscow Technical University of Communications and Informatics, Moscow, Russia

**PLER: A NOVEL FULL-REFERENCE METRIC FOR EVALUATING
THE GEOMETRIC FIDELITY OF 3D ASSETS**

**14. Vitaly B. Kreyndelin, Denis Y. Pankratov, Ilya M. Dubrovkiy, Andrey A. Reznev,
Alexandra V. Pakhomova**

Moscow Technical University of Communications and Informatics, Moscow, Russia

**MATHEMATICAL MODELS AND PERFORMANCE ANALYSIS
OF THE MISO-WSMA SYSTEM FOR UPLINK COMMUNICATION**

15. Alexander Sak

Moscow State University of Civil Engineering, Moscow, Russia

Irina Sak

Russian State Agrarian University – Moscow Timiryazev Agricultural Academy, Moscow, Russia

**EVALUATING COMPLEX SYSTEMS EFFICIENCY BY MEANS
OF SEMI-SUPERVISED LEARNING**

16. Don Cher Tsoy, Lev M. Kazadaev, Vladislav I. Lipatkin, Konstantin Yu. Ryumshin

Moscow Technical University of Communications and Informatics, Moscow, Russia

**DEVELOPMENT OF A MATHEMATICAL MODEL FOR ESTIMATING
THE ENERGY EFFICIENCY AND THROUGHPUT OF A DECENTRALIZED
LORA NETWORK WITH ACCOUNT FOR DYNAMICALLY CHANGING
SIGNAL PROPAGATION CONDITIONS**

17. Julia Timoschuk, Taoufik Ben Rejeb

Moscow Technical University of Communication and Informatics, Moscow, Russia

PERFORMANCE ANALYSIS OF COMBINED PD-SCMA SYSTEM

March 11, 2026 (Wednesday)
12-30 – 17-30

SECTION 7.
Electrical and electronic engineering pedagogy

SECTION CHAIRMAN: *Sergei L. Yablochnikov, Doctor of Pedagogical Sciences, Professor, National Research University, Moscow Power Engineering Institute; Plekhanov Russian University of Economics, Moscow, Russia*

1. Anastasia V. Ermakova

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PROBLEM OF MACHINE-GENERATED TEXTS IN THE ACADEMIC ENVIRONMENT OF STUDENTS

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