

# INFORMATION BULLETIN

Ukrainian Nuclear Society



## DEAR COLLEAGUES,

The Ukrainian Nuclear Society presents to your attention the information bulletin, which was prepared at the invitation of the European Nuclear Society as a part of the ENS newsletter.

We are pleased to share with our colleagues the last UkrNS news, talk about our initiatives and projects, as well as the activities of members of the Society who work or study in the field of nuclear energy, nuclear research and related fields in Ukraine.

We sincerely hope that the information about the UkrNS activity in the period from September to December 2023 will be interesting and useful for you.

With best regards,  
Ukrainian Nuclear Society

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**THE V INTERNATIONAL SCIENTIFIC CONFERENCE “PROSPECTS FOR THE INTRODUCTION OF INNOVATIONS IN NUCLEAR ENERGY”**



On September 28-29, 2023, the V International Scientific Conference “Prospects for the Introduction of Innovations in Nuclear Energy” was held in Kyiv in the Great Conference Hall of the National Academy of Sciences of Ukraine.

The conference has been held for several years with the aim of attracting a wide range of specialists and members of the public to a constructive discussion of scientific and technical problems of the functioning and development of nuclear energy in Ukraine, the achievements of nuclear science and the prospects for their implementation in the nuclear industry.

This year, despite the hostilities in Ukraine, more than 220 specialists from the nuclear and related industries, representatives of Ukrainian and foreign enterprises, scientists and industry experts registered to participate in the event.

Over the two days of the conference, more than 60 reports were presented.



Among the reports were such topics as innovative technologies for increasing the safety of nuclear power plants; radiation monitoring in conditions of military operations, as well as tools for the renewal and development of nuclear energy; improvement of existing technologies and new scientific developments in the field of increasing the efficiency of nuclear power plants; modern methods of radioactive waste management; innovative approaches to the construction of nuclear power facilities; the use of new promising materials and developments, prospects for the use of accident-resistant nuclear fuel in SMRs, prospects for the production of low-carbon hydrogen on the territory of existing nuclear power plants, etc.

The reports also raised the topic of licensing new power units in Ukraine; taking into account public opinion in the development of innovative technologies in nuclear energy and issues of international cooperation in this area.

Also during the conference, two expert discussions took place, including on the functioning and development of nuclear energy, taking into account the consequences of russian aggression.

The abstracts collection based on the results of the conference, can be found by the link:

**THE ABSTRACTS COLLECTION OF THE V INTERNATIONAL SCIENTIFIC CONFERENCE “PROSPECTS FOR THE INTRODUCTION OF INNOVATIONS IN NUCLEAR ENERGY”**



## THE V.M. VOEVODIN INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE "PROBLEMS OF MODERN NUCLEAR ENERGY" ANNOUNCEMENT

On April 17-19, 2024, the V.M. Voevodin International Scientific and Technical Conference "Problems of modern nuclear energy" will be held in the city of Kharkiv.

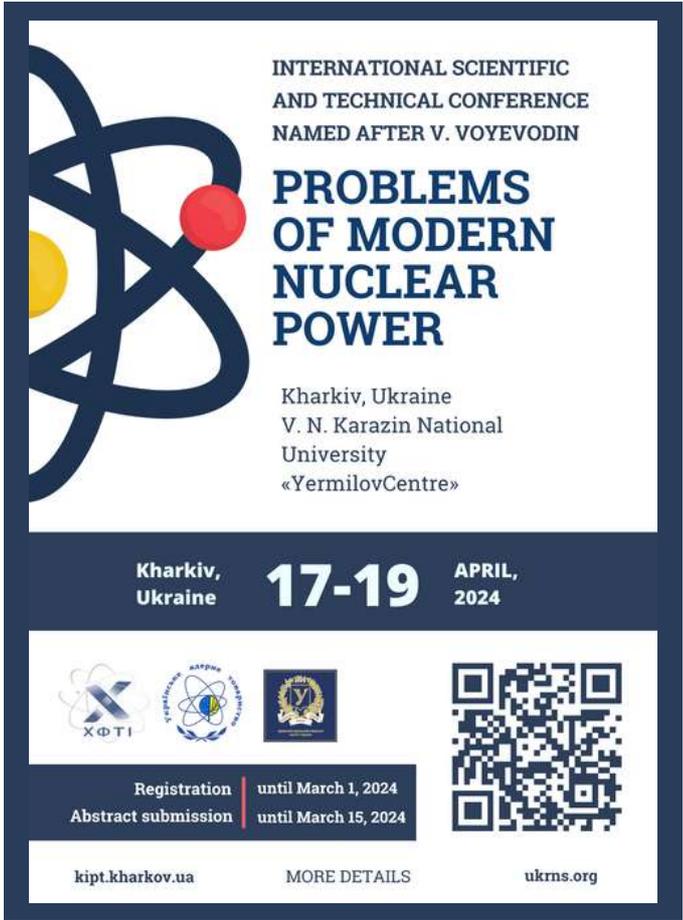
Organizers of the event: Ukrainian Nuclear Society, National Science Center Kharkiv Institute of Physics and Technology NAS of Ukraine and V. N. Karazin Kharkiv National University.

Within the framework of the conference, the following questions will be considered:

- Development of the nuclear energy complex of Ukraine
- Materials for nuclear energy
- Increasing the level of safety and efficiency of NPP operation
- Lifetime extension of NPPs and management of life cycle and ageing at
- nuclear power plants
- Nuclear, radiation and environmental safety in the handling of RAW and SNF
- Problems of thermonuclear fusion
- Work with the public in the nuclear industry

The working languages of the conference are Ukrainian and English.

**The organizing and program committee contact:**  
[pmne2016@ukr.net](mailto:pmne2016@ukr.net)



INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE NAMED AFTER V. VOEVODIN

# PROBLEMS OF MODERN NUCLEAR POWER

Kharkiv, Ukraine  
 V. N. Karazin National University  
 «YermilovCentre»

Kharkiv, Ukraine **17-19** APRIL, 2024




Registration until March 1, 2024  
 Abstract submission until March 15, 2024

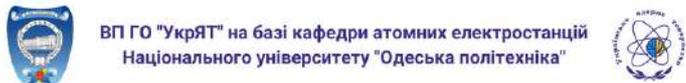
[kipt.kharkov.ua](http://kipt.kharkov.ua)      MORE DETAILS      [ukrms.org](http://ukrms.org)

**THE DEADLINE FOR SUBMITTING APPLICATIONS FOR PARTICIPATION IS UNTIL MARCH 1, 2024 BY THE LINK:**

[\*\*APPLICATION FORM\*\*](#) 

[\*\*MORE INFORMATION ABOUT THE CONFERENCE\*\*](#) 

## A NEW UKRNS SEPARATE SUBDIVISION WAS CREATED ON THE BASIS OF THE ODESA POLYTECHNIC NATIONAL UNIVERSITY



In November 2023 a constituent meeting of members of the Ukrainian Nuclear Society was held in the city of Odesa, during which it was decided to create a new separate division based on the Department of Nuclear Power Plants of the Odesa Polytechnic National University.

Odesa Polytechnic is one of the leading scientific and educational complexes of higher education in Ukraine. At the Department of Nuclear Power Plants students are trained in such scientific areas as the operation of nuclear installations, increasing reliability, life time extension and decommissioning of NPP, handling radioactive waste and spent nuclear fuel, analyzing and ensuring nuclear and radiation safety.

## A MEMORANDUM OF COOPERATION BETWEEN UKRNS AND NGO “WIN UKRAINE”

Within the framework of the Memorandum between the Ukrainian Nuclear Society and “WIN Ukraine” the following areas of cooperation are defined:

the development of partnerships with the government, academic, private sector, as well as other public and international organizations in projects and initiatives in the field of ecology, radioactive waste management and radiation safety; active involvement of women in work in the field of nuclear energy, in particular in the field of radiation safety and technology, their professional growth; increasing public attention to the role of women in nuclear energy; working with governments and international organizations to implement policies that support women in nuclear energy and radiation safety.

The parties will also expand cooperation in attracting and increasing the interest of young people in nuclear energy and industry, the development of nuclear technologies and radiation safety; training young specialists, sharing experience and promoting career opportunities in the industry; supporting innovative approaches and projects developed by young specialists in the field of nuclear energy.

WiN Ukraine is the national representative of Women in Nuclear (WiN) Global, which since 1992 has brought together women nuclear professionals to develop and promote their role in this field. The organization promotes gender equality and cooperation between women and men, and creates opportunities for the effective exchange of information, knowledge and experience in the nuclear industry.



## ORGANIZATIONAL ACTIVITIES

### THE UKRNS BOARD MEETING

In December 2023, another UkrNS Board meeting was held in Kyiv, at which the results of the work for 2023 were summed up, as well as the organization's work plan for the next year was adopted.

During the meeting the President of the Society, Volodymyr Kholosha, congratulated the members of UkrNS and thanked all those present for their fruitful work during the year. The meeting was attended by 27 members of the Management Board and invited participants.



## PARTICIPATION IN THE ROUND TABLE WITH THE NATIONAL ACADEMY OF INTERNAL AFFAIRS OF UKRAINE

The round table discussed the threat of seizure of critical infrastructure (including nuclear energy facilities) both in peacetime and in war, the actions of law enforcement agencies, the specific tactics of actions of police agencies and units in the event of a threat of seizure of nuclear facilities, nuclear materials and sources ionizing radiation, cybersecurity, and engaging citizens and UAVs to protect nuclear facilities.

The event was attended by the head of the UkrNS Scientific and Analytical Section, head of the laboratory of the Institute for Safety Problems of Nuclear Power Plants of the National Academy of Sciences of Ukraine, Doctor of Technical Sciences Kostiantyn Simeiko with a report: "The issue of nuclear safety of law enforcement officials and civilians in areas of increased nuclear danger, associated with the possibility of seizure of nuclear energy facilities as a result of armed aggression."

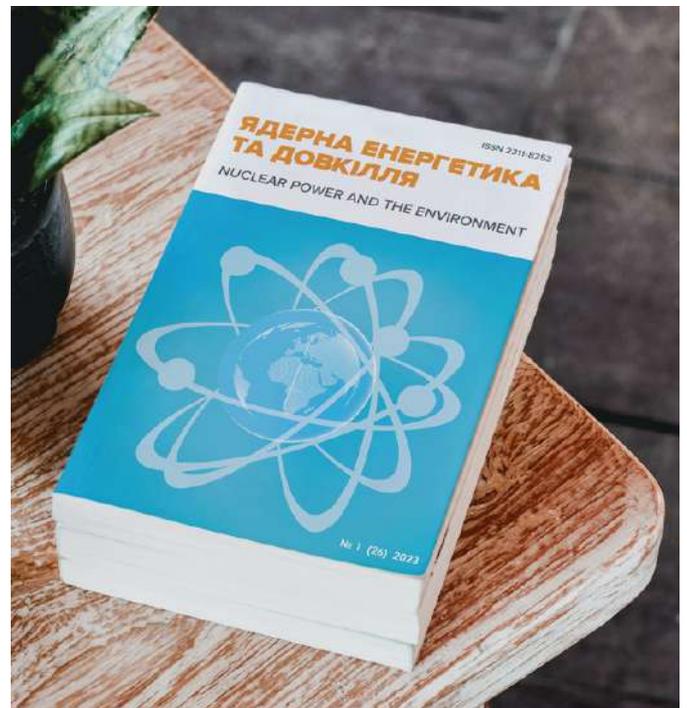


During discussions a proposal was presented for further cooperation between UkrNS, the Institute for Safety Problems of Nuclear Power Plants and the National Academy of Internal Affairs of Ukraine in the field of developing tactics for the actions of law enforcement agencies in the event of a threat at nuclear energy facilities in peacetime and wartime conditions.

## TECHNICAL JOURNAL "NUCLEAR ENERGY AND THE ENVIRONMENT"

A next edition of the scientific and technical journal "Nuclear Energy and the Environment" has been published, co-founded by the Institute of Safety Problems of Nuclear Power Plants of the National Academy of Sciences of Ukraine and the UkrNS. The edition No. 26 includes articles devoted to current issues of nuclear energy and radioecology.

Among them: Comparative method of qualifying safety systems of nuclear power plants with VVER-1000 and AP1000; Technologies and promising developments of graphite production (overview); Verification of scaling factors in radiological characterization of NPP solid RAW using IAEA procedure. Overview of modern approaches; Radioactive aerosols in sub-reactor rooms of the Shelter object within conditions of the New Safe Confinement, Assessment of the radio ecological situation for the territory of the Drevlians nature reserve as of 2023, etc.



[DOWNLOAD THE EDITION NO. 26 HERE](#)



## WORK WITH YOUTH AND THE PUBLIC

In its activities, the UkrNS pays great attention to the work with youth, the public, actively carries out information and educational, career guidance and publishing activities, participates in solving issues of training specialists for nuclear energy.

Among the society's initiatives in this area, carried out in the second half of 2023: organizing an essay competition for high school students, holding webinars for school teachers on the current state of the nuclear industry in Ukraine and the world, on areas of study for future specialists and career opportunities for youth, participation in the organization and conducting educational projects at Ukrainian nuclear power plants, publishing booklets and information materials for children and youth.



**ВЕБІНАР ДЛЯ ВЧИТЕЛІВ**  
СУЧАСНИЙ СТАН ТА ПЕРСПЕКТИВИ РОЗВИТКУ АТОМНОЇ ГАЛУЗІ УКРАЇНИ І СВІТУ. МОЖЛИВОСТІ ДЛЯ МОЛОДИ В ЦЬЙ СФЕРІ




*Webinars for school teachers about nuclear energy, training for future specialists and career opportunities for young people.*



ВСУКРАЇНСЬКИЙ КОНКУРС РЕФЕРАТІВ

**ЯДЕРНА ЕНЕРГІЯ І СВІТ**



Об'єднана енергетична система (ОЕС) - вісім регіональних підрозділів, підпорядковані «Укренерго», Потужність ОЕС України - 55,3 ГВт; пілсастав - 137 (34 на тимчасово окупованій території), протяжність ліній електропередачі - 22 тис. км, пінове навантаження - 34 ГВт.

*The final stage of the essay competition for high school students [online].*



*Lecture by a member of the UkrNS within the framework of the "Club of Young Researchers AtomIQ" with an in-depth study of nuclear physics, organized jointly with the Rivne NPP*



*Creative competition of drawings for children "Light that defeats darkness"*



*Participation in organizing an educational project for high school students at the Khmelnytsky NPP "Atomic School"*



*A booklet issued by UkrNS for primary school students about nuclear energy "Atomic Alphabet"*



*An new UkrNS educational and gaming project for schoolchildren "How the NPP works" in cooperation with the South Ukrainian NPP*



*The project is being implemented in the format of dynamic mini-games, which are an interpretation of real production processes at nuclear power plants. In particular, these are such as "Construction of nuclear power plants", "Installation of pipelines", "Loading of nuclear fuel", etc. Mini-models of nuclear power plant equipment were developed and manufactured especially for the project.*



*Supporting of creative contests for children and adults on nuclear energy topics.*

MORE INFORMATION ABOUT UKRNS ACTIVITIES CAN BE FOUND BY THE LINK:

[UKRNS.ORG/EN/](https://ukrns.org/en/)



*The Ukrainian Nuclear Society continues to help our members and support defenders of Ukraine,*

*We cooperate with charitable funds and requests of Ukrainian military personnel for help in acquiring the necessary means and equipment.*



**"EMPOWERING RADIANCE" CHARITY EXHIBITION**



In November, UkrNS together with NGO WiN Ukraine held a charity exhibition-auction "Empowering Radiance" in support of military women .

The exhibition was dedicated to the creativity of Ukrainian women nuclear workers, through which they captured their experiences during the war, as well as the importance of nuclear energy in the life of society today.

All funds raised during the event were donated for the purchase of women's military equipment, uniforms, shoes, protection, sleeping bags, etc.



**PHOTO REPORT ABOUT THE EVENT CAN BE FOUND HERE** 

**INFORMATION DIGEST ON THE STATE OF THE NUCLEAR INDUSTRY AND THE SITUATION IN UKRAINE**

In order to inform the world community about the situation in Ukraine, since mid-March 2022, UkrNS has been preparing an information digest on the state of the nuclear industry and the situation in Ukraine.

The digest includes information about status of the Ukrainian nuclear power plants and the nuclear industry of Ukraine; Current situation on Zaporizhzhya NPP, on Chernobyl NPP and in the Exclusion Zone; war in Ukraine.



**DIGESTS CAN BE FOUND BY THE LINK** 

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