Kharkov National University of Radio Electronics (KNURE) invites students, post-graduates and young scientists to take part in the work of the 28th International Forum of Young Scientists "**RADIO ELECTRONICS AND YOUTH IN THE XXI CENTURY**" which will be held on **April 16–18, 2024.**

10 thematic conferences will be held in the framework of the Forum (*Appendix 1*).
Working languages of the Forum are Ukrainian, English.
The format for holding Conferences of the Forum is **on-line.**
The Forum materials will be posted in the form of Collections of Conferences and individual abstracts in the Electronic Archive (ElAr) of Kharkiv National University of Radio Electronics.
The possibility of assigning a DOI index to report abstracts is provided if there is a positive response from the Review Committee.
The texts of the best reports, on the recommendation of the Forum Organizing Committee, will be published in the form of articles in the scientific collections of KNURE: «ACS and Automation Devices», «Bionics of Intelligence» and «Radio Engineering».

TO PARTICIPATE IN THE WORK OF THE FORUM one should register himself/herself (from a Google account or from the domain @nure.ua) using the link and provide:
- Abstracts of the report formed in accordance with the requirements and the applied example (*Appendix 2*).
- A copy of the document confirming payment of the registration fee.
 DEADLINE FOR SUBMISSION OF MATERIALS TO THE FORUM – March 6, 2024.
 DEADLINE for Forum participants to receive information from the Review Committee about the possibility of assigning a DOI index to the abstracts of reports **– April 1, 2024.**

EXHIBITION OF TECHNICAL CREATIVITY OF YOUTH will be held during the Forum.
TO PARTICIPATE IN THE WORK OF THE EXHIBITION one should register himself/herself (from a Google account or from the domain @nure.ua) using the link and provide:
- An application for participation in the Exhibition.
- Demonstration materials (presentation, photo or video of the development).
 Requirements for registration of materials for the exhibition are attached (*Appendix 3*).
 DEADLINE FOR SUBMISSION OF MATERIALS TO THE EXHIBITION – March 20, 2024.

The Organizing Committee reserves the right not to consider materials prepared without meeting the requirements.
The Forum is held on a self-financing basis. The participants finance the costs of organizing and holding the Forum and assigning the DOI index.
The registration fee for participants: from KNURE is **70 UAH**; from representatives of third-party educational institutions (organizations) in Ukraine it is **120 UAH**. In case of rejection of the abstract of the report from participation in the Forum, registration fees are not refunded.
Participation in the Exhibition is free of charge.

Bank details for payment of registration fee (hryvnia):

For participants from foreign educational institutions (organizations), payment of the registration fee (in the equivalent of **$10 or 10€**) should be carried out through the following bank details:

Bank details for payment of registration fee (US dollars):

For **Kharkiv National University of Radio Electronics,**
JSC Oschadbank Kharkiv regional branch
IBAN: UA743518230000026004300574024
JSC Oschadbank, Kiev, Ukraine,
 code SWIFT: COSBUAUKKHA,
To account № 001-1-194057
JPMORGAN CHASE BANK. New York
SWIFT (code BIC) – CHASUS33
Indicate the purpose of payment: **IF of YS – 2024, last name and first name of the author(s) of the report's theses.**

Bank details for payment of registration fee (Euro):

For Kharkiv National University of Radio Electronics,
JSC Oschadbank Kharkiv regional branch
IBAN: UA743518230000026004300574024
JSC Oschadbank, Kiev, Ukraine,
code SWIFT: COSBUAUKKHA,
To account № 947 0576 10
Deutsche Bank Trust AG,
Frankfurt Am Main, Germany
code SWIFT (code BIC) – DEUTDEFF
Indicate the purpose of payment: **IF of YS – 2024, last name and first name of the author(s) of the report's theses.**

SUBJECT CONFERENCES OF THE FORUM

1. CONFERENCE *«ELECTRONIC, LASER AND BIOMEDICAL ENGINEERING»*

Section 1. Electronic systems and technologies, including micro and nanoelectronic
- Electronic devices and systems for receiving and transmitting information;
- Electronic/digital/optical methods and systems for processing signals and images;
- Mathematical, statistical and software modeling of electronic systems, signals and interference, transmission, reception and recording of information in electronic systems;
- Electronic technologies and methods of diagnostics, control and monitoring;
- Modern electronics elemental base;
- Applied programming in electronics;
- Nanoelectronic and nano-optical technologies;
- Electronic systems of energy-saving technologies;
- Physical and mathematical foundations of electronics, micro- and nanoelectronics;
- Innovative teaching methods in the field of electronics, micro and nanoelectronics.

Section 2. Biomedical engineering
- Biomedical electronic devices, appliances and systems;
- Modeling, processing and analysis of medical and biological information;
- Bionanotechnologies, biosensors and interdisciplinary research in medicine and ecology;
- Sports and Rehabilitation Engineering and Biometrics.

Section 3. Photonics, laser and optoelectronic engineering
- Physics principles of photonics;
- Laser systems and optoelecronic devices including those ones based on photon crystals;
- Optical computers elemental base;
- Development of principles of 3D dynamic holograms creation;
- Development of optical systems using microwave devices;
- Quantum informatics;
- Quantum principles and devices of information-measuring systems.

2. CONFERENCE *«AUTOMATED SYSTEMS AND COMUTERIZED TECHNOLOGIES OF RADIO ELECTRONIC INSTRUMENT MAKING»*

Section 1. **Computer-integrated technologies of radio-electronic instrumentation**
- Industry 4.0 and Internet of Things technologies;
- Flexible computerized, robotic and mechatronic systems;
- Intelligent technological processes and production;
- Microsystem technology and high production technology;
- Modeling of technological processes of automated production;
- CAD / CAM / CAE / PLM and flexible integrated manufacturing decision-making systems.

Section 2. REA of embedded systems
- Principles and methods of creation of intelligent equipment technical means;
- Microcontrollers in intelligent appliances and automation means;
- Software-hardware interfaces for electronic apparatus control through computer networks;
- Provision of electronic apparatus security;
- Household and municipal electronic technique;
- Integration of REA of different principles of functioning into intelligent complexes.

Section 3. **Physical fundamentals of processes in radio electronics, computer science, and instrumentation**
- Thermal methods and means for nondestructive control of REA and production objects;
- Acoustic and electromagnetic methods and devices for nondestructive control of manufactured goods;
- Physical fundamentals of quantum electronics;
- Modern methods for geospace investigation;
- Physical principles of optical recording and processing of information;
- Physical modeling of processes in radio electronics.

Section 4. Security systems for technological and production processes
- Simulation modeling of safety systems under the influence of harmful and dangerous factors of the production environment and labor process;
- Methods and means for protection against harmful production factors;
- Ecological safety of industrial objects;
- Assessment and definition of risk in the performance of production activities;
- Methods and means for monitoring of natural environment;
- Educational information-modeling systems in ecology, life safety and civil security;
- Automated systems for control and provision of safety of production processes and objects.

3. CONFERENCE *«INFORMATION RADIO TECHNOLOGIES AND TECHNICAL DATA PROTECTION»*

Section 1. Electrodynamic systems, radio engineering devices and means of radio communication
- Scattering of electromagnetic waves in different environments;
- Mathematical modeling of electrodynamic systems;
- Theory and technology of antennas and antenna elements;
- Theory and technology of microwave range;
- Nanoelectronics and nanoantennas;
- Transmitting-receiving devices and elemental base;
- Measurement and control of signal and circuit parameters;
- Electromagnetic compatibility of radio electronic means;
- Means of wireless radio communication.

Section 2. Information radio electronic systems and media engineering
- Fundamental problems of radio location, radio navigation and radio vision, and radio control;
- Methods for signals and images processing;
- Multimedia technology;
- Modern radio location, radio navigation and radio control systems;
- Technologies of countermeasures against small-dimension unmanned aerial vehicles;
- Passive radio location of radio emissions;
- Problems of counter action of radar detection of objects;
- Systems of radio electronic reconnaissance and radio electronic countermeasures;
- Distance sounding (diagnostics) of objects, earth surface and atmosphere;
- Perspective television system, television of network protocol;
- Micro and nano electromechanical systems;
- Acoustic radio electronic systems;
- Space radio electronic systems;
- Broadband chaotic signals in radio electronic systems.

Section 3. Technical protection of information
- Theory and methodology of engineering-technical protection of information;
- Technical channels of information leakage;
- Software-hardware means for information protection;
- Radio electronic reconnaissance and radio electronic suppression;
- Radar systems of security;
- Modern technologies and solutions for provision of information-telecommunication systems security.

Section 4. Devices and technologies of information and communication systems
- Methods and principles of designing embedded information-communication systems;
- Modern software-hardware platforms of embedded systems;
- Technologies and means for developing embedded systems based on microcontrollers and programmable logical matrices;
- Mobile radio electronic devices;
- Sensors and sensor networks;
- Internet technologies of things (IoT);
- Digital devices for multimedia information processing and transmitting;
- Radio electronic devices for medical informatics;
- Engineering of renewable energy sources.

Section 5. Systems and technology devices on microprocessors, microcontrollers and PLIC
- Modeling, processing and synthesis of digital signals;
- Designing of devices on microprocessors, microcontrollers and PLIC;
- HDL-hardware description languages;
- The problem of real-time microprocessor systems development;
- Industrial Internet of Things (IoT);
- CAD hardware.

4. CONFERENCE *«PROSPECTS OF TELECOMMUNICATION AND INFORMATION-MEASUREMENT TECHNOLOGIES DEVELOPMENT»*

Section 1. Info-telecommunications problems
- General systems problems of info-telecommunications;
- Electromagnetic compatibility;
- Management, adaptation, self-organization in info-communication systems;
- Mobile info-communication systems and 4G and 5G wireless technologies;
- Software-configured SDN networks;
- Telecommunication systems with SDR technology;
- MPLS and GMPLS technologies in telecommunication networks;
- Adaptive routing methods in telecommunication networks;
- Optical wired and wireless telecommunication systems;
- Wireless telecommunication systems with MIMO technology;
- Nebulous computing and the Internet of things;

- Modern methods of digital signal processing in telecommunication systems;
- Problems of integration and convergence of technologies in telecommunications;
- Logistics in telecommunication systems;
- Design of telecommunication systems and networks.

Section 2. Information security management
- Practical basis for information security provision;
- Theory of information security risks;
- Technologies and methods for information security control;
- Network security, systems for identifying and countering attacks, network resiliency;
- Information security of software-configured SDN networks;
- Process approaches to the audit of information security management systems;
- Information security of next-generation mobile networks;
- Cybersecurity of nebulous computing and databases;
- Problems and methods of introducing the international standards of information security provision;

Section 3. Information-communication technologies
- Conceptual problems of info-communication networks construction;
- Hardware and software for granting info-communication services;
- Multicriteria optimization and mathematical simulation of info-communication networks;
- Processing of information in info-communications;
- Information protection in info-communications;
- Business processes in info-communications;
- Info-communications in the social sphere.

Section 4. Information-measurement technologies, metrological support, standardization and certification
- Development of elements of the products and services quality systems;
- Development of measurement technique means and their metrological support;
- Methods and algorithms for processing measurement results and assessing errors and uncertainties;
- Information-measurement technologies;
- Standardization and certification.

5. CONFERENCE «*PROBLEMS OF COMPUTER ENGINEERING AND INFORMATION PROTECTION*»

Section 1. Computer engineering: modern technologies for developing and programming computer systems and networks
- Software and hardware reconfiguration of heterocomponent systems;
- Big Data. Processing large volumes of data;
- High-performance computing;
- Multiservice computer networks;
- Computer graphics and visualization in technical systems;
- Methods of designing and maintaining databases in distributed information systems;
- Organization of network information structures;
- Management and decision-making support in network structures;
- Mobile technologies;
- Systems on crystals;
- Networks on crystals;
- Design routes;
- Methods and means of verification and testing;
- Standards for testable design;
- Hardware description languages;
- Testing of digital circuits;
- Verification of mathematical models;
- Methods, models, testing and diagnostic means;
- Artificial intelligence methods in decision-making and management systems;
- Multi-agent systems and technologies.

Section 2. Protection of information and information resources in information and communication systems (ICS)
- Legal and regulatory support for information security systems;
- Methods, mechanisms and means for cryptographic protection of information;
- Public key infrastructure and electronic digital extended list (EDL) system;
- Synthesis and analysis of cryptographic systems;
- Synthesis and analysis of cryptographic mechanisms and protocols;
- Antivirus analytics;
- Cryptanalysis methods;
- Security of critical infrastructure;
- Security of IoT systems;
- Security methods for cloud computing.

6. CONFERENCE «*INFORMATION INTELLIGENT SYSTEMS*»

Section 1. Modern problems of computational and artificial intelligence
- Hybrid neuron-fuzzy models and systems in the problems of information processing;
- Modern methods and models of machine and seep learning;
- Intelligent analysis of data;
- Evolutionary calculations in Web-, Text- and Genetic-Mining problems;
- Application of generative artificial intelligence when solving intellectual problems;
- Intelligent information technologies in knowledge management;
- Intelligent processing and information integration in the distributed Web-systems.

Section 2. Information systems and technologies for project and operational management of enterprises and organizations
- Information systems in management of business-processes of enterprises based on service-oriented architecture;
- Information technologies for monitoring and management of the enterprise business-processes;
- "Nebulous" information technologies in the enterprise management;
- Management of projects of development, introduction and support of information-control systems and information technologies and program products;
- Technologies for designing, administering , monitoring and management of corporative networks;
- Information technologies of data processing in the information systems;
- Methods and means for information transform in the information systems;
- Information technology and systems in medicine and ecology.

Section 3. Modern directions of software engineering and innovative training system
- Advanced software development methods from Agile to DepOps;
- Modern approaches to software testing and quality;
- Development of highly reliable systems using distributed architectures;
- Cloud computing and technologies;
- Machine learning and artificial intelligence;
- Blockchain technologies. From cryptocurrencies to smart contracts;
- Database design for high-performance systems;
- Big data systems and data analysis;
- Visualization and containerization in the architecture of software systems;
- Cybersecurity and software protection in the light of modern threats;
- Quantum computing and its impact on software engineering;
- Development of interactive educational platforms;
- Games, virtual reality;
- Distance learning: New technologies and approaches;
- Innovations in teaching aids. Development of new tools and platforms;
- Integration of information technologies into the educational process.

Section 4. Methods and means of decision-making in socio-economic and technical systems
- Models and methods of multi-criteria optimization and multi-factor assessment;
- Application of the theory of utility for solving problems of managing socio-economic systems;
- Models of decision making in conditions of various types of uncertainty and in conditions of risk;
- Application of models and methods of decision-making in information intelligent systems;
- Design and development of information systems, including those with elements of artificial intelligence;
- Making decisions using machine learning tools;
- Design and development of analytical systems for working with large amounts of data (Big Data);
- Methods and software solutions to problems using Data Mining;
- Design and development of systems using mobile technologies;
- Development of systems and software solutions using cloud technologies;
- Design and development of the gaming environment elements.

Section 5. Computer technologies in printing
- Technology of printed editions;
- Technology of electronic multimedia editions;
- WEB technology;
- Automated systems of polygraph production management;
- Computer technologies in digital images processing and color control;
- Descriptive geometry and computer graphics.

7. CONFERENCE «*COMPUTER VISION, SYSTEM ANALYSIS AND MATHEMATICAL MODELING*»

Section 1. Computer vision and multimedia systems
- Methods for intelligent analysis and processing of multidimensional data;
- Models of normalization and recognition of images;
- Analysis, processing and presentation of data in multimedia systems;
- Neural network systems for analysis and synthesis of visual information;
- Image processing in unmanned devices;
- Applied applications of computer vision systems;
- Intelligent systems using methods and models of machine learning, computer vision, natural language processing.

Section 2. System analysis, mathematical and computer simulation
- Information technologies in system analysis;
- Systems analysis of problems in technical, economical and social systems;
- Models and methods in problems of management and decision-making;
- Methods for risks estimation and control;
- Analysis of time series: forecasting and management;
- Applied data analysis;
- Methods of machine learning and their application;
- Boundary-value problems of mathematical physics and methods of their numerical analysis;
- Models and methods of image reconstruction;
- Synergetic models of non-linear dynamics, deterministic chaos, fractal structures;
- Mathematical modeling in photonics.

8. CONFERENCE «*URGENT PROBLEMS OF ECONOMICAL CYBERNETICS AND ECONOMIC SECURITY*»

Section 1. Economical cybernetics
- Economic theory and history of economic thought;
- World economy and international economic relations;
- Economics and national economy management;
- Economics and management of enterprises;
- Development of productive forces and regional economy;
- Problems of ecological and economic development of territories;
- Demography, labor economics, social economics and politics;
- Single digital market of the European Union;
- The third mission of universities and the socio-economic development of territorial communities;
- Money, finance and credit;
- Accounting, analysis and audit;
- Ukraine - EU: digital innovations for change;
- Statistics;
- Modeling of economic processes in infrastructure industries;
- Mathematical methods, models and information technologies in economics;
- Information business and e-commerce.

Section 2. Financial-economical security management
- Organization and management of the enterprise's financial and economic security system;
- Provision of national security system;
- Organizational and legal support of financial and economic security of business entities;
- Information and analytical support and monitoring of financial and economic security;
- Development of modern entrepreneurship in conditions of impact and counteraction to hybrid threats;
- Safely oriented management and personnel reliability assessment methods;
- Corporate conflicts and counteraction to raiding;
- Organization and management of information security with limited access;
- Organization and management of property and personal security of the entrepreneur;
- Methods of the model for diagnosing the level of economic security of business structures.

9. CONFERENCE «*HUMANITARIAN ASPECTS OF DIGITAL SOCIETY*»

Section 1. Philosophical and psychological problems of the digital society
- Problem of identity in the information epoch;
- Anthropological problems in the information society formation epoch;
- Socio cultural aspects of the global informatization;
- Transformation of values in the process of the information society formation;
- Youth under conditions of the society of risks;
- Problems of a person socialization in the virtual space;
- Problem of freedom and responsibility in the information medium;
- Communicative problems in the informatization epoch;
- Manipulation with consciousness in the information society: methods and mechanisms;
- Psychological aspects of a person adaptation under the information society conditions;
- Psychological-pedagogical problems of modern education;
- Gender aspects of education under conditions of the information society;

Section 2. Political and legal foundations of digital age
- Democracy and political regimes in the information epoch;
- Information society: prospects and collisions;
- Innovative transformations in the information epoch: socio-political aspect;
- Globalization and democratization of the modern world: their interrelation and interdependency;
- Totalitarian threats in the information epoch: essence and ways of their overcoming;
- Socio cultural and legal development of the information society in Ukraine.

10. CONFERENCE «*UKRAINE IN HISTORICAL, CULTURAL AND LANGUAGE SPACE STATE ORGANIZATION OF UKRAINE, LANGUAGE, CULTURE*»

Section1. The Ukrainian language since ancient times to the contemporaneity
- The origin and stages of development of the Ukrainian language;
- Lexical, grammatical and stylistic features of professional texts;
- Terminology as linguistic science of terms;
- Formation and development of branch terminological systems;
- Terms and nomenclature units in scientific texts;
- Peculiarities and difficulties of translating scientific and technical texts;
- Stylistics of a scientific text;
- Media text. Features of its functioning;
- Culture of communication in professional activity;
- Techniques and types of rhetoric in professional activity;
- Language etiquette for professional communication;
- History and characteristics of office work;
- Functioning of regional languages in Ukraine;
- Norms of Ukrainian spelling: history and modernity.

Section 2. Historical, regional, geopolitical aspects of culture
- The origin and characteristics of the development of world cultures;
- Material and spiritual culture: common and different;
- Archeology as a source of study of ancient cultures and civilizations;
- State and culture: choice of priorities, ways to implement policies in the humanitarian sphere;
- Historical origins and traditions of Ukrainian statehood;
- Achievements and problems of Ukrainian history and culture;
- Ukrainian foreign policy and cultural relations in different historical periods;
- Cultural features of historical and ethnographic regions of Ukraine;
- Features of Ukrainian folk art;
- Ukrainian traditions and customs in the information millennium;
- Outstanding figures of Ukrainian culture;
- Volunteer movement and its significance in modern Ukraine;
- Russian-Ukrainian war: challenges and threats.

SUBMISSION GUIDELINES FOR ABSTRACS OF REPORTS

- The volume of abstracts: 2–3 full pages of A4 size paper (29.7 x 21 cm, "Book").
- All margins: 25 mm, paragraph indent 10 mm.
- The text should be typed: line spacing – single, font size – 14, justified alignment, Times New Roman.
- Summary in English (8–10 lines)
- List of references (up to 5 sources) must be formatted according to DSTU 8302:2015. *Information and documentation. Bibliographic reference. General principles and rules of composition.* (referens to example)
- Formulas, symbols, variables in the text should be typed as the ***Microsoft Equation*** or ***Mathtype*** objects*.* Formula element sizes: regular element – 14 pt, index (upper and lower) – 12 pt, small index – 10 pt, main symbol – 16 pt, small symbol – 14 pt.
- Figures are inserted into the report abstract file in the form of graphic objects stored in file formats: .png, .jpeg, or .tiff with a resolution of at least 300 dpi.
- Tables should be clear, compact. Redactors: ***Table Editor*** or ***Microsoft Excel.***
- When preparing abstracts, use generally accepted terms, units of measurement, conventions, common for the entire text.
- Help in determining the UDC index can be obtained on the S.L. website at the link or on the Forum page (the tab «UDC to topics»).
- Abstracts of the report should be submitted in a files of two formats .docx and .pdf with the name:

  Author's surname.docx   and   Author's surname.pdf

- If the author provides 2 abstracts, the name of each file must end with a digit according to the sample:

  Author's surname_1.docx   and   Author's surname_1.pdf
  Author's surname_2.docx   and   Author's surname_2.pdf

- Texts of abstracts are posted in the author's version without editing.

THE ORDER OF THE MATERIAL ARRANGEMENT

The first line: UDC (regular font Times New Roman (14 pt.), single spacing, left alignment, no paragraph).

The next line: The title of the report (in capital letters, font 14 pt., bold, single spacing, alignment in the middle).

The next line: Surnames, initials of the author (s) (regular font Times New Roman, 14 pt., alignment in the middle).

The next line: Scientific supervisor (if any) – academic degree, scientific title, surname, initials (regular font Times New Roman, 14 pt., alignment in the middle).

The next line: Organization, city, country (regular font Times New Roman, 14 pt., single spacing, alignment in the middle).

The next line: E-mail of the author (s) (regular font Times New Roman, 14 pt., single spacing, alignment in the middle).

The next line: Summary in English 8–10 lines (regular font Times New Roman, 14 pt., single spacing, justified alignment, paragraphs with 1 cm indention).

The text of the abstracts should be placed one line after the summary (regular font Times New Roman, 14 pt., single spacing, justified alignment, paragraphs with 1 cm indention).

List of sources used (up to 5 sources) (one line after the text of the abstract):
1.
2.
3.

EXAMPLE OF THE REPORT PRESENTATION

УДК 621.38:[621.38-025.53+621.38-022.532]
EVALUATION OF SOLAR ELEMENTS OPERATION EFFICIENCY
Ivanov M.T.
Scientific supervisor – Dr. Sci., Prof. Petrenko V.P.
Kharkiv National University of Radio Electronics, Dep. MEEDA,
Kharkiv, Ukraine
e-mail: ivanov@nure.ua

This work is devoted to assessing the efficiency of solar panel, namely, orientation systems based on the position of the Sun. The basic designs of solar position monitoring systems were considered (8–10 lines).

Text of the report.

List of sources used

1.
2.
3.

Appendix 3

APPLICATION FORM FOR PARTICIPATION IN THE EXHIBITION
- Title of the development.
- Author/authors (surname, first name, patronymic in full, group, name of the educational institution).
- Scientific supervisor/scientific supervisors (surname, first name, patronymic, scientific degree, scientific title, position, department, educational institution).
- Author/authors e–mail, telephone number for contacts.
- Brief annotation for the development (10–15 lines) with information about the implementation or patent (if any).
- Direction and section, which the development belongs to:
  1) gaming technologies;
  2) software (sections: «Business», «Science», «Programs»);
  3) software-hardware developments, devices and appliances (sections: «Software Development for Hardware Platforms», «Development of Electronic Devices and Systems»);
  4) computer design (sections: «Design of Printed Editions», «Design of Games», «Design of Web-applications, Electronic Multimedia Editions, VR-reality»).

REQUIREMENTS FOR PRESENTATION, PHOTO OR VIDEO:
- Presentation of the development is provided in pdf/ppt format (no more than 10 slides);
- Photo is provided in .jpeg (.jpg) format;
- Video demonstrating the development work is provided in .avi, .mkv or .mp4 format (size - not more than 300 MB, duration - up to 5 minutes).

ORGANIZING COMMITTEE ADDRESS:

KNURE, 14, Nauky Ave., Kharkiv, Ukraine, 61166
E-mail: **mref21@nure.ua** ;
Site: **www.nure.ua**