



**Problems of Infocommunications.
Science and Technology**
PIC S&T

ORGANIZED BY

Ukrainian Section IEEE
Kharkiv National University of Radio Electronics
Borys Grinchenko Kyiv University

Technical Co-Sponsorship
Ukraine (Kharkov) Section SP/AP/C/EMC Joint Chapter

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CONFERENCE TIMELINE

October 8 Tues- day	9:00 - 11:00	Registration (<i>Hall of Floor 1</i>)
	10:20 - 11:00	Coffee Break
	11:15 - 12:00	Conference Opening (<i>Room 227</i>)
	12:00 - 13:00	Lunch
	13:00 - 15:00	Conference Plenary Session (<i>Room 227</i>)
	15:00 - 15:30	Coffee Break
	14:00 - 16:00	Regular Session 2: Cybersecurity (<i>Room 227</i>) Regular Session 1: Wireless Mobile Infocommunication Systems and Signal Processing (<i>Room 503</i>)
October 9 Wednes- day	09:30 - 11:50	Regular Session 3: Infocommunication technologies, networks and services (IoT) (<i>Room 227</i>) WorkShops (<i>Room 503</i>)
	11:50 - 12:10	Coffee Break
	12:10 - 14:00	Regular Session 5: Image Processing (<i>Room 503</i>)
		Regular Session 4: Infocommunication technologies, networks and services (Network Architectures) (<i>Room 227</i>)
		Regular Sessions 2: Cybersecurity (<i>Room 203</i>)
	14:00 - 15:00	Lunch
	15:00 - 16:20	Regular Sessions 2: Cybersecurity (<i>Room 227</i>)
		Regular Session 1: Wireless Mobile Infocommunication Systems and Signal Processing (<i>Room 503</i>)
	15:40 - 17:00	WorkShops (<i>Room 203</i>)
18:00	Gala Dinner	
October 10 Thurs- day	10:00 - 11:50	Regular Session 3: Infocommunication technologies, networks and services (IoT) (<i>Room 503</i>)
		Regular Session 9: Infocommunication Aspects of Economic Security (<i>Room 203</i>)
	11:50 - 12:10	Coffee Break
	12:10 - 14:00	Regular Sessions 6: Radar, Session 7: Artificial Intelligence and Recognition (<i>Room 503</i>)
		Regular Session 2: Cybersecurity (<i>Room 203</i>)
	14:00 - 15:00	Lunch
15:00 - 18:00	Social Event: Excursion	
October 11 Friday	10:00 - 11:50	Regular Session 4: Infocommunication technologies, networks and services (Network Architectures) (<i>Room 227</i>)
		Regular Session 9: Infocommunication Aspects of Economic Security (<i>Room 503</i>)
	11:50 - 12:10	Coffee Break
	12:10 - 14:00	Regular Session 9: Infocommunication Aspects of Economic Security (<i>Room 503</i>)
		Regular Session 8: Fractals (<i>Room 227</i>)
	14:00 - 15:00	Lunch
	15:00 - 16:20	Regular Sessions 7: Artificial Intelligence and Recognition (<i>Room 503</i>)
16:20 - 16:45	Conference Closing (<i>Room 503</i>)	

CONFERENCE OPENING AND PLENARY SESSION

Room 227 - October 08 – 11:15 – 15:00

09:00- 17:00 Registration (Reception, KUBG, Kyiv)

Vyktor Ognivyuk, Rector KUBG, Dr.Sc., Prof.
Education. Welcome speech.

Dmytro Ageiev, Dr.Sc., Prof.
Evolution. Welcome speech.

Taylor Vance and Andrew Vance, Cybersecurity University, USA
Cybersecurity in the Blockchain Era: A Survey on Examining Critical Infrastructure Protection with Blockchain-Based Technology

Roman Odarchenko, Dr. Sc., NAU
Broadcast and Multicast Communication Enablers For the Fifth Generation of Wireless Systems

Volodymyr Krolivets, GlobalLogic
Digital Transformation in the Telecom industry and how it will affect the future requirements for professionals in this area

Volodymyr I. Ponomaryov, Dr.Sc., Prof.
Learning Approach in Restoration, Resolution Enhancement and Security for 2D/3D Data Processing

Maryna Yevdokymenko, PhD, NURE
Routing Tensor Model with Providing Multimedia Quality

SESSION. CYBERSECURITY

Room 227 - October 8 – 14:00 - 16:00

85	David-Octavio Muñoz-Ramírez, Volodymyr Ponomaryov, Rogelio Reyes-Reyes, Clara Cruz-Ramos and Denys Ponomaryov	Steganographic framework for hiding a color image into digital images
86	Ixcanil García-Daza-Cervantes, Rogelio Reyes-Reyes, Clara Cruz-Ramos, Volodymyr Ponomaryov and Denys Ponomaryov	Malware Classification Using Distance and Directional Local Binary Patterns
135	Oleksandr Lemeshko, Ihor Dobrynin and Andriy Zhuravka	The Biometric Identification System Based on Iris Code
124	Mariia Rodinko and Roman Oliynykov	Comparing Performances of Cypress Block Cipher and Modern Lightweight Block Ciphers on Different Platforms
217	Petro Snitsarenko, Anatolii Pavlikovskyi, Oleksii Zahorka and Oleksandr Oksiiuk Oleksandr Oksiiuk	Cybersecurity as a component of information security: a terminological aspect from the point of view of the Ukrainian information legislation

SESSION. WIRELESS MOBILE INFOCOMMUNICATION SYSTEMS AND SIGNAL PROCESSING

Room 503 - October 8 – 14:00 - 16:00

16	Arkadiy Prodeus, Igor Kotvytskyi and Alexander Grebin	Using Kurtosis for Objective Assessment of the Musical Signals Clipping Degree
95	Gleb Avdeyenko	Application of Spatial Signal Processing for Bandwidth Capability Improvement of Radio Relay Link
117	Oleksii Serheiev-Horchynskyi	Analysis of Frequency Characteristics of Simple Moving Average Digital Filtering System
203	Roman Odarchenko, Anastasiia Abakumova, Pavlo Usik, Oleksii Smirnov and Maratkyzy Kundyz	QoE ASSESMENT TECHNIQUE FOR MEDIA DELIVERY IN 5G NETWORKS
216	Mikhail Ilchenko, Teodor Narytnyk, Vladimir Prisyazhny, Sergii Kapshtyk and Sergey Matvienko	The Solution of the Problem of the Delay Determination in the Information Transmission and Processing in the LEO Satellite Internet of Things System
45	Volodymyr Saiko, Teodor Narytnyk, Mykola Brailovskyi and Volodymyr Nakonechnyi	Radiating telecommunication system of the sub-THz-band to protect objects from unauthorized access
58	Orest Sushynskyi, Gryhoriy Barylo, Zinovi Mykytyuk, Taras Prystay and Mariya Vistak	DEVICES MODEL RESEARCH TECHNIQUE OF ANALOGOUS FRONT-END FOR OPTICAL SENSORS

SESSION. INFOCOMMUNICATION TECHNOLOGIES, NETWORKS AND SERVICES (IOT)

Room 227 – Oct., 9 – 09:30 - 11:50

14	Oleksandr Bauzha, Bogdan Sus', Sergiy Zagorodnyuk and Natalia Stuchynska	Electrocardiogram measurement complex based on micro-controllers and wireless networks
30	Olha Zaichenko, Marina Miroshnyk and Pavlo Galkin	Model and Algorithms for Microwave Mutiport Receiver
43	Svitlana Hrushko, Irina Zeleneva, Galina Kirichek and Artur Timenko	Comparative Analysis of Combined Finite State Machine Implementation on Chips of Different Manufacturers
94	Vitaliy Lysenko and Irina Chernova	Infocommunication Provision for the Production of Entomophages
107	Ievgeniia Kuzminykh, Anders Carlsson and Maryna Yevdokymenko	A Performance Evaluation of Sensor Nodes in the Home Automation System based on Arduino
115	Vadym Shkarupylo, Ravil Kudermetov, Artur Timenko and Olga Polska	On the Aspects of IoT Protocols Specification and Verification
118	Pavlo Galkin	Design Testbench for Wireless Sensor Network Based on CC2530 Transceiver
121	Pavlo Galkin, Ravil Umiarov and Olga Grigorieva	Approaches for safety-critical embedded systems and telecommunication systems design for avionics based on FPGA
209	Roman Yershov, Volodymyr Voytenko and Volodymyr Bychko	Software-Based Contact Debouncing Algorithm with Programmable Auto-Repeat Profile Feature

WORKSHOPS

Room 503 – Oct., 9 – 09:30 - 11:50

Cybersecurity

SESSION. IMAGE PROCESSING

Room 503 – Oct., 9 – 12:10 - 14:00

40	Volodymyr Pyliavskyi, Olena Osharovska, Mikola Patlaenko and Valentina Solodka	Compensation for Color Distortions in End-to-End Video Transmission Paths with Regards to the Spectral Composition of Light Sources
48	Serhiy Kovbasiuk, Leonid Kanevskyy, Mykola Romanchuk and Ihor Sashchuk	Object Detection Method Based on Aerial Image Instance Segmentation in Poor Optical Conditions for Integration of Data into an Infocommunication System
81	Galina Proskura, Vladimir Lukin and Irina Vasilyeva	Improvement of Multichannel Image Classification by Combining Elementary Classifiers
110	Sergei Yelmanov and Yuriy Romanyshyn	A New Technique of Image Enhancement by Equalizing the Bivariate Probability Density of Brightness
22	Igor Ruban, Hennadii Khudov, Irina Khizhnyak, Oleksandr Makoveichuk, Vladyslav Khudov, Iryna Yuzova and Yevhen Drob	The Method for Selecting the Urban Infrastructure Objects Contours

SESSION. INFOCOMMUNICATION TECHNOLOGIES, NETWORKS AND SERVICES (NETWORK ARCHITECTURES)

Room 227 – Oct., 09 – 12:10 - 14:00

18	Alexander Chemeris and Sergii Sushko	Usage of Discrete Particle Swarm Optimization Method for the Searching of Optimal Tile Size
29	Vitalii Tkachov, Mykhailo Hunko and Vadym Volotka	Scenarios for Implementation of Nested Virtualization Technology in Task of Improving Cloud Firewall Fault Tolerance
62	Vasyl Sheketa, Roman Vovk, Yulia Romanyshyn, Volodymyr Pikh and Mykola Pasyeka	Formal Methods for Solving Technological Problems in the Infocommunications Routines of Intelligent Decisions Making for Drilling Control
65	Volodymyr Akhmetov, Sergii Khlamov, Vadym Savanevych and Eugen Dikov	Cloud computing analysis of Indian ASAT test on March 27, 2019
49	Hennadii Falatiuk, Mariya Shirokopetleva and Zoia Dudar	Investigation of Architecture and Technology Stack for e-Archive System
166	Mykhailo Klymash, Yuliia Pyrih and Mykola Kaidan	Modified Genetic Algorithm for Increasing the Efficiency of Routing in Self-organized Networks
172	Oleksandr Lemeshko, Maryna Yevdokymenko and Oleksandra Yeremenko	Load-Balancing Fast ReRouting Model with Providing Fair Priority-Based Traffic Policing
36	Andriy Lutskiv and Nataliya Popovych	Adaptable Text Corpus Development for Specific Linguistic Research
180	Nadia Pasioka, Vasyl Sheketa, Mykola	Models, Methods and Algorithms of Web System Architec-

	Pasieka, Ulyana Domska, Yulia Romanushyn and Anna Struk	ture Optimization
21	Ivan Obod, Iryna Svyd, Oleksandr Maltsev, Ganna Zavolodko, Daria Pavlova and Halyna Maistrenko	Fusion of Discrete Evaluation of the State Vector of Air Objects Based on 4D Measurement
77	Dmitry Zaitsev, Tatiana Shmeleva and Alexander Kostikov	Clans Aggregation for Verification of Networking Protocols on Parallel Architectures

SESSION. CYBERSECURITY

Room 203 – Oct., 9 – 12:10 - 14:00

54	Victor Krasnobayev, Alina Yanko, Alexandr Kuznetsov and Kateryna Kuznetsova	Correction Codes in the System of Residual Classes
87	Oleksandr Kurbatov, Pavel Kravchenko, Nikolay Poluyachenko, Oleksiy Shapoval and Tetiana Kuznetsova	Decentralized Identification and Certification System
133	Alexandr Kuznetsov, Olesia Reshetniak, Oleksii Smirnov, Tetiana Ivko, Tetiana Katkova and Tetiana Kuznetsova	Generators of Pseudorandom Sequence with Multilevel Function of Correlation
144	Victor Krasnobayev, Andrii Diachenko, Irina Lokotkova, Serhii Florov, Yevgen Kotukh and Tetiana Kuznetsova	Method of Operative Control of Data in the Class of Residues
199	Victor Krasnobayev, Sergey Koshman, Kostiantyn Myslyvtsev, Kateryna Kuznetsova, Tetiana Ivko and Tetiana Katkova	The Method of Arithmetic Comparison of Data in the Residue Numeral System

SESSION. WIRELESS MOBILE INFOCOMMUNICATION SYSTEMS AND SIGNAL PROCESSING

Room 503 – Oct. 09 – 15:00 - 16:20

47	Volodymyr Vasylyshyn	Estimation of signal parameters using SSA and Unitary Root-MUSIC
83	Mykola Naumenko and Vyacheslav Solodovnick	Signal-Code Construction Based on Space-Time Block Coding with Dual-Mode Index Modulation Aided OFDM
190	Oleksandr Pliushch	Gradient Signal Processing Algorithm for Adaptive Antenna Arrays Obviating Reference Signal Presence
206	Mykola Kaliuzniy, Alex Zadonskiy, Guo Qiang and Andrey Kipenskiy	Creating the information basis of spectral masks of infocommunication facilities for their identification during automated radiomonitoring
179	Yuliia Tverdokhlib and Valeriy Dubrovin	Research on wavelet filter features for nonstationary signals

SESSION. CYBERSECURITY

Room 227 – Oct. 09 – 15:00 - 16:20

70	Viktoriya Grechko, Tetiana Babenko and Larysa Myrutenko	Secure Software Developing Recommendations
19	Iryna Svyd, Ivan Obod, Oleksandr Maltsev, Ganna Zavolodko, Halyna Maistrenko and Liliia Saikivska	Method of Enhancing Information Security of Requesting Cooperative Surveillance Systems

88	Valeriy Gorbachov, Abdulrahman Kataeba Batiaa, Olha Ponomarenko and Oksana Kotkova	Impact Evaluation of Embedded Security Mechanisms on System Performance
194	Galyna Liashenko and Andrii Astrakhantsev	Investigation of The Influence of Image Quality on The Work of Biometric Authentication Methods
170	Gennady Khalimov, Yevgen Kotukh and Svitlana Khalimova	MST3 cryptosystem based on the automorphism group of the Hermitian function field

WORKSHOP

Room 203 – Oct., 9 – 15:40 - 17:00

Alexander Adamov

Education and Research Challenges in Cybersecurity.

SESSION. INFOCOMMUNICATION TECHNOLOGIES, NETWORKS AND SERVICES (IOT)

Oct. 10, 10:00 - 11:50, Room 503

39	Dmytro Kucherov, Andriy Berezkin and Olha Sushchenko	Features of Signal Processing by Means of LoRa Technology
93	Viktoriia Onyshchenko, Svitlana Shevchenko and Olena Negodenko	Models of information processing in IoT networks on the basis of fundamental trigonometric splines
98	Mykhailo Reshetniak and Svitlana Popereshnyak	Method for Accessing and Processing Multimedia Content in a Cloud Environment
69	Maksym Vladymyrenko, Volodymyr Sokolov, Volodymyr Buriachok and Artem Platonenko	Analysis of Implementation Results of the Distributed Access Control System
32	Vitaliy Lysenko, Serhii Shvorov, Natalia Pasichnyk, Oleksiy Opryshko, Dmytro Komarchuk and Volodymyr Lukin	Methodological solutions for the IoT concept for biogas production using the local resource
167	Oleksii Barybin, Volodymyr Brazhnyi and Elina Zaitseva	Testing the Security ESP32 Internet of Things Devices

SESSION. INFOCOMMUNICATION ASPECTS OF ECONOMIC SECURITY

Room 203 – Oct. 10 – 10:00 - 11:50

106	Nataliia Manakova, Olha Kolisnyk and Liudmyla Sokolova	Ensembling Clustering Method for Evaluating of the Economic Security Components. Case Study: The Regions of Ukraine
92	Sergiy Obushnyi, Roman Kravchenko and Yevhenii Babichenko	Blockchain as a Transaction Protocol for Guaranteed Transfer of Values in Cluster Economic Systems with Digital Twins
137	Yuriy Lakh and Rostyslav Shymkiv	Using Honeypot Programs for Providing Defense of Banking Network Infrastructure
148	Olga Shevchenko	Models for Reduction of Interregional Disparities Accounting Regional Economic Security

154	Yuliia Melnychuk and Maksym Slatvynskiy	Economic Security Governance and Financial Independence of Telecommunication Companies
161	Vitalina Babenko, Mykola Latynin, Liudmila Lomovskykh, Oleksandr Nakisko, Serhii Rudenko and Olga Girzheva	Procedure of identifying of the parameters of the model of management of technological innovations in economic systems
195	Galyna Chornous and Iuliia Iarmolenko	The Influence of an Information Environment on Consumer Behavior in E-Commerce
201	Volodymyr Kraevsky, Oleksii Kalivoshko, Oleksandr Kostenko, Nikolay Kiktev and Igor Lyutyty	Financial Infrastructure of Telecommunication Space: Accounting Information Attributive of Syntalytical Submission
38	Iryna Spivak, Svitlana Krepych, Roman Krepych and Andrii Bayurskii	Construction of a Criterion for Assessing the Level of Objectivity of Experts Based on a Modified Interval Expert Appraisal Method
84	Тетяна Носенко, Вікторія Вембер and Larysa Gorodianska	Neobank Operation and Security Features

SESSION. RADAR. ARTIFICIAL INTELLIGENCE AND RECOGNITION

Room 503 – Oct. 10 – 12:10 - 14:00

8	Vladimir Pavlikov, Huu Nguyen Van, Simeon Zhyla and Anton Sobkolov	Spectral Aperture Synthesis Method
24	Hennadii Khudov, Andrii Fedorov, Dmytro Holovniak and Galina Misiyuk	Method of radar adjustment with automatic dependent surveillance technology use
26	Svitlana Solonska, Volodymyr Zhyrnov and Oleksiy Holovin	Semantic Processing of Radar Spectral Information for Air Object Recognition
42	Sergiy Sheiko, Volodymyr Oleynikov, Oleh Zubkov, Volodymyr Kartashov, Igor Koryttsev and Stanislav Babkin	Experimental Estimation of Direction Finding to Unmanned Air Vehicles Algorithms Efficiency by Their Acoustic Emission
96	Igor Shubin, Svitlana Solonska, Stanislav Snisar, Vlad Slavhorodskiy and Victoria Skovorodnikova	Semantic Radar Technology for Detecting and Recognizing Low-Visible Air Objects
120	Oleksandr Dumin, Vadym Plakhtii, Dmytro Shyrokorad and Oleksandr Prishchenko	Signal Processing in UWB Subsurface Radiolocation by Artificial Neural Networks
35	Iryna Spivak, Svitlana Krepych, Serhii Spivak and Vasyl Faifura	Methods and Tools of Face Recognition for the Marketing Decision Making
25	Oleksii Sheremet and Oleksandr Korobov	Speech to Mind Map Conversion in Infocommunication Systems
116	Victoriia Naumenko and Alexander Totsky	Bispectrum-Based Detection Homogeneous Areas in the Digital Images
63	Stanislav Shostak and Arkadiy Prodeus	Classification of the bee colony condition using spectral features

SESSION. CYBERSECURITY

Room 203 – Oct. 10 – 12:10 - 14:00

10	Mykola Pastushenko, Viacheslav Pastushenko and Oleksandr Pastushenko	Specifics of Receiving and Processing Phase Information in Voice Authentication Systems
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33	Elena Nyemkova, Vyacheslav Chaplyha, Stepan Voytusik, Aleksandr Ragulin, Volodymyr Chaplyha and Svitlana Chaplinska	Real-Time Authentication of Electronic Devices in Cyber-Physical Systems
100	Lyudmyla Kirichenko, Tamara Radivilova and Abed Saif Alghawli	Entropy Analysis Method for Attacks Detection
147	Sergiy Gnatyuk, Viktoriia Sydorenko, Yuliia Polishchuk and Yuliia Sotnichenko	Determining the Level of Importance for Critical Information Infrastructure Objects
128	Feodosiy Kipchuk, Volodymyr Sokolov, Volodymyr Buriachok and Lidia Kuzmenko	Investigation of Availability of Wireless Access Points Based on Embedded Systems

SESSION. INFOCOMMUNICATION TECHNOLOGIES, NETWORKS AND SERVICES (NETWORK ARCHITECTURES)

Room 227 - Oct. 11 – 10:00 - 11:50

71	Oleksandr Romanov and Volodymyr Mankivskiy	Optimal traffic distribution based on the sectoral model of loading network elements
72	Vladyslav Apukhtin, Mariya Shirokopetleva and Victoria Skovorodnikova	The Relevance of Using Message Brokers in Robust Enterprise Applications
184	Oksana Pichugina	New Approaches to Modelling Covering Problems in Monitoring Optimization
207	Sergii Korotin, Yurii Kravchenko, Olena Starkova, Kostiantyn Herasymenko and Roman Mykolaichuk	Analytical determination of the parameters of the self-tuning circuit of the traffic control system on the limit of vibrational stability
187	Nina Kniazieva, Sergii Kotlyk and Anastasiia Kalchenko	Method of assessment and improvement the quality of multimedia services
205	Liudmyla Koliiechkina and Alla Nahirna	The Mathematical Model of the Optimal Choice of a Software Package for an Enterprise Information System
60	Mykhailo Rakushev, Oleksandr Permiakov, Svitlana Tarasenko, Serhii Kovbasiuk, Yurii Kravchenko and Oleksandr Lavrinchuk	Numerical Method of Integration on the Basis of Multidimensional Differential-Taylor Transformations
15	Oleh Pihnastyi, Georgii Kozhevnikov and Tetiana Bondarenko	The Information Controlling Model Transport System During Transient Conditions
64	Maksym Yevlanov, Svitlana Shtangey, Oleksandr Petrichenko and Viktoria Zhebka	Development of a Model for the Task of Managing the Operation of a Service-Oriented Information System

SESSION. INFOCOMMUNICATION ASPECTS OF ECONOMIC SECURITY

Room 503 - Oct. 11 – 10:00 - 11:50

34	Viktor Morozov and Olena Kalnichenko	Probabilistic Forecasting Model Of Changes Based On Impacts In Infocommunication Projects
132	Sergii Kavun, Alina Zamula and Kostyantyn Serdukov	Binary Recommender System with Artificial Intelligence Aids
138	Andriy Shtangret, Svitlana Shynkar, Taras	Formation and Functioning of the Organizational and Eco-

	Shyra, Myroslava Karaim and Sviatoslav Kavyn	conomic Mechanism of Ensuring the Economic Security of the Enterprise
142	Oleksandr Sylkin, Yaroslav Pushak, Myroslava Krystyniak, Olha Ogirko and Yurii Ratushniak	Anti-Crisis Strategy in the System of Ensuring Financial Security of the Engineering Enterprise: Theoretical and Practical Aspects
143	Marta Kopytko, Mariya Vinichuk, Olha Podra and Maryana Veresklya	Strategic Priorities for Combating Corruption under Conditions of Global Financial and Economic Challenges
156	Serghei Ohrimenco, Grigori Borta and Tetiana Bochulia	The Shadow of Digital Economics
162	Tetiana Momot, Nataliia Chekh and Daryna Momot	Art Market Investment Security Modelling and Blockchain Technologies Perspectives
193	Sergii Kavun, Olga Zavgorodnia, Oksana Panchenko and Robert Brumnik	Counteracting Malicious Insider's Activity within Funds Transfer Systems

SESSION. INFOCOMMUNICATION ASPECTS OF ECONOMIC SECURITY

Room 503 – Oct. 11 – 12:10 - 14:00

175	Iryna Strutynska, Halyna Kozbur, Lesia Dmytrotsa, Ihor Bodnarchuk and Olha Hlado	Small and Medium Business Structures Clustering Method Based on Their Digital Maturity
183	Ryszard Pukala, Serhii Hlibko, Nataliya Vnukova and Daria Davidenko	Usage of E-Technologies to Enhance Infocommunication in Financing Innovation
185	Volodymyr Ostakhov and Viktor Morozov	Models and Methods of IT and Infocommunications Portfolio Management Using the System of Metrics and KPIs
140	Olexandr Pushkar and Yevhen Hrabovskyi	Methods of Providing Information Security of a Multimedia Publishing Company

SESSION. FRACTALS

Room 227 – Oct. 11 – 12:10 - 14:00

125	Roman Voliansky, Oleksandr Sadovoi, Iurii Shramko, Yuliia Sokhina and Mykola Pushkar	Chua's Circuit With Time-Depended Variable Capacitances And Its Synchronization
177	Anatolii Pashko and Olga Vasylyk	STATISTICAL SIMULATION OF SIZE BEHAVIOR FOR TCP WINDOWS
186	Alexander Bogomolov, Viktor Nevezhin, Liubov Chagovets and Natalia Chernova	The Information Signal Resonance Effect Modeling
197	Valeria Baranova, Oleksandr Zeleniy, Zhanna Deineko, Ganna Bielcheva and Vyacheslav Lyashenko	Wavelet Coherence as a Tool for Studying of Economic Dynamics in Infocommunication Systems
198	Stanislav Berezovsky	3D intellectual heuristic topology of communication devices of telecommunication structures on the elements by Berezovsky

SESSION. ARTIFICIAL INTELLIGENCE AND RECOGNITION

Room 503 – Oct. 11 – 15:00 - 16:20

68	Kirill Smelyakov, Anastasiya Chupryna, Mykyta Hvozdiev, Denys Sandrkin and Vitalii Martovytskyi	Comparative efficiency analysis of gradational correction models of highly lighted image
89	Kirill Smelyakov, Anton Datsenko, Vitalii Skrypka, Aganur Akhundov and Anastasiya Chupryna	Efficiency of Image Reduction Algorithms with Small-Sized and Linear Details
99	Oleksandr Ponomarenko, Kirill Smelyakov, Anastasiya Chupryna, Dariia Tovchychenko and Igor Ruban	Local Feature Detectors Performance Analysis on Digital Image
215	Anton Khaddad, Yuliia Riabchun, Svetlana Terenchuk and Bohdan Yeremenko	Modeling of the Intelligent System of Searching Associative Images
204	Vladimir Barannik, Oksana Stetsenko, Natalia Barannik, Alexander Musienko, Sergii Shulgin and Igor Shevchenko	The Principles of Developing a Differential Video Controlling Scheme Based on the use of Intelligent Agents

POSTER SESSION 1.

Floor 3, October 8 – 15:00 – 15:30

76	Dmytro Vovchuk, Mykola Khobzei and Mykhailo Khavruniak	Sensing Properties of SRR: influence of finger touching
212	Mykola Moskalets, Valerii Loshakov, Oleksandr Martynchuk, Kostiantyn Sivilivanov, Drif Abdenour and Dmytro Ageyev	Methods for Solving EMC Problems by Means of Antenna Technology in Tropospheric Communication
202	Muhammad Bilal, Zohaib Hassan, Roman Odarchenko, Muhammad Ayub and Ishtiaque Ahmad	Classification of Routing Protocols for FANTS
174	Ihor Sliusar, Vadym Slyusar, Sergij Voloshko, Andrii Zinchenko and Larisa Degtyareva	Synthesis of quasi-fractal ring antennas
164	Teodor Narytnik, Aleksey May, Igor Kuzmichev, Aleksey Popkov and Aleksandr Kogut	Excitation of the Wave TE ₀₁ in a Circular Waveguide by Means of the Higher Oscillations of an Open Resonator
149	Vitaly Pochernyaev and Victoriia Povkhlil	Useful of High Power Microwave Transmitters in Combined Radio Engineering Complexes and the Analysis of Electromagnetic Compatibility of the System
130	Yuriy Rudyk, Victor Kuts and Oleg Nazarovets	Means for measuring control of impulsive overvoltage caused by thunderstorms
181	Valerii Koval, Vitaliy Lysenko, Oleksandr Osinskiy, Oleksandr Samkov and Mykola Khudyntsev	Infocommunication Technologies and Networks for Multi-channel Monitoring of Synchronization Signals of SMART Grid and Microgrid Electrical Systems
27	Olexander Belej, Tamara Lohutova and Jan Sadeckii	The Features of Security of Transfer and Storage Data for the Internet of Things in Cloud Database
171	Valeriy Lakhno, Dmytro Kasatkin and Andriy Blozva	Modeling cyber security of information systems smart city based on the theory of games and markov processes
61	Serhii Toliupa, Ihor Tereikovskiy, Oleksandr Korystin, Volodymyr Nakonechnyi and Liudmyla Tereikovska	ONE-PERIODIC TEMPLATE MARKS MODEL OF NORMAL BEHAVIOR OF THE SAFETY PARAMETERS OF INFORMATION SYSTEMS NETWORKING RESOURCES

103	Sergiy Gnatyuk, Tetyana Okhrimenko, Maksim Iavich and Rat Berdibayev	Intruder Control Mode Simulation of Deterministic Quantum Cryptography Protocol for Depolarized Quantum Channel
129	Vladyslava Chaikovska, Oleksandr Oksiuk and Andriy Fesenko	Security technique for authentication process in the cloud environment
104	Yaroslav Krainyk and Yevhen Davydenko	Mathematical Model of Transposition Chaotic Encryption System Based on Field-Programmable Gate Arrays for Multimedia Data
44	Volodymyr Kylyvnyk, Sergey Rudyk, Oleksandr Hladkyi and Tetiana Tkachenko	Use of Information Technologies for Clinical Decision-Making in Medical Rehabilitation

POSTER SESSION 2.

Floor 3, October 09 – 11:50 – 12:10, 15:40 – 16:10

23	Oleg Riznyk, Natalya Kustra, Yurii Kynash and Roksolana Vynnychuk	Method of Constructing Barker-like Sequence on the Basis of Ideal Ring Bundle Families
191	Vasyl Oreshkov and Vitaliy Balashov	Evaluation of Characteristics of Broadband Access Systems Using G.Fast Technology Over TPP Type Multi-Pair Telephone Cable
59	Yana Kremenetskaya, Anatolii Makarenko and Viktor Koval	Limitations of Efficiency of Wireless Systems of Telecommunications 5G and Methods of Their Compensation
146	Baliar Volodymir, Dmitrenko Ivanna and Mazurkiewicz Olena	Estimation of technical quality for MPEG streaming in LTE networks
151	Alexandr Volvach, Galina Kurbasova and Larisa Volvach	Radio Antennas for a forecast of solar activity
169	Baliar Volodymir, Mazurkiewicz Olena and Staneva Inna	Estimation of a coarse synchronization performance for signals of digital television systems based on OFDM technology
189	Andriy Semenov, Oleksandr Osadchuk, Olena Semenova, Kostyantyn Koval, Serhii Baraban and Anton Savytskyi	A Deterministic Chaos Ring Oscillator Based on a MOS Transistor Structure with Negative Differential Resistance
3	Mariya Nazarkevych, Yaroslav Voznyi, Marta Kipish, Yelyzaveta Sydorenko, Oleksii Shevchuk and Mariya Podavalkina	Fingerprint Recognition Device is Built on the Method of Filtering Ateb-Gabor
91	Vladyslav Pliuhin, Maria Sukhonos, Mykola Pan, Volodymyr Korobka and Andrey Karyuk	Using Azure Machine Learning Studio with Python Scripts for Induction Motors Optimization Web-Deploy Project
173	Dmitriy Khort, Alexey Kutyrev, Rostislav Filipov, Nikolay Kiktev and Dmytro Komarchuk	ROBOTIZED PLATFORM FOR COLLECTION OF STRAWBERRY BERRIES
192	Anastasia Goncharuk and Yuliia Adamenko	Portable device for monitoring blood pressure
127	Sergiy Novoselov and Oksana Sychova	Using Wireless Technology for Managing Distributed Industrial Automation Objects within the Concept of Industry 4.0
210	Kostyantyn Herasymenko, Olena Starkova and Danylo Bukhanko	Access control system based on radioelectronic elements and the Internet of things

155	Artur Levkin, Ruslana Levkina, Anna Petrenko and Igor Chaliy	Economic Security as a Result of Modern Biotechnology Implementation
51	Kostyantyn Kolisnyk, Tatyana Sokol, Oleg Avrunin, Dmytro Deineko and Sergiy Kutsevlyak	Application of modern Internet technologies in telemedicine screening of patient conditions
57	Nataliia Kunanets, Antonii Rzhеuskyi, Yurii Oliinyk and Olga Artemenko	Sentiment Analysis of User Responses of Tourist Services
75	Evgeniy Lavrov, Olga Lavrova, Nadiia Pasko, Vasyly Kyzenko and Nataliia Savina	Assessment of the Reliability of a Human Operator in Access Systems to Information Resources
78	Oleksiy Borysenko, Oleksii Horiachev, Igor Kulyk and Maximilian Yakovlev	Factorial permutation generation
111	Svitlana Riznychok, Kateryna Ilkanych, Natalia Dorosh and Viktoria Maikher	Peculiarities of Realization of a Web-Resources Professional Medical Periodic Edition
123	Oksana Luchsheva, Ihor Turkin, Pavlo Luchshev and Yuliia Kuznetsova	Navigation support method taking into account urban canyon limitations for visually impaired people
153	Serhiy Mashkovskyi	New Approaches to Search the Relations Between Distributed Data in Social Networks
159	Orest Khamula, Svitlana Vasiuta, Oleksandr Tymchenko, Olha Sosnovska, Andriy Konyukhov and Marek Dudzik	Synthesis of Factors Model of Data Visualization in the Infographics
196	Sergei Yelmanov and Yuriy Romanyshyn	A New Technique of Image Enhancement by Equalizing the Bivariate Probability Density of Brightness

POSTER SESSION 3.

Floor 3, October 10 – 11:50 – 12:10, 15:00-15:30

80	Svitlana Popereshnyak	One Way of Testing of Pseudorandom Sequence of Small Length using Multidimensional Statistics
101	Evgeniy Avchinnikov, Igor Shostko, Andrei Tevyashev, Mikhail Neofitny and Yuliia Kulia	Experimental researches on determination of angles of side illumination by laser radiation of optical devices and optoelectronic devices
2	Vitaliy Lishchenko, Hennadii Khudov, Fedor Zots, Serhii Kovalevskyi, Oleksij Serdjuk and Artem Irkha	The Proposals for Synchronization Positions of MIMO Radar System on The Basis of Surveillance Radars
13	Lesya Karpova, Juliy Boiko and Oleksander Eromenko	Synthesis of Ambiguity Functions for Complex Radar Signal Processing
214	Aleksandr Selyukov, Khaldon Araffa, Yurii Khlaponin and Natalia Lialina	Compensator of trajectory instabilities of aviation radar with aperture synthesis
108	Serhii Potapov and Kostiantyn Kasian	Recognition of interior objects from photographs and their subsequent transformation into a drawing for building IoT systems
145	Jan Matuszewski and Dymitr Pietrow	Deep Learning Neural Networks With Using Pseudo-Random 3D Patterns Generator
165	Vadym Tiutiunyk, Vladimir Kalugin, Olha Pyslakova, Alexander Levterov and Julia Zakharchenko	Development of Civil Defense Systems and Ecological Safety

POSTER SESSION 4.**Floor 3, October 11 – 11:50 – 12:10, 15:00-15:30**

67	Victotia Bandura, Mykola Pasieka, Roman Khrabatyn and Andriw Malitchuk	Evaluation of Quality of Backup Copy Systems Data in Telecommunication Systems
150	Yaroslav Dorogyy and Hleb Shpyta	USING OF MACHINE LEARNING ALGORITHMS WITHOUT PRELIMINARY TRAINING IN UNCONSTANT GAME SYSTEMS
176	Nataliya Fil, Leonid Nefedov and Angela Binkovskaya	A Model for Choosing Hosting for a Company's Website
134	Vadim Shergin, Larysa Chala and Serhii Udovenko	Assortativity Properties of Scale-Free Networks
113	Alina Nechyporenko, Victoriia Alekseeva, Nadiia Yurevych, Victor Reshetnik, Rosana Nazaryan and Vitaliy Gargin	Assessment of Measurement Uncertainty of The Uncinated process and Middle Nasal concha in Spiral Computed Tomography Data
112	Kostiantyn Chorny, Igor Khudetsky and Yuliya Antonova-Rafi	Analysis of Approaches to Use Wireless Sensors Networks in Design of the Spinal Traction Therapy Systems
74	Alexander Kuchansky, Andrii Biloshchytskyi, Yurii Andrashko, Svitlana Biloshchytska, Tetyana Honcharenko and Volodymyr Nikolenko	Fractal Time Series Analysis in Non-Stationary Environment
11	Dmitry Tsiupak, Ruslan Pashchenko and Viktor Ivanov	The Use of Fractal Signals in Information and Communication Systems
200	Valeria Baranova, Oleksandr Zeleniy, Zhanna Deineko and Vyacheslav Lyashenko	Stochastic Frontier Analysis and Wavelet Ideology in the Study of Emergence of Threats in the Financial Markets
125	Roman Voliansky, Oleksandr Sadovoi, Iurii Shramko, Yuliia Sokhina and Mykola Pushkar	Chua's Circuit With Time-Depended Variable Capacitances And Its Synchronization
157	Nataliia Kuzmynchuk, Oleksandra Terovanesova and Nikolai Pysarevskyi	Simulation Technologies in Raiding Countering for Ensuring the Economic Security of the Enterprise
163	Stepan Melnychuk and Iryna Manuliak	Aanalysis of the passive fragments influence in broadband signals with manipulated information entropy on the data transmission reliability
66	Taras Chaikivskyi and Irena Nykulyshyn	Mathematical support of the information system for managing the technological process of polymerization
17	Andrii Oliinyk, Ievgen Fedorchenko, Alexander Stepanenko, Tetiana Zaiko, Dmytro Goncharenko and Anastasia Kharchenko	Development of Genetic Methods of Network Pharmacy Financial Indicators Optimization

CONFERENCE CLOSING**Room 503 - October 11 – 16:20 – 16:45****Moderator: Prof. Dmytro Ageiev**