



IEEE



IEEE
UKRAINE SECTION

TCSET'2016

CONFERENCE PROGRAM

XIIIth 2016 International Conference

**“MODERN PROBLEMS OF RADIO
ENGINEERING, TELECOMMUNICATIONS,
AND COMPUTER SCIENCE”**

**Lviv-Slavske, Ukraine
February 23-26, 2016**

TCSET'2016

XIIIth 2016 International Conference
“Modern Problems of Radio Engineering, Telecommunications, and Computer
Science”

Organized by

Ministry of Education and Science of Ukraine
Lviv Polytechnic National University
Warsaw University of Technology, Poland
Wroclaw University of Technology, Poland
Military University of Technology, Poland

in Technical Co-Sponsorship with

IEEE Ukraine Section

in cooperation with

IEEE /MTT/ED/AP/CPMT/SSC West Ukraine Chapter

Sponsors:



Biophysical Tools GmbH
www.biophysical-tools.de



ROHDE & SCHWARZ

Rohde & Schwarz Representative Office Ukraine
<http://www.rohde-schwarz.com.ua/>

ORGANAZING COMMITTEE

Chair

Prof. **Ivan Prudyus**, Director of Institute, Lviv Polytechnic National University

Chair's Deputy

Prof. **Myroslav Kiselychnyk**, Professor, Lviv Polytechnic National University

Conference Secretary

Assoc. Prof. **Leonid Ozirkovskyy**, Dean, Lviv Polytechnic National University

Working Group

Daria Bachyk, Assistant Professor, Lviv Polytechnic National University

Ihor Kulyk, Assistant Professor, Lviv Polytechnic National University

Orest Lavriv, Senior Lecturer, Lviv Polytechnic National University

Members of the Committee

Prof. Berkman L., (Kyiv, Ukraine)

Prof. Bolshakova I., (Lviv, Ukraine)

Prof. Bondarev A., (Lviv, Ukraine)

Prof. Dabrowski T., (Warsaw, Poland)

Assoc. Prof. Fast V., (Lviv, Ukraine)

Prof. Gepko I., (Kyiv, Ukraine)

Prof. Grudzinski E. (Wroclaw, Poland)

Prof. Kaniewski P., (Warsaw, Poland)

Assoc. Prof. Korzh R., (Lviv, Ukraine)

Kostiv M., (Lviv, Ukraine)

Prof. Kozhukhar O., (Lviv, Ukraine)

Prof. Kryshchuk V., (Zaporizhzhya, Ukraine)

Prof. Kryzhanovskyy V., (Donetsk, Ukraine)

Prof. Kychak V., (Vinnytsya, Ukraine)

Prof. Lemeshko O., (Kharkiv, Ukraine)

Prof. Lobur M., (Lviv, Ukraine)

Prof. Matuszewski J., (Warsaw, Poland)

Prof. Mosorov V., (Lodz, Poland)

Prof. Mykhaylov S., (Odesa, Ukraine)

Prof. Nedostup L.A., (Lviv, Ukraine)

Prof. Pavlysh V., (Lviv, Ukraine)

Prof. Politanskyy L., (Chernivtsi, Ukraine)

Prof. Rybin O., (Kyiv, Ukraine)

Prof. Skachkov V., (Odesa, Ukraine)

Prof. Sunduchkov K., (Kyiv, Ukraine)

Prof. Zakharchenko M., (Odesa, Ukraine)

Prof. Zelenskyy O., (Kharkiv, Ukraine)

PROGRAM COMMITTEE

Chair

Prof. **Yuriy Bobalo**, Rector, Lviv Polytechnic National University

Chair's Deputy

Prof. **Mykhailo Klymash**, Head of the Department, Lviv Polytechnic National University

Members of the Committee:

Prof. Andriychuk M., (Lviv, Ukraine)
 Prof. Bezruk V., (Kharkiv, Ukraine)
 Prof. Bluvband Z., (Tel Aviv, Israel)
 Prof. Bobytskyy Ya., (Lviv, Ukraine)
 Prof. Druzhinin A., (Lviv, Ukraine)
 Prof. Dubrovka F., (Kyiv, Ukraine)
 Prof. Dyvak M., (Ternopil, Ukraine)
 Prof. Fedasyuk D., (Lviv, Ukraine)
 Prof. Georgiev G., (Veliko Tyrnovo, Bulgaria)
 Prof. Gotra Z., (Lviv, Ukraine)
 Prof. Hahanov V., (Kharkiv, Ukraine)
 Prof. Ilchenko M., (Kyiv, Ukraine)
 Prof. Jo Minho, (Seoul, S. Korea)
 Prof. Kartashov V., (Kharkiv, Ukraine)
 Prof. Kawalec A., (Warsaw, Poland)
 Prof. Kevanishvili G., (Tbilisi, Georgia)
 Prof. Khlopov H., (Kharkiv, Ukraine)
 Prof. Kyrylenko O., (Kyiv, Ukraine)
 Prof. Levin B., (Holon, Israel)
 Prof. Lukin V., (Kharkiv, Ukraine)
 Prof. Luntovskyy A., (Drezden, Germany)
 Prof. Mandziy B., (Lviv, Ukraine)
 Prof. Mikolajuk K., (Warsaw, Poland)
 Prof. Modelski Y., (Warsaw, Poland)
 Prof. Nichoga V., (Lviv, Ukraine)
 Prof. Oleksenko P., (Kyiv, Ukraine)
 Prof. Osowski S., (Warsaw, Poland)
 Prof. Pavlov S., (Vinnytsia, Ukraine)
 Prof. Popovskyy V., (Kharkiv, Ukraine)
 Prof. Romanyshyn Y., (Lviv, Ukraine)
 Prof. Rusyn B., (Lviv, Ukraine)
 Prof. Schill A., (Dresden, Germany)
 Prof. Shubitidze F., (Dartmouth, USA)
 Prof. Shynkaruk O., (Khmelnitsky, Ukraine)
 Prof. Stachiv P., Lviv, Ukraine)
 Prof. Trzaska H., (Wroclaw, Poland)
 Prof. Voloshanovski V., (Geneva, Switzerland)
 Prof. Vorobiyenko P., (Odesa, Ukraine)
 Prof. Wnuk M., (Warsaw, Poland)
 Prof. Yakymenko Yu., (Kyiv, Ukraine)
 Prof. Yanovskyy F., (Kyiv, Ukraine)
 Prof. Yashchyshyn Ye., (Warsaw, Poland)
 Prof. Zaridze R., (Tbilisi, Georgia)
 Prof. Zubkov A., (Lviv, Ukraine)

CONFERENCE SECTIONS

S1	Theory of electronic circuits and signals
S2	Mathematical simulation in radio electronics, communications and computer engineering
S3	Antennas and microwave technology
S4	Radioelectronic devices and systems
S5	Electronics and photonics: systems and devices, micro- and nanotechnologies
S6	Information systems: construction, operation and security
S7	Quality and reliability of radioelectronic and communication devices and systems
S8	Infocommunication systems and networks
S9	Information processing
S10	Biotechnical and medical devices and systems
S11	Information technologies in educational process
S12	Telecommunication systems and networks

CONFERENCE SCHEDULE

Tuesday February, 23	Wednesday February, 24	Thursday February, 25	Friday February, 26
13.00-15.00 Registration	10.00-13.00 S2, S4(1), S6(1), S12	Excursion Day	09.00-12.00 S1, S3, S9, S10
15.00-19.00 Conference opening Plenary Session	15.00-19.00 S5, S4(2), S6(2), S8		13.00-15.00 S7, S11
	20.00 Welcome party		15.30-16.30 Final Session

Paper presentation at the plenary session – 30 min

Paper presentation at the regular session – 10 min

Discussion – 10 min

Discussion – 5 min

CONFERENCE OPENING

Tuesday, February, 23

15.00 – 15.30

1	<i>Yuriy Bobalo</i> Welcome speech Rector, Lviv Polytechnic National University
2	<i>Ivan Prudyus</i> Participants congratulation Head of Institute of Telecommunications, Radioelectronics and Electronic Devices, Lviv Polytechnic National University

PLENARY SESSION

Tuesday, February, 23

15.30 – 19.00

Co-Chairs:

Prof., DSc **Yuriy Bobalo** Lviv Polytechnic National University

Prof., DSc **Ivan Prudyus** Lviv Polytechnic National University

1.	<i>A. Zubkov, I. Prudyus, J. Krasnik, S. Martynenko, S. Myronyuk, V. Yunda, A. Shcherba</i> Multispectral radioelectronic system of remote monitoring. Scientific and technical basis and spheres practical application Lviv, Dnipropetrovsk, Ukraine, Hetman Petro Sahaidachny National Army Academy, National University Lviv Polytechnic, Yuzhnoye State Design Office
2.	<i>Przemyslaw Piasecki, Yevhen Yashchyshyn</i> 120 GHz – 135 GHz CPWG to Dielectric Waveguide Transition and Its Capability With Using Different LTCC Materials Warsaw, Poland, Warsaw University of Technology
3.	<i>Oleksandr Lemeshko, Oleksandra Yeremenko</i> Dynamic Presentation of Tensor Model for Multipath QoS-Routing Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
4.	<i>Valeriy Bezruk, Yulia Skorik</i> Multi-criteria selection of optimum means of telecommunications Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
5.	<i>Aleksey G. Vostretsov, Veniamin A. Bogdanovich, Nikita S. Khailo</i> Adaptive Asymptotically Robust Invariant Detection of Signals in Uncertain Noise Environments Saint-Petersburg, Novosibirsk, Russia, JSC “VNIIRA”, Novosibirsk State Technical University

6.	<p><i>Inessa Bolshakova, Yaroslav Kost, Fedir Shurygin, Oleksandr Vasyliev</i> Sensor Systems for Magnetic Diagnostics of Fusion Reactors and Accelerators. 20-year Experience of Magnetic Sensor Laboratory NULP in the International Activities: Achievements and Perspectives Lviv, Ukraine, Lviv Polytechnic National University</p>
7.	<p><i>Anatoliy Semenko, Volodymyr Tolubko, Natalia Bokla, Klaus Kabich, Aleksandr Dementiev</i> Use of wireless telecommunication system with code channels division based on modified pseudorandom Gold sequences for the information transmission from surveillance cameras Kyiv, Dresden, Ukraine, Germany, State University of Telecommunications, TUD</p>
8.	<p><i>Vladimir Barannik, Andrii Krasnorutskiy, Yu. N. Ryabukha, D.E. Okladnoy</i> Model intelligent processing of aerial photographs with a dedicated key features interpretation Kharkiv, Ukraine, Kharkiv university of Air Forces n.a. Ivan Kozhedub</p>
9.	<p><i>Maksym Garbuz</i> Review of modern test and measurement instruments from Rohde & Schwarz engineer of Rohde & Schwarz Representative Office Ukraine</p>
10.	<p><i>Kateryna Prasol, Claus Fütterer</i> Precise Microflow Control in Lab-on-a-Chip and Organ-on-a-Chip as Future Applications Leipzig, Germany, Biophysical Tools GmbH</p>

SECTION 1

Theory of electronic circuits and signals

Friday, February 26

09.00 – 12.00

Co-Chairs:

Prof., DSc **Bohdan Mandziy**, Lviv Polytechnic National UniversityProf., DSc **Petro Stakhiv**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>Yuriy Shapovalov, Bohdan Mandziy, Dariya Bachyk, Marian Turyk</i> The adequacy of analysis of linear periodically-time-variable circuits by the frequency symbolic method in the time domain Lviv, Ukraine, Lviv Polytechnic National University
2.	<i>Bohdan A. Sus', Bohdan B. Sus'</i> Wave-particle nature of radio waves Kyiv, Ukraine, Military Institute of Telecommunications and Information
3.	<i>Oleh Liura, Ivan Ostrovka, Iryna Sabadash, Yaroslav Nykolaichuk</i> Theoretical principles and methods of distortions recognition in load surges, short circuits and powerful electric drives launching type power lines Lviv, Ivano-Frankivsk, Ternopil, Ukraine, Lviv Polytechnic National University, Ivano-Frankivsk National Technical University of Oil and Gas, Ternopil National Economic University
4.	<i>Andriy Samila, Galina Lastivka, Leonid Politansky</i> A computational model of signal transformations in pulsed NQR spectrometer Chernivtsi, Ukraine, Yuriy Fedkovych Chernivtsi National University
5.	<i>Dmytro Vovchuk</i> The parameters hiding estimation of chaotic communication systems Chernivtsi, Ukraine, Yuriy Fedkovych Chernivtsi National University
6.	<i>Alla Dudnyk, Vitaliy Lysenko</i> Automation of biotechnological objects Kyiv, Ukraine, National University of Life and Environmental Sciences of Ukraine
7.	<i>Victor Tikhonov, Abdullah Taher</i> Orthogonal Quasi Harmonic Piece-wise Linear Functions Based on IQ Modulation Technique Odesa, Ukraine, O.S. Popov Odesa National Academy of Telecommunications

8.	<i>Vladimir Barannik, S.A. Podlesny, Kostya Yalivets, Ali Bekirov</i> The analysis of the use of technologies of error resilient coding at influence of an error in the codeword Kharkiv, Ukraine, Kharkiv university of Air Forces n.a. Ivan Kozhedub
9.	<i>Petro Stakhiv, Eugeniusz Rosolowski, Oksana Hoholyuk</i> Prospects of Discrete Macromodels Usage for Calculation of Electric Power Systems Modes Lviv, Wroclaw, Łódź, Ukraine, Wroclaw University of Technology, Lviv Polytechnic National University, Technical University of Łódź
10.	<i>Roman Yankevych</i> An Installation for the Poly-phase Signals' Investigation Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>Andrii Kuzyk</i> Comparative analysis of complex signals based on continuous and discrete frequency modulation Lviv, Ukraine, Lviv Polytechnic National University

SECTION 2
**MATHEMATICAL SIMULATION IN RADIO ELECTRONICS,
 COMMUNICATIONS AND COMPUTER ENGINEERING**

Wednesday, February 24

10.00 – 13.00

Co-Chairs:

Prof., DSc **Mykola Dyvak**, Ternopil National Economic University
 Prof., DSc **Konstantin Sunduchkov**, National Technical University of
 Ukraine “Kyiv Polytechnic Institute”

ORAL SESSION

1.	<p><i>Sunduchkov Konstantin, Irina Tymchenko, Evgeniya Svetsinskaya, Ilya Kubasov</i></p> <p>Heterogeneous Distributed Access Network with Satellite Radio Channels</p> <p>Kyiv, Ukraine, National Technical University of Ukraine “Kyiv Polytechnic Institute”</p>
2.	<p><i>Bohdan Mandziy, Yuriy Shapovalov, Dariya Bachyk</i></p> <p>The expansion of the functional possibilities of the system functions MAOPCs for the study of linear periodically-time-variable circuits</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
3.	<p><i>Serhiy Gnatiuk</i></p> <p>Analytical model of reliability program of computer systems and software-controlled means of communication</p> <p>Kyiv, Ukraine, National Technical University of Ukraine “Kyiv Polytechnic Institute”</p>
4.	<p><i>Volodymyr Fast, Larysa Hlinenko</i></p> <p>Optimization of the Set Head Path for SMD Mounting Apparatus</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
5.	<p><i>Volodymyr Fitio, Volodymyr Romakh</i></p> <p>Features of Gradient Waveguide Analysis in a Frequency Domain</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
6.	<p><i>Viktor Hoblyk, Volodymyr Pavlysh, Nadiya Goblyk, Iryna Nychai, Olexiy Liske, Mykola Zelenku, Ivan Teplyakov</i></p> <p>Modelling radiative properties of metallodielectric structures</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>

7.	<i>Yaroslav Matviychuk, Peter Malachivskyy, Olga Matviychuk</i> Comparisons of the identification of mathematical macromodels in three metrics - Gaussian, Chebyshev, L1 Lviv, Ukraine, Lviv Polytechnic National University, Centre for Mathematical Modeling IAPMM National Academy of Sciences of Ukraine
8.	<i>Andriy Sydor, Vasyl Teslyuk</i> Modelling Reliability Indices of Hierarchical Systems Lviv, Ukraine, Lviv Polytechnic National University
9.	<i>Iryna Madiudia, Mykola Dyvak, Lyudmyla Honchar, Ruslan Shevchuk</i> Interval model for the prediction soil moisture Ternopil, Ukraine, Ternopil National Economic University
10.	<i>Mykola Dyvak, Kasatkina Natalya, Iryna Oliynyk</i> Reduction of Interval Equations for Interval System of Linear Algebraic Equations Ternopil, Kyiv, Ukraine, Ternopil National Economic University, Ministry of Education and Science of Ukraine
11.	<i>Leonid Ozirkovskyy, Yuriy Pashchuk, Andriy Mashchak, Serhiy Volochiy</i> The automation of the exploitation risks assessment of the navigation information system of air drones Lviv, Ukraine, Lviv Polytechnic National University
12.	<i>Roxana Tors`ka, Bohdan Rusyn</i> Application the Cellular Automata Method for Modeling the Growth of Surfaces Corrosion Defects Lviv, Ukraine, Karpenko Physico-Mechanical Institute of the NASU
13.	Jacek Paszek, Piotr Kaniewski Simulation of random errors of inertial sensors Warsaw, Poland, Military University of Technology
14.	<i>Lobur M., Vivchar D., Jaworski N.</i> MEMS pressure sensors design by the COMSOL system Lviv, Ukraine, Lviv Polytechnic National University

POSTER SESSION

1.	<i>Boyko Sergiy, Stepan Novosyadlyy</i> Modernized Ebers–Moll model for SOI MOSFET computer simulation Ivano-Frankivsk, Ukraine, Vasyl Stefanyk Precarpathian National University
----	--

2.	<i>Tolbatov Andrii, Evgeniy Lavrov, Nadiia Pasko, Anna Krivodub</i> Mathematical models for the distribution of functions between the operators of the computer-integrated flexible manufacturing systems Sumy, Ukraine, Sumy State University, Sumy National Agrarian University
3.	<i>Vladimir Makarenko, Viktor Spivak</i> Using circuit simulation in studying the processes in the electronic circuits Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"
4.	<i>Vasily Irkha, Victor Gorbachev, Ivan Vikulin</i> Light-emitting diode as a magnetic field sensor Odesa, Ukraine, Odesa National Academy of Communications
5.	<i>Spartak Mankovskyy, Emilia Mankovska</i> Symbolic Model of the Quadrature Detector Lviv, Ukraine, Lviv Polytechnic National University
6.	<i>Andriy Semenov</i> The Van der Pol's mathematical model of the voltage-controlled oscillator based on a transistor structure with negative resistance Vinnytsia, Ukraine, Vinnytsia National Technical University
7.	<i>Gennadiy Churyumov, Tetyana Frolova, Aleksandr Gritsunov</i> State-of-the-Art of Computer Modeling and Design of the Vacuum Microwave Devices Kharkiv, Ukraine, Kharkiv National University of Radio electronics
8.	<i>Kruk Olena, Zhuravchak Liubov, Grytsko Bogdan</i> Mathematical modeling of the distribution of potential field in piecewise homogeneous objects using boundary elements method Lviv, Ukraine, Lviv Polytechnic National University, Ivan Franko National University of Lviv
9.	<i>Irina Strelkovskaya, Irina Solovskaya, Nikolay Severin, Stanislav Paskalenko</i> Approximation of self-similar traffic by spline-functions Odesa, Ukraine, Odessa National A.S. Popov Academy of Telecommunications
10.	<i>Yurii Maslyiak, Mykola Dyvak, Nataliya Porplytsya, Andriy Pukas, Taras Dyvak</i> Drywall Humidity Modeling During its Drying Process under Condition of Changing the Temperature Fields Based on Interval Difference Operator Ternopil, Ukraine, Ternopil National Economic University

11.	<i>Andriy Veremchuk, Andriy Pukas, Iryna Voytyuk, Iryna Spivak</i> Mathematical and Software Tools for Modeling Objects with Distributed Parameters Ternopil, Ukraine, Ternopil National Economic University
12.	<i>Vadym Kolisnichenko, Yaroslav Dorogy</i> Designing Spiking Neural Networks Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"

SECTION 3

Antennas and microwave technology

Friday, February 26

09.00 – 12.00**Co-Chairs:**

Prof, DSc **Yevhen Yashchyshyn**, Warsaw University of Technology
 Assoc. Prof., DSc **Mykhaylo Andriychuk**, Pidstryhach Institute for Applied
 Problems of Mechanics and Mathematics, NASU

ORAL SESSION

1.	<i>Mehr-e-Munir, Umar Farooq</i> Multiband Microstrip Patch Antenna Using DGS For L-BAND,S-Band,C-Band & Mobile Applications Peshawar, Pakistan, Iqra National University
2.	<i>Hubert Trzaska, Pawel Bienkowski, Vitalij Nichoga</i> Radiations From A Portable Terminal Wroclaw, Lviv, Poland, Ukraine, Wroclaw University of Technology, Lviv Polytechnic National University
3.	<i>Yevhen Yashchyshyn , Grzegorz Bogdan</i> Spatial Filtration of Digitally Modulated Signals Using a Time-Modulated Antenna Array Warsaw, Poland, Warsaw University of Technology
4.	<i>Valeriy Oborzhytskyy, Ivan Prudyus, Volodymyr Storozh</i> Design method of dual-band digital phase shifters with arbitrary differential phase shifts Lviv, Ukraine, Lviv Polytechnic National University
5.	<i>Mykhaylo Andriychuk</i> To Synthesis Problem of Linear Antenna by the Desired Amplitude Diagram Lviv, Ukraine, Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, NASU
6.	<i>Daryna Polishchuk, Ludwig Ilnytskyi, Leonid Sibruk</i> Antenna of radiocontrol Kyiv, Ukraine, National Aviation University
7.	<i>Volodymyr Onufrienko , Leonid Onufriyenko</i> A Fractal Log-periodical Antenna with Variable Scaling: on Theoretical Model Elaboration Zaporizhyya, Ukraine, Zaporizhyya Technical National University

8.	<i>Tetyana Frolova , Gennadiy Churyumov</i> A Non-Resonant Method of Excitation of the Electrodeless Lamp Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
9.	<i>Igor Bondarenko, Aleksandr Galich</i> Resonant Irregular Hybrid Structures Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
10.	<i>Nazariy Andrushchak</i> Development and Approbation of Novel Interference Technique for Materials Permittivity Investigation for the Frequency Range of 50-75 GHz Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>H. P. Laba, K. O. Chaban, V. M. Tkachuk</i> Electromagnetic modes in waveguides and quantum mechanics Lviv, Ukraine, Lviv Polytechnic National University, Ivan Franko National University of Lviv

POSTER SESSION

1.	<i>Ivan Karbovnyk, Nazariy Andrushchak, Ihor Shchur</i> Using LabVIEW in Automated Measurements of Refractive Indices in Optical Range Lviv, Ukraine, Lviv Polytechnic National University, Ivan Franko Lviv National University
----	---

SECTION 4
Radioelectronic devices and systems

Wednesday, February 24

10.00 – 13.00

Co-Chairs:

Prof., DSc **Piotr Kaniewski**, Military University of Technology
Prof., DSc **Vitalij Nichoga**, Lviv Polytechnic National University

ORAL SESSION

1.	<p><i>Prodeus Arkadiy</i> Comparison of A Priori Signal-to-Noise Ratio Assessment Methods Used in Noise Reduction Algorithms Kyiv, Ukraine, National Technical University of Ukraine “Kyiv Polytechnic Institute”</p>
2.	<p><i>Yurkov Nikolay, Aleksey Grishko, Nikolay Goryachev, Igor Kochegarov, Sergey Brostilov</i> Management of Structural Components Complex Electronic Systems on the Basis of Adaptive Model Penza, Russia, Penza state university</p>
3.	<p><i>Shtofel Dmytro, Leonid Koval, Sergiy Pavlov, Kost Solodenko, Zlepko Sergiy</i> Tactical-Exploring Unmanned Aviation Systems: Current State and Prospects in Ukraine Vinnytsya, Ukraine, Vinnytsya National Technical University</p>
4.	<p><i>Vladimir Pavlikov, Valeriy Volosyuk, Cuong Vu Ta</i> Synthesis of Optimal Multiantenna Ultra-Wideband Detector of Spatially Extended Objects Kharkiv, Ukraine, National Aerospace University named after N. E. Zhukovsky "Kharkiv Aviation Institute"</p>
5.	<p><i>Kiem Nguyen Van, Vladimir Pavlikov</i> Optimal Algorithm for Estimation of Radio Brightness of an Extended Source of Radio Thermal Radiation in the Ultra-Wideband Radiometric Complex with a Three-Element-Antenna System Kharkiv, Ukraine, National Aerospace University named after N. E. Zhukovsky "Kharkiv Aviation Institute"</p>
6.	<p><i>Bychkov V, Pravda V.</i> Results of use a method of decrease sidelobes level of signals after compression for distinction of closely spaced targets Kyiv, Ukraine, National Technical University of Ukraine “Kyiv Polytechnic Institute”</p>

7.	<i>Vitalii Liubchyk, Yuliya Senchyshyna, Andrey Klepikovskiy</i> Improved Multi-Frequency Phase Method of Ranging Khmelnitskyi, Ukraine, Khmelnitskyi national university
8.	<i>Hryvachevskiy A., Kondratov P., Ohanesyan A., Tkachenko V., Prudyus I., Lazko L.</i> Detection and allotment of objects based on multispectral monitoring Lviv, Ukraine, Lviv Polytechnic National University
9.	<i>Roman Dunets, Halyna Klym, Roman Kochan</i> Models of Hardware Integration of Sensors elements with Cyber-Physical Systems Lviv, Ukraine, Lviv Polytechnic National University
10.	<i>Bohdan Volochiy, Volodymyr Onishchenko, Yuriy Salnik</i> Synthesis of guard signaling complex structure with a glance of possible layouts of seismic sensors Lviv, Ukraine, The Petro Sahaidachny National Army Academy, Lviv Polytechnic National University
11.	<i>Oleksandr Osolinskyy</i> Research of Interference immunity of the System for Measuring the Average Energy Consumption of Microcontrollers Ternopil, Ukraine, Ternopil National Economical University
12.	<i>Y. Budaretskiy, Y. Schavinskiy</i> Synthesis of structure and optimization of algorithms of work of the decision support system of at a fire-control artillery subdivisions of tactical link Lviv, Ukraine, Hetman Petro Sahaidachny National Army Academy

Wednesday, February 24

15.00 – 19.00

Co-Chairs:

Prof., DSc **Volodymyr Shkliarskyi**, Lviv Polytechnic National University

Prof., DSc **Anatoliy Zubkov**, Hetman Petro Sahaidachny National Army Academy

ORAL SESSION

1.	<i>Oleh Saldan, Vitaliy Nichoha, Volodymyr Storozh, Igor Storozh, Igor Stefanyshyn</i> Experimental research of signals of defects such as the transverse cracks on the rail imitator Lviv, Ukraine, Lviv Polytechnic National University
----	--

2.	<i>Andrii Hryvachevskyi, Ivan Prudyus</i> Image segmentation based on cluster analysis of multispectral monitoring data Lviv, Ukraine, Lviv Polytechnic National University
3.	<i>Kiem Nguyen Van, O. M. Tymoshchuk</i> Investigation of Ambiguity Function of Ultra-Wideband, Multi-Band and Narrow-Band Radiometric Complex with a Three-Element-Antenna System Kharkiv, Kyiv, Ukraine , National Aerospace University named after N. E. Zhukovsky "Kharkiv Aviation Institute", Kyiv State Maritime Academy named after hetman Petro Konashevich-Sahaydachniy
4.	<i>Sergiy Fabirovskyy, Ivan Prudyus, Viktor Tkachenko, Leonid Lazko</i> Matrix Model of the Subpixel Imaging Process by Optical Scanner Lviv, Ukraine, Lviv Polytechnic National University
5.	<i>Ivan Maksymiv, Andriy Bondarev, Taras Maksymyuk</i> Method of Improving the Power Efficiency of QPSK Signals Lviv, Ukraine, Lviv Polytechnic National University
6.	<i>Vasyl Kychak, Volodymyr Kychak</i> Radio-frequency arbitrary-function logical device synthesizing Vinnytsia, Ukraine, Vinnytsia National Technical University
7.	<i>Ihor Stefanyshyn, Oleh Saldan, Vitaliy Nichoha, Volodymyr Storozh</i> The stand of multichannel system for collecting information for non-destructive testing of rails Lviv, Ukraine, Lviv Polytechnic National University
8.	<i>Jan Matuszewski</i> The analysis of modern radar signals parameters in electronic intelligence system Warsaw, Poland Military University of Technology
9.	<i>Nataliya Hots</i> Method of control and linearization of calibration function for reference infrared radiation thermometer Lviv, Ukraine, Lviv Polytechnic National University
10.	<i>Volodymyr Shkliarskyi , Yuriy Matiyeshyn, Rostyslav Matviyiv, Vitaliy Goy</i> Resizable scanning raster generation in Television Optical Microscope Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>Volodymyr Shkliarskyi , Volodymyr Storozh, Yuriy Matiieshyn</i> Features of the different dynamic microobjects scanning using the television scanning optical microscope Lviv, Ukraine, Lviv Polytechnic National University

POSTER SESSION

1.	<p><i>Valeriy Volosyuk , Cuong Vu Ta, Olena Tymoshchuk</i> Optimal Algorithm of Ultra-Wideband Signals Processing in 3D Mapping Systems with Two Antenna Arrays Kharkiv, Kyiv, Ukraine, National Aerospace University named after N. E. Zhukovsky "Kharkiv Aviation Institute", Kyiv State Maritime Academy named after hetman Petro Konashevich-Sahaydachniy</p>
2.	<p><i>Yevgenii Shestopal</i> Coding for increase of data transmission robustness via orthogonal parallel sub-channels Kyiv, Ukraine, State University of Telecommunications</p>
3.	<p><i>Volodymyr Pilinsky, Volodymyr Shvaichenko, Dmytro Titkov, Maxim Panchoha</i> Modern Approach to Selection of Mains RFI Filters Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"</p>
4.	<p><i>Kostyantyn Koval, Oleksandr Osadchuk, Maksym Prytula, Andriy Semenov</i> Comparative Analysis of Radiomeasuring Frequency Converters of the Magnetic Field Vinnitsya, Ukraine, Vinnitsya National Technical University</p>
5.	<p><i>Ivan Chesanovskyi, Yuliia Babii, Denis Levchunets</i> Application of non-stationary signals matched windowing in pulse radiolocation tasks Khmelnytskyi, Ukraine , Khmelnytskyi national university, National Academy of State Border Guard Service of Ukraine n.a. Bohdan Khmelnytskyi</p>
6.	<p><i>Volodymyr Shklarskyj, Andriy Rehush, Anatolj Pedan, Jaroslav Tebenko</i> Scanning television optical microscope with controlled freezing of microobject Lviv, Ukraine, Lviv Polytechnic National University</p>
7.	<p><i>Volodymyr Shkliarskyi , Yuriy Matiieshyn, Yuriy Balanyuk</i> Algorithms of television scanning optical microscope in determining the parameters of dynamic microobjects Lviv, Ukraine, Lviv Polytechnic National University</p>

SECTION 5

Electronics and photonics: systems and devices, micro- and nanotechnologies

Wednesday, February 24

15.00 – 19.00

Co-Chairs:

Prof., DSc **Anatoly Druzhinin**, Lviv Polytechnic National University
 Prof., DSc **Bohdan Mytsyk**, Karpenko Physico-Mechanical Institute of The
 NAS of Ukraine

ORAL SESSION

1.	<i>Oleksandr Osadchuk, Volodymyr Osadchuk, Iaroslav Osadchuk</i> The Generator of Superhigh Frequencies on the Basis Silicon Germanium Heterojunction Bipolar Transistors Vinnytsya, Ukraine, Vinnytsya National Technical University
2.	<i>Denys Nevinskyi, Volodymyr Pavlysh, Lubou Zakalyk, Solomiya Lebid, Halyna Korzh</i> Development and Investigation of the Surface Plasmon polariton Four-channel splitter Lviv, Ukraine, Lviv Polytechnic National University
3.	<i>Iryna Kremer, Zenon Hotra, Roman Holyaka, Zinoviy Mykytyuk, Mariya Vistak</i> Transient mode characteristics of luminescence photocurrent integrators Lviv, Ukraine, Lviv Polytechnic National University
4.	<i>Anatoliy Andrushchak</i> Spatial anisotropy of induced optical effects in anisotropic materials for optoelectronic devices: hidden reserves for enhancing their performance Lviv, Ukraine, Lviv Polytechnic National University
5.	<i>Anatoly Druzhinin, Igor Kogut, Victor Holota, Yuriy Khoverko</i> Polysilicon in SOI-structures as a Material for Sensor Application in the Wide Temperature Range Lviv, Wroclaw, Ivano-Frankivsk, Ukraine, Poland, Lviv Polytechnic National University, V. Stefanyk Precarpathian National University, International Laboratory of High Magnetic Fields and Low Temperatures

6.	<p><i>Anatoly Druzhinin, Igor Osrtovskii, Yuriy Khoverko, Roman Koretskii, Serhii Yatsukhnenko</i></p> <p>The frequency dependence features of Si whiskers conductance in low-temperature range</p> <p>Lviv, Wroclaw, Ukraine, Poland, Lviv Polytechnic National University, International Laboratory of High Magnetic Fields and Low Temperatures</p>
7.	<p><i>Igor Kogut, Victor Dovhij, Victor Holota</i></p> <p>Architecture development and elements simulation of analytical microsystem-on-chip with "silicon-on-insulator" structures</p> <p>Ivano-Frankivsk, Ukraine, V.Stefanyk Precarpathian National University</p>
8.	<p><i>Oleh Buryy, Dmytro Vynnyk, Nataliya Demyanyshyn, Bohdan Mytsyk, Mykola Melnyk, Ivan Solskyi, Rostyslav Melnyk</i></p> <p>The perspectives of CaWO₄ crystals using in acousto-optical modulators</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
9.	<p><i>Anatoliy Evtukh, Olga Steblova, Oleg Bratus', Anatoly Druzhinin, Stepan Nichkalo</i></p> <p>Silicon Nanostructures Formed by Metal-Assisted Chemical Etching for Electron Field Emission Cathodes</p> <p>Kyiv, Lviv, Ukraine, V. Lashkaryov Institute of Semiconductor Physics, Lviv Polytechnic National University</p>
10.	<p><i>Iryna Yaremchuk, Volodymyr Fitio, Yaroslav Bobitski</i></p> <p>Shape Effect of Silver Nanoparticles on Plasmon Properties of DLC:Ag Nanocomposites</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
11.	<p><i>Anatoliy Andrushchak, Oleh Buryy, Bohdan Mytsyk, Nazariy Andrushchak, Nataliya Demyanyshyn, Kseniia Chaban, Andrzej Rusek, Andriy Kityk</i></p> <p>Information Technology for Most Efficient Application of Bulk and Nanocrystalline Materials as Sensitive Elements for Optoelectronic Devices</p> <p>Lviv, Czestochowa, Ukraine, Poland, Lviv Polytechnic National University, Czestochowa University of Technology</p>
12.	<p><i>Zinoviy Mykytyuk, Andriy Fechan, Vasyl Petryshak, Grygoriy Barylo, Oksana Boyko</i></p> <p>Optoelectronic multi-sensor of SO₂ and NO₂ gases</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>
13.	<p><i>Halyna Klym, Ivan Karbovnyk, Ivanna Vasylchyshyn</i></p> <p>Multicomponent Positronium Lifetime Modes to Nanoporous Study of MgO-Al₂O₃ Ceramics</p> <p>Lviv, Ukraine, Lviv Polytechnic National University</p>

POSTER SESSION

1.	<i>Valerij Yerokhov, Olga Ierokhova</i> Coatings Of The “Black-Silicon” Type for Silicone Solar Cells Lviv, Ukraine, Lviv Polytechnic National University
2.	<i>Tatyana Brostilova, Sergey Brostilov, Nikolay Yurkov, Valeriy Bannov, Alexey Grigoriev</i> Test Station for Fibre-optic Pressure Sensor of Reflection Type Penza, Russia, Penza state university
3.	<i>Yevhen Odarenko, Oleksandr Shmat’ko</i> Novel THz Sources with Profiled Focusing Field and Photonic Crystal Electrodynamic Systems Kharkiv, Ukraine, Kharkiv National University of Radio Electronics, V.N. Karazin Kharkiv National University
4.	<i>Yana Sashkova, Yevhen Odarenko</i> Visualization of the Monochromatic Plane Wave Scattering by Multilayer Lens Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
5.	<i>Stepan Novosyadlyi, Liubomyr Melnyk</i> Physics and chemistry of semiconductor surfaces as the basis for high-speed transistors submicron structures LIC Ivano-Frankivsk, Ukraine, Vasyl Stefanyk Precarpathian National University
6.	<i>Anatoly Druzhinin, Igor Ostrovskii, Yuriy Khooverko, Natalia Liakh-Kaguy, Yana Byldina</i> Magnetoresistance oscillations in germanium and indium antimonide whiskers Lviv, Wroclaw, Ukraine, Poland, Lviv Polytechnic National University, International Laboratory of High Magnetic Fields and Low Temperatures
7.	<i>Pavel Andreyev, Alexey Grishko, Nikolay Yurkov</i> The Temperature Influence on the Propagation Characteristics of the Signals in the Printed Conductors Penza, Russia, Penza state university
8.	<i>Oleh Buryy, Anatoliy Andrushchak, Andrzej Rusek, Serhij Ubizskii</i> Most efficient geometries of the electro-optic effect in crystalline materials of different symmetry Lviv, Czestochowa, Ukraine, Poland, Lviv Polytechnic National University, Czestochowa University of Technology
9.	<i>Vasyl Varyshchuk, Yaroslav Bobitski</i> An experimental study of utilizing multimode polymer fiber for load detection Lviv, Rzeszow, Ukraine, Poland, Lviv Polytechnic National University, University of Rzeszow

10.	<i>Volodymyr Berezhansky</i> Adjusted two-dimensional model of silicon dioxide films growth for silicon substrates complex configuration Ivano-Frankivsk, Ukraine, Vasyl Stefanyk Precarpathian National University
11.	<i>Zenon Hotra, Pavlo Turyk</i> Localized surface plasmon resonance in multiwalled carbon nanotubes Lviv, Ukraine, Lviv Polytechnic National University
12.	<i>Andriy Stelmashchuk, Ivan Karbovnyk, Halyna Klym</i> Computer simulations of nanotube networks in dielectric matrix Lviv, Ukraine, Lviv Polytechnic National University, Ivan Franko National University of Lviv
13.	<i>Orest Sushynskyi, Maria Vistak, Vasyl Dmytrah</i> The Sensitive Element of Primary Transducer of Protein Optical Sensor Lviv, Ukraine, Lviv Polytechnic National University, Danylo Halytsky Lviv National Medical University

SECTION 6

Information systems: construction, operation and security

Wednesday, February 24**10.00 – 13.00****Co-Chairs:**Prof., DSc **Vladimir Hahanov**, Kharkiv National University of Radio ElectronicsAssoc. Prof., DSc **Bohdan Strykhalyuk**, Lviv Polytechnic National University**ORAL SESSION**

1.	<i>Igor Gepko, Sergiy Zhuk</i> Mobile Phone Multi-factor Authentication with Robustness of Clone Detection Kyiv, Ukraine, Ukrainian State Centre of Radio Frequencies
2.	<i>Andrii Kolykhalov, Kostiantyn Kasian</i> Improving the accuracy of human placement in detection algorithms in graphics by splitting up region of interest Zaporizhzhia, Ukraine, Zaporizhzhia National Technical University
3.	<i>Dmytro Dosyn, Vasyl Lytvyn, Vira Kovalevych, Oksana Oborska, Roman Holoshchuk</i> Knowledge discovery as planning development in knowledgebase framework Lviv, Ukraine, Lviv Polytechnic National University, Karpenko Physico-Mechanical Institute of the NAS of Ukraine
4.	<i>Taras Tkachuk</i> Two methods to determining the time complexity of algorithm Lviv, Ukraine, Lviv Polytechnic National University
5.	<i>Boris Krulikovskiy, Nataliia Vozna, Volodymyr Kimak, Alina Davletova</i> The method to optimize structural, hardware and time complexities characteristics multi-bit adders of special processors for data encryption Rivne, Ternopil, Ivano-Frankivsk, Ukraine, National University of Water Management and Nature Resources Use, Ternopil National Economic University, Ivano-Frankivsk National Technical University of Oil and Gas
6.	<i>Rostyslav Strubytskyi</i> Organization of cloud storage data in distributed systems Lviv, Ukraine, Lviv Polytechnic National University

7.	<i>Inna Khavina</i> Multiagent system for the optimal control of a combination of transport robots in an manufacturing technological process Kharkiv, Ukraine, Kharkiv National Technical University «Kharkiv Polytechnic Institute»
8.	<i>Alexander Kozin , Olga Papkovskaya, Mariia Kozina</i> Steganography method using Hartley transform Odesa, Ukraine, National University "Odesa Academy of Law", Odesa National Polytechnic University
9.	<i>Roman Banakh, Andrian Piskozub, Yaroslav Stefinko</i> External elements of honeypot for wireless network Lviv, Ukraine, Lviv Polytechnic National University
10.	<i>Mykhailo Solomko</i> The Tabular Transfer Mode in the Rademacher NTB Adders Rivne, Ukraine, National University of Water and Environmental Engineering
11.	<i>Yaroslav Stefinko, Andrian Piskozub, Roman Banakh</i> Manual and automated penetration testing. Benefits and drawbacks. Modern tendency Lviv, Ukraine, Lviv Polytechnic National University
12.	<i>Olga Polska, Ravil Kudermetov</i> Towards a Formalization of the Fundamental Concepts of SOA Zaporizhzhya, Ukraine, Zaporizhzhya National Technical University

Wednesday, February 24

15.00 – 19.00

Co-Chairs:

Prof., DSc **Valeriy Bezruk**, Kharkiv National University of Radio Electronics

Prof., DSc **Andriy Peleshchyn**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>Vadym Shkarupylo</i> A technique of DEVS-driven validation Zaporizhzhya, Ukraine, Zaporizhzhya National Technical University
2.	<i>Yurij Gryciuk, Pavlo Grytsyuk</i> Implementation Details for The Cipher Key Generation Cardano Permutation Lviv, Ukraine, Lviv Polytechnic National University, National Forestry University of Ukraine

3.	<i>Mykola Chesanovsky, Vasyl Sheketa, Volodymyr Yurchyshyn, Taras Styslo</i> The formal structuring of subject domain for oil and gas industry IT applications Ivano-Frankivsk, Ukraine, Ivano-Frankivsk National Technical University Oil and Gas
4.	<i>Volodymyr Gryga, Igor Kolosov, Olga Danyluk</i> The development of a fast iterative algorithm structure of cosine transform Ivano-Frankivsk, Ukraine, Vasyl Stefanyk Precarpathian National University
5.	<i>Artem Potebnia, Sergiy Pogorilyy</i> Investigation of transformations and landscapes for combinatorial optimization problems Kyiv, Ukraine, Taras Shevchenko National University of Kyiv
6.	<i>Tamara Radivilova, Lyudmila Kirichenko, Igor Ivanisenko</i> Dynamic load balancing algorithm of distributed systems Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
7.	<i>Sergiy Haliuk, Oleg Krulikovskiy, Leonid Politanskyi</i> Analysis of pixels permutations based on discretized Chirikov map Chernivtsi, Ukraine, Yuriy Fedkovych Chernivtsi National University
8.	<i>Vira Vialkova, Yurii Kravchenko</i> The problem of providing functional stability properties of information security systems Kyiv, Ukraine, Taras Shevchenko National University of Kyiv
9.	<i>Arkadii Snihurov, Vadym Chakrian</i> Approach to Determination of Priority for Nodes of Telecommunication Network Functioning under DDOS-attacks in Order to Provide Quality of Service Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
10.	<i>Vladimir Hahanov, Svetlana Chumachenko, Alexander Mishchenko, Vladislav Sergienko, Yulia Hahanova</i> Cloud Services of Smart Cyber University Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
11.	<i>Vladimir Hahanov, Eugenia Litvinova, Maria Brazhnikova, Anastasia Hahanova</i> Cyber Democracy and Digital Relationship Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
12.	<i>Tetiana Soklakova, Igor Iemelianov, Tamer Bani Amer, Ivan Hahanov</i> Technological Culture of Big Data Kharkiv, Ukraine, Kharkiv National University of Radio Electronics

POSTER SESSION

1.	<p><i>Stanislav Motsnyi</i> Optimization of Traffic Filtering in Virtual Networks Based On Solving the Minimum Vertex Cover Problem Kharkiv, Ukraine, Ukrainian State University of Railway Transport</p>
2.	<p><i>Marina Miroshnyk, Vladimir Kotukh, Natalia Kaptsova</i> Information analysis of energy performance and factors affecting the serviceability of products illustrated by the example in gas industry Kharkiv, Ukraine, Ukrainian State University of Railway Transport, Kharkiv National University of Urban Economy named after O.M. Beketov</p>
3.	<p><i>Natalia Loginova, Elena Trofimenko, Olexander Zadereyko, Rashid Chanyshv</i> Program-technical aspects of encryption protection of users' data Odesa, Ukraine, National University "Odessa Law Academy"</p>
4.	<p><i>Oleksandr Muliarevych</i> Solving Dynamic Assymetrical Travelling Salesman Problem In Conditions Of Partly Unknown Data Lviv, Ukraine, Lviv Polytechnic National University</p>
5.	<p><i>Andrew Yerukayev</i> An approach to the formation of the type-2 fuzzy sets Kyiv, Ukraine, Kyiv National University of Construction and Architecture</p>
6.	<p><i>Vasyl Sheketa, Mykola Demchyna, Roman Vovk, Yulia Romanyshyn</i> The Formally Stated Model for Technological Process Operator Queries Interpretation Ivano-Frankivsk, Ukraine, Ivano-Frankivsk National Technical University of Oil and Gas</p>
7.	<p><i>Ganna Plekhanova</i> The Algorithm of HRM Systems Selection Kharkiv, Ukraine, S. Kuznets Kharkiv National University of Economics</p>
8.	<p><i>Stanislav Berezovsky</i> Reconfigurable commutation structures using the elements by Berezovsky Odesa, Ukraine, Odesa Polytechnic National University</p>
9.	<p><i>Yaroslav Nikolaichuk, Stepan Ivasiev, Ihor Yakymenko, Mykhajlo Kasianchuk</i> Test of verification of multidigit numbers on simplicity on the basis of method of vector and modular multiplication Ternopil, Ukraine, Ternopil National Economical University</p>

SECTION 7

Quality and reliability of radioelectronic and communication devices and systems

Friday, February 26,

13.00 – 15.00

Co-Chairs:

Prof., DSc **Vasyl Kychak**, Vinnytsya National Technical University

Prof., DSc **Bohdan Volochiy**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>Yuriy Bobalo, Leonid Nedostup, Myroslav Kiselychnyk, Myhaylo Melen</i> Systems evaluation of radio electronic devices quality Lviv, Ukraine, Lviv Polytechnic National University
2.	<i>Kostiantyn Kasian, Mykola Kasian</i> Elementwise Diagnosing of Technical Systems with High Reliability Requirements Zaporizhzhia, Ukraine , Zaporizhzhia National Technical University
3.	<i>Marina Miroshnyk, Viktoriya Krylova</i> Communication channel statistical characteristics research methods Kharkiv, Ukraine, Ukrainian State University of Railway Transport, National Technical University "Kharkiv Polytechnic Institute"
4.	<i>Vasyl Kychak, Vladimir Tromsyuk</i> Initial Data Processing Algorithms Of Bit Error Rate Testers Vinnytsya, Ukraine, Vinnytsya National Technical University
5.	<i>Tetyana Korytchinko</i> Modern decisions of tasks of diagnosing of the telecommunication systems Kharkiv, Ukraine, Kharkiv Ukrainian state university of railway transport
6.	<i>Nina Kniazieva, Tatiana Kunup</i> Increasing the Structural Survivability of Telecommunication Networks Odesa, Ukraine, Odesa National Academy of Food Technologies
7.	<i>Inna Grishchenko, Liliya Zimenko</i> Improving Method of Increasing the Structural Survivability of Telecommunication Networks Odesa, Ukraine, Odesa National Academy of Food Technologies

8.	<p><i>Oleg Shynkaruk, Juliy Boiko, Oleksander Eromenko</i> Measurements of the energy gain in the modified circuit signal processing unit Khmelnytskyi, Ukraine, Khmelnytskyi national university, National academy of the State Border Guard Service of Ukraine</p>
9.	<p><i>Vasyl Semerenko, Oleksandr Roik</i> Synthesis of Test Generators Based on Theory of Cyclic Codes Vinnytsya, Ukraine, Vinnytsya National Technical University</p>
10.	<p><i>Denis Afanassyev, Vasyl Rabyk</i> Hardware for fault diagnosis of analog circuits by multitest method Lviv, Ukraine, Lviv Polytechnic National University, Ivan Franko Lviv National University</p>
11.	<p><i>Bohdan Volochiy, Mykhailo Zmysnyi, Ihor Kulyk</i> The Efficiency Improving of Maintenance Strategy Base Station of Cellular Network Lviv, Ukraine, Lviv Polytechnic National University</p>

SECTION 8

Infocommunication systems and networks

Wednesday, February 24

15.00 – 19.00

Co-Chairs:

Prof., Dr. hab. **Andriy Luntovskyy**, BA Dresden University of Cooperative Education

Prof., DSc **Mykhailo Klymash**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>Andriy Luntovskyy, Larysa Globa, Oleksandr Stepurin</i> Performance-Energy Tradeoff Models for Distributed Computing Dresden, Kyiv, Germany, Ukraine BA Dresden University of Cooperative Education, National Technical University of Ukraine "Kyiv Polytechnic Institute"
2.	<i>Maryan Kyryk, Volodymyr Yanyshyn, Lyudmyla Matiishyn, Vitaliy Havronskyy</i> Performance Comparison of Cognitive Radio Networks Spectrum Sensing Methods Lviv, Ukraine, Lviv Polytechnic National University
3.	<i>Kalian D.O., Koval V.V., Tepliuk V.M., Shkliarevskii I.I., Khudyntsev M.M.</i> Multichannel clock signal monitoring system for infocommunication networks Kyiv, Odesa, Ukraine, National University of Life and Environmental Sciences of Ukraine, PJSC "Information service technologies", Odesa state environmental university
4.	<i>Vladimir Barannik, S. S. Shulgin</i> The Method of Increasing Accessibility of The Dynamic Video Information Resource Kharkiv, Ukraine, Kharkiv university of Air Forces n.a. Ivan Kozhedub
5.	<i>Serhiy Tolyupa, Heorhiy Rozorinov, Aymen Mohamed Fendri</i> Reliability and features of optical cable laying Kyiv, Ukraine, State University of Telecommunications
6.	<i>Ganna Grynkevych, Volodymyr Vasylenko, Valentyn Kuklov</i> Analysis of SDN for wireless handover platform Kyiv, Ukraine, State University of Telecommunications

7.	<i>Anatoliy Semenko, Natalia Bokla, Andriy Shokotko, Vitaliy Lusenko</i> Construction of microwave link using channel code division based on modified pseudorandom Gold sequences Kyiv, Ukraine, State University of Telecommunications, LTD «Infopulse», National University of Life and Environmental Sciences of Ukraine
8.	<i>Ivan Demydov, Orest Lavriv, Zenoviy Kharkhalis, Mohamed Mehdi El-Hatri</i> Concept of the Migrating Firewall to Scalable Cloud Networks Lviv, Ukraine, Lviv Polytechnic National University
9.	<i>Aymen Al-Dulaimi, Mohammed Al-Dulaimi, Dmytro Ageyev</i> Realization of Resource Blocks Allocation in LTE Downlink in the Form of Nonlinear Optimization Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
10.	<i>Olga Shpur, Bohdan Strykhalyuk, Oleksandr Morushko, Iryna Bolyubash</i> The Optimal Distribution of Optical Resources Between Data Centers for Providing the Required Level of QoS Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>Yulia Klymash, Bohdan Strykhalyuk, Ihor Strykhalyuk</i> Algorithm for Greedy Routing Based on the Thurston Algorithm in Sensor Networks Lviv, Ukraine, Lviv Polytechnic National University
12.	<i>Andriy Masiuk, Mykola Beshley, Orest Lavriv, Yuriy Deschynskiy</i> Common Radio Resource Management Model for Heterogeneous Cellular Networks Lviv, Ukraine, Lviv Polytechnic National University
13.	<i>Marian Seliuchenko, Mykola Beshley, Oleksiy Panchenko, Mykhailo Klymash</i> Development of Monitoring System for end-to-end packet delay measurement in Software-Defined Networks Lviv, Ukraine, Lviv Polytechnic National University
14.	<i>Oleksiy Nedashkivskiy</i> Estimation of quality of Internet services in Ukraine Kyiv, Ukraine, State University of Telecommunications
15.	<i>Mykola Kaidan, Mykhailo Klymash, Valeriy Koval</i> Algorithm of Optical Transport Network Modeling Based on Percolation Theory Lviv, Kyiv, Ukraine, Lviv Polytechnic National University, National University of Life and Environmental Sciences of Ukraine

POSTER SESSION

1.	<p><i>T.N. Lebedenko, A.V. Simonenko, Fouad Abdul Razzaq Arif</i> A Queue Management Model on the Network Routers Using Optimal Flows Aggregation Kharkiv, Baghdad, Ukraine, Iraq, Kharkiv National University of Radio Electronics, Al Iraqi University</p>
2.	<p><i>Victor Morozov, Olena Kalnichenko, Iuliia Liubyma</i> The Models Of Procurement Management And Information Technologies For Hybrid Project Management Kyiv, Ukraine, Taras Shevchenko National University, "KROK" University</p>
3.	<p><i>A. I. Tsopa, V. K. Ivanov, V. I. Leonidov, Yu.I. Maleshenko, V. V. Pavlikov, N. V. Ruzhentsev, A. A. Zarudniy</i> The Research Program of Millimetric Radio Waves Attenuation Characteristics on Perspective Communication Lines of Ukraine Kharkiv, Ukraine, Kharkiv National University of Radio Electronics, Institute of Radio Physics and Electronics of National Academy of Sciences, Kharkiv National Aerospace University</p>
4.	<p><i>Oleksandra Yeremenko, Nadia Tariki, Ahmad M. Hailan</i> Fault-Tolerant IP Routing Flow-Based Model Nasiriya, Kharkiv, Ukraine, Iraq, Kharkiv National University of Radio Electronics, College of Computer Science and Mathematics</p>
5.	<p><i>Maryan Kyryk, Nazar Pleskanka, Maryana Pitsyk</i> QoS Mechanism in Content Delivery Network Lviv, Ukraine, Lviv Polytechnic National University</p>
6.	<p><i>Volodymyr Chervenets, Vasyl Romanchuk, Halyna Beshley, Andriy Khudyy</i> QoS/QoE Correlation Modified Model for QoE Evaluation on Video Service Lviv, Ukraine, Lviv Polytechnic National University</p>
7.	<p><i>Ivan Katerynychuk, Roman Rachok, Dmytro Mul, Andrii Balender</i> Modelling of radio waves propagation and creation of radio networks using geoinformation systems Khmelnytskyi, Ukraine, National academy of the State Border Guard Service of Ukraine</p>

SECTION 9

Information processing

Friday, February 26

09.00 – 12.00

Co-Chairs:

Prof., DSc **Vladimir Barannik**, Kharkiv University of Air Forces n.a. Ivan Kozhedub

Prof., DSc **Bohdan Rusyn**, Karpenko Physico-Mechanical Institute of the NASU

ORAL SESSION

1.	<i>Galina Shcherbakova, Viktor Krylov, Radmila Pisarenko, Oleg Logvinov</i> Automation of the data processing via clustering on the wavelet transform base Odesa, Ukraine, Odesa National Polytechnic university
2.	<i>Elena Yelmanova</i> Quantitative Evaluation of Contrast for a Complex Image by its Histogram Lviv, Ukraine, Lviv Polytechnic National University
3.	<i>Alexander Zemliachenko, Ruslan Kozhemiakin, Benoit Vozel, Vladimir Lukin</i> Prediction of Compression Ratio in Lossy Compression of Noisy Images Kharkiv, Rennes, Ukraine, France, National Aerospace University, University of Rennes
4.	<i>Sergii Zhuk, Oleksii Liashuk</i> A two-step algorithm of compensating the additive correlated noise on a homogeneous image Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"
5.	<i>Roman Melnyk, Arsenii Zawyalow</i> Image Retrieval by Histogram Features and Artificial Neural Networks Lviv, Ukraine, Lviv Polytechnic National University
6.	<i>Oleh Zaritskiy, Petro Pavlenko, Andriy Tolbatov</i> Data representing and processing in expert information system of professional activity analysis Kyiv, Ukraine, Kyiv National Aviation University

7.	<i>Olena Osharovska, Valentina Solodka</i> Transferring the 3D TV Objects by the Standard Digital Streams Odesa, Ukraine, Odesa National Academy of Telecommunications n.a. O.S. Popov
8.	<i>Natalia Khymytsia, Sergiy Holub</i> The use of multi-level modeling in the cliometric studies process Cherkasy, Ukraine, Bohdan Khmelnytsky National University of Cherkasy
9.	<i>Tetiana Golub</i> The Analysis of Text Documents Classifiers Constructing Methods Zaporizhzhya, Ukraine, Zaporizhzhya National Technical University
10.	<i>Dmytro Mymrikov, Petro Kondratov, Albert Oganessian, Victor Tkachenko, Ivan Prudyus, Leonid Lazko</i> Thermal Images Improving Based on Cumulative Histogram Correction and Median Filtering Methods Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>Oleksii Rubel, Vladimir Lukin, Karen Egiazarian</i> On Prediction of DCT-based Denoising Efficiency under Spatially Correlated Noise Conditions Kharkiv, Tampere, Ukraine, Finland, Kharkiv National Aerospace University, Tampere University of Technology
12.	<i>Igor Ziakhor, Igor Khudetskyi</i> Computerized control of defects in pressure welding joints by ultrasonic inspection Kyiv, Ukraine, E.O. Paton Electric Welding Institute, NASU

POSTER SESSION

1.	<i>Sergey Krivenko, Olena Kolganova, Vladimir Lukin</i> Lossy Compression of Images Corrupted by Spatially Correlated Noise Kharkiv, Kyiv, Ukraine, National Aerospace University, University of Rennes, National Aviation University
2.	<i>Victoria Vysotska</i> Linguistic Analysis of Textual Commercial Content for Information Resources Processing Lviv, Ukraine, Lviv Polytechnic National University
3.	<i>Yuriy Kalychak, Roman Melnyk</i> Face Image Searching by Parametric Statistical Features Lviv, Ukraine, Lviv Polytechnic National University
4.	<i>Khrystyna Mykich, Yevhen Burov</i> Uncertainty in situational awareness systems Lviv, Ukraine, Lviv Polytechnic National University

5.	<p><i>Vladimir Barannik, Dmitry Komolov, A.P. Musienko, R.V. Tarnopolov</i> Methodological Basis For Determining The Energy Significance Of The Structural Unit Of A Video Frame Based On The Estimation Of Low-Frequency Components Of The Matrices Of The DCT Blocks Of The Luminance Component Kharkiv, Ukraine, Main Directorate of the Ministry of internal affairs of Ukraine in Kharkov region, Kharkiv university of Air Forces n.a. Ivan Kozhedub</p>
6.	<p><i>Mykola Kozlenko, Mykola Kuz</i> Joint Capturing of Readouts of Household Power Supply Meters Ivano-Frankivsk, Ukraine, Ivano-Frankivsk University of Low named after King Danylo Halytskyi</p>
7.	<p><i>Nikolay Patlaenko</i> Analysis the functions of wavelet transform to compress content in television production Odesa, Ukraine, O.S. Popov's Odessa National Academy of telecommunications</p>

SECTION 10

Biotechnical and medical devices and systems

Friday, February 26

09.00 – 12.00**Co-Chairs:**

Prof., DSc **Anatoliy Povoroznjuk**, Kharkiv National Technical University
«Kharkiv Polytechnic Institute»

Prof., DSc **Oleksandr Kozhukhar**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>S.K. Meshaninov, Spivak V.M.</i> Estimation Method for Safety and Efficiency of the Electronic Equipment for Biophysical Explorations Kyiv, Ukraine, National Technical University of Ukraine “Kyiv Polytechnic Institute”
2.	<i>Povoroznjuk Anatoliy, Filatova Anna</i> Optimization of Parameters of the Visualization Quality Improvement Method of X-Ray Images Kharkiv, Ukraine, Kharkiv National Technical University «Kharkiv Polytechnic Institute»
3.	<i>Sergiy Tymchyk, Sergiy Kostishyn, Roman Vyrozyb, Alexandra Zlepko, Volodymyr Pavlov</i> Design Features of Automated Diagnostic Systems for Family Medicine Vinnytsya, Ukraine, Vinnytsya National Technical University
4.	<i>Bohdan Yavorsky, Mykhailo Bachynskyy, Yuriy Stoyanov</i> Excitation Energy Control in Quantum Retinography Ternopil, Ukraine, Ternopil Ivan Pului National Technical University
5.	<i>Josyp Bilynsky, Oksana Horodetska, Pavlo Ratushny</i> Prospects for the use of new methods of digital processing of medical images Vinnytsya, Ukraine, Vinnytsya National Technical University
6.	<i>Oleksandr Kozhukhar, Zenon Hotra, Mariya Ivakh, Hryhoriy Barylo, Volodymyr Virt</i> Schematic Support of Programmed Polychromatic Treatments with the Preliminary Test for Colour Sensitivity Lviv, Ukraine, Lviv Polytechnic National University

7.	<i>Yakovenko E.I., Storchun E.V.</i> Modeling of Radiators Characteristics for Ultrasound Transducers with Mechanical Scanning Lviv, Ukraine, Lviv Polytechnic National University
8.	<i>Mariya Ivakh, Zenon Hotra, Grigoriy Barylo, Roksolana Shkrebnyuk</i> Improving the Effectiveness of Physiotherapy in Dentistry Lviv, Ukraine, Lviv Polytechnic National University, Danylo Halytsky Lviv National Medical University
9.	<i>Yaroslav Savenko, Evgeniy Nelin, Fedir Repa</i> Millimeter-Wave System for Medical Diagnostics Kyiv, Ukraine, National Technical University of Ukraine 'KPI'
10.	<i>N.Dorosh, H. Kuchmiy, O. Boyko, O.Dorosh, O. Stepanjuk, N.Maritz</i> Development the software applications for mobile medical systems based on OS Android Lviv, Kyiv, Ukraine, Lviv Polytechnic National University, National University "Kyiv-Mohila academy", NTUU "KPI"

POSTER SESSION

1.	<i>Vsevolod Novikov, Anton Borsuk, Victoria Glazkova</i> Potential influence of wireless Wi-Fi networks for the digestive function of a stomach Kherson, Ukraine, Kherson National Technical University
2.	<i>Maria Stadnyk</i> The informative parameters determination for a visual system diagnostics by using the steady state visual evoked potentials Ternopil, Ukraine, Ternopil Ivan Pului National Technical University

SECTION 11

Information technologies in educational process

Friday, February 26

13.00 – 15.00**Co-Chairs:**

Prof., DSc **Dmytro Fedasyuk**, Lviv Polytechnic National University
 Assoc. Prof., PhD **Roman Korzh**, Lviv Polytechnic National University

ORAL SESSION

1.	<i>Ilona Revenchuk, Tetyana Shatovska</i> Lifelong Learning Monitoring Model Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
2.	<i>Mykola Pasyeka, Nadiya Pasyeka</i> Construction of multidimensional data warehouse for processing students' knowledge evaluation in universities Ivano-Frankivsk, Ukraine, Vasyl Stefanyk Precarpathian national university, Ivano-Frankivsk National Technical University of Oil and Gas, Ivano-Frankivsk NTU of Oil and Gas
3.	<i>Roman Korzh, Andriy Peleschyshyn, Zoriana Holub</i> Analysis of Integrity and Coverage Completeness of the Informational Image of a Higher Education Institution Lviv, Ukraine, Lviv Polytechnic National University
4.	<i>Andriy Andrukhiv, Dmytro Tarasov, Maria Sokil</i> The system of information providing of educational process in university Lviv, Ukraine, Lviv Polytechnic National University
5.	<i>Andrii Tolbatov, Oleksandr Viunenko, Svitlana Vyganyaylo, Volodymyr Tolbatov, Svitlana Agadzhanova, Sergii Tolbatov</i> Information technologies in the educational process as the basis of modern distance learning Sumy, Ukraine, Sumy National Agrarian University, Sumy State University, National Aviation University
6.	<i>Tetiana Bilushchak, Zhanna Myna, Ulyana Yarka, Oksana Peleschyshyn</i> Using International Standards of Quality Management System in Higher Educational Institutions Lviv, Ukraine, Lviv Polytechnic National University

7.	<i>Iryna Krasniuk, Maryna Kryvych</i> Learning Foreign Languages in Context: Pros and Cons of Using Modern Computer Technologies Kyiv, Ukraine, National Academy of Security Service of Ukraine
8.	<i>Hanna Krasovska, Iryna Domanetska</i> Features of the formation of a unified educational-information space for geographically and organizationally distributed universities Kyiv, Ukraine, Taras Shevchenko National University of Kyiv
9.	<i>Natalia Shcherbak</i> Tests Tasks Quality Assessment Method Zaporizhzhya, Ukraine, Zaporizhzhya National Technical University
10.	<i>Olya Trach, Volodymyr Vus, Oksana Tymovchak-Maksymets</i> Typical algorithm of stage completion when creating a virtual community of a HEI Lviv, Ukraine, Lviv Polytechnic National University
11.	<i>Maryana Zakharchuk</i> Peculiarities of the application of innovative educational technologies in postgraduate education Lviv, Ukraine, Lviv Polytechnic National University
12.	<i>Andriy Melnyk, Mykhailo Shpintal, Viktor Spilchuk, Mykhailo Susla</i> Method for Evaluating the Efficiency of Systems for Distance Education Ternopil, Ukraine, Ternopil National Economic University
13.	<i>Solomia Fedushko, Yuriy Syerov, Roman Korzh</i> Validation of the User Accounts Personal Data of Online Academic Community Lviv, Ukraine, Lviv Polytechnic National University

POSTER SESSION

1.	<i>Inna Herasymenko</i> Used Distance Learning Technologies Cherkasy, Ukraine, Cherkasy State Technological University
2.	<i>Iryna Zolotaryova, Olena Plokha</i> Serious Games: Evaluation of the Learning Outcomes Kharkiv, Ukraine, Simon Kuznets Kharkiv National University of Economics

SECTION 12

Telecommunication systems and networks

Wednesday, February 24

10.00 – 13.00**Co-Chairs:**Prof., DSc **Anatoliy Semenko**, State University of TelecommunicationsProf., DSc **Oleksandr Lemeshko**, Kharkiv National University of Radio Electronics**ORAL SESSION**

1.	<i>Taras Maksymyuk, Mykhailo Klymash, Minho Jo</i> Deployment Strategies and Standardization Perspectives for 5G Mobile Networks Lviv, Seoul, Ukraine, S. Korea, Lviv Polytechnic National University, Korea University
2.	<i>Igor Sunduchkov</i> Super-High Frequency Block for Transmitter-Receiver of 8 mm Range Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"
3.	<i>Sergii Harkusha, Olena Harkusha, Marina Ievdokymenko</i> Hypergraph Representations of Topological Model Mesh-Network IEEE 802.11 Poltava, Kharkiv, Ukraine, Poltava University of Economics and Trade, Kharkiv National University of Radio Electronics
4.	<i>Catherine Domracheva, Anatoly Semenko, Viktor Zaika</i> Using of Amplitude Manipulated signal to increase capacity of MIMO telecommunication system Kyiv, Ukraine, State University of Telecommunications
5.	<i>Marina Lyskova, Valentyn Abakumov</i> Services Of Telecommunication Systems Of New Generation Kyiv Ukraine National Technical University of Ukraine "Kyiv Polytechnic Institute"
6.	<i>Ievgeniia Kuzminykh</i> Development of Traffic Light Control Algorithm in Smart Municipal Network Kharkiv, Ukraine, Kharkiv National University of Radio Electronics

7.	<i>Vasil Oreshkov, Vitaliy Balashov</i> Perspective broadband access technologies over multipair telephone cables Odesa, Ukraine, State enterprise "Odessa Scientific Research Institute of Communications", O.S. Popov Odessa national academy of telecommunications
8.	<i>Vladimir Barannik, N. Kharchenko, V.V. Tverdokhleb, Oleg Kulitsa</i> The issue of timely delivery of video traffic with controlled loss of quality Kharkiv, Ukraine, Kharkiv university of Air Forces n.a. Ivan Kozhedub, Kharkiv National University of Radio Electronics
9.	<i>H. M. Vaskiv, A. Ya. Yaroshchuk, M. v. Drul'</i> Implementation of the training multiservice network of ITRE (Institute of Telecommunications, Radioelectronics and Electronic Engineering) with the remote access Lviv, Ukraine, Lviv Polytechnic National University
10.	<i>Oksana Yevsieieva ,Yevgen Ilyashenko</i> Hierarchical Approach to Resource Allocation in Multitenant Transport Optical Network Kharkiv, Ukraine, Kharkiv National University of Radio Electronics
11.	<i>Barba Irina, Balashov Vitaliy</i> Optimal Signals for Transmission Over the Imperfect Media Odesa, Ukraine, Odessa national academy of telecommunications named after A.S. Popov
12.	<i>Serhii Osypchuk, Leonid Uryvsky, Bogdan Shmigel</i> The 802.11 protocols usage for wireless systems construction with flexible architecture Kyiv, Ukraine, National Technical University of Ukraine "Kyiv Polytechnic Institute"
13.	<i>Anastasia Kalchenko</i> Accounting users' opinion about quality of services in NGN with distributed control system Odesa, Ukraine, Odesa National Academy of Food Technologies
14.	<i>Andriy Dzyubina , Halyna Kopets</i> Prospects of implementation of modern cellular wireless data transfer standards Lviv, Ukraine, Lviv Polytechnic National University
15.	<i>Haider Al-Zayadi</i> The problem of downlink channel bandwidth capacity allocation in LTE technology Lviv, Ukraine, Lviv Polytechnic National University

16.	Olena Krasko, Roman Kolodiy, Viktor Khavalko Wavelength Rearrangement and Load Balancing Algorithm for OWTDMA-PON network Lviv, Ukraine, Lviv Polytechnic National University
-----	--

POSTER SESSION

1.	<i>Alla Goryushkina, Sergey Semenov, Svetlana Globa</i> Model of dynamic management of telecommunication and computer resources Kharkiv, Ukraine, Kharkiv National Technical University «Kharkiv Polytechnic Institute»
2.	<i>Sergii Harkusha, Olena Harkusha</i> Results of the Development Functional Mathematical Model of Distribution Sub-Channels in the Mesh-Network IEEE 802.16 Poltava, Ukraine, Poltava University of Economics and Trade
3.	<i>Liubov Nykolaychuk, Halyna Protsiuk, Ihor Pitukh, Vasyl Protsiuk</i> Information and Legal Aspects of the Communication Functions of the Computerized System Operator Ivano-Frankivsk, Ukraine, Ivano-Frankivsk National Technical University of Oil and Gas
4.	<i>Olena Nevzorova, Kinan M. Arous, Ali Salem Ali</i> Research of the Flow-based Model of Hierarchical Multicast Routing Kharkiv, Baghdad, Ukraine, Iraq, Kharkiv National University of Radio Electronics, Al Iraqi University
5.	<i>Yanevich A.K., Liakhovetsky L.M.</i> The Research Of Dependence Of Harmful Interference In The Systems Of Broadband Access Over Electric Wiring Networks On Guard Interval Duration Odesa, Ukraine, SE «Odessa scientific-research institute of telecommunications»
6.	<i>Valeriy Romanyuk, Oleg Sova, Anton Romanyuk, Sergey Salnyk</i> The MANET`s Hierarchical Control System Using Fuzzy Logic Kyiv, Ukraine, Military Institute of Telecommunication and Information Technology
7.	<i>Haider D. Al-Janabi, Hussam D. Al-Janabi, Oraz M. Hojayev</i> Formulating and Solving Problem of Priority Subchannel Allocation in Downlink WiMAX Odesa, Baghdad, Kharkiv, Ukraine, Iraq, Odesa National Academy of Telecommunications named after O.S. Popov, Imam Jaafar Al-Sadiq University, Kharkiv National University of Radio Electronics

8.	<i>Volodymir Baliar</i> Transmission Quality Estimation for DOCSIS Upstream Channel in Cable TV Networks Odesa, Ukraine, Odesa National Academy of Telecommunications named after A. S. Popov
9.	<i>Stepan Dumych</i> Study on Traffic Aggregation Algorithms for Edge Nodes of Optical Burst Switching Network Lviv, Ukraine, Lviv Polytechnic National University

