

SECOND INFORMATION STATEMENT



XIX Research and Development Contest-Conference of young scientists and specialists of the RSE NNC RK (in form of a video-conference)

29th of September- 1st of October, 2020
Kurchatov city, EKR, Republic of Kazakhstan

Total number of works accepted for the competition– 44, including 15 by the IRSE, 21 by the IAE, 5 by the INP and 3 by the IGR (1 fundamental, 12 engineering and technical and 31 in applied researches).

Time limit on speeches (including questions and answers) – 20 min.

Working languages of the contest-conference are Russian and Kazakh.

TIMED AGENDA OF THE ONLINE CONFERENCE

29th of September, Tuesday – opening, Competition performances

30th of September, Wednesday – Competition performances

1st of October, Thursday – Competition performances , summing up

IMPORTANT DEADLINES

21st of September – release of the second information statement

30th of October – deadline for submission of works to be published in the «Bulletin of the NNC RK» journal

(in accordance with the requirements of the journal)

THE WINNERS ARE DETERMINED BASED ON A ONE TO FIVE SCALE ON EACH OF THE CRITERIA AS FOLLOWS:

Topicality, practical value (significance for the issue the work is dedicated to), level - scientific, engineering, novelty of the results, degree of the work completeness, personal contribution of the competitor, style of presentation and the level of knowledge of the material. Additional criteria for assessment, taking into account particularities of the areas are :

- fundamental – level of publications;
- engineering and technical – assessment of technical solutions;
- applied – competitive ability.

The highest rate for a work is 35 scores. The participant, that earned the maximum score as the result of summing up the score from all the jury members is the winner .

NUMBER AND SIZES OF AWARDS, NOMINATIONS

Winning places and rewards:

one first-place reward in amount of **100 000 tenge**;

two second-place rewards in amount of **60 000 tenge** each;

three third-place rewards in amount of **45 000 tenge** each.

four incentive rewards, **30 000 tenge each** in the following nominations:

- Best speaker
- Best design of work
- Originality of work
- To the active participant

one reward for the innovational work in amount of **20000 tenge**.

Each participant will be awarded the certificate of participant of the contest-conference .

Each participant, taken a winning place will be awarded a diploma.

All the participants need to prepare presentations of their reports in ppt/pptx or pdf format and email them to seraya@nnc.kz – until the 25th of September, 2020.

VIDEO- CONFERENCE WORKING ORDER

The reporters are recommended to present their reports in the locations of their institutes prepared provided for sanitary norms of their institutes, however, individual connection is also possible.

The personal conference identification code for connection will be sent by the IT-specialists of the institutes not later than 5 days before the competition.

Each participant of online-conference needs to have means of audio- video communication, and install a respective software/application to be used on his computer, tablet or phone, get registered with full name specified and connect to Zoom Video Communications. To download the software/applications for any PC operating system or mobile platform, please use the link: <https://zoom.us/download>. It's recommended to get the software installed on your device in advance. This will allow you to get connected to the webinar and test different capabilities of the software before the event starts.

For individual connection, a speaker needs to direct an inquiry for connection to the conference administrator not later than 15 minutes before the starting time as per program.

An online transmission for the hosts on YouTube will be available on <https://www.youtube.com/c/IrseKz>

If you have any questions, please feel free to contact IT-specialists of your organization.

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Vladimir Vyacheslavovich LEZIN, technician - system engineer of the RSE IGR RK, mob. +7 771 987 3615

The following locations, equipped with means of video communication (web-camera, display, microphone) **will be used for the purpose of this event.**

RSE INP – scientific council hall, Alatau settlement, 1, Ibragimov st.

RSE IGR – Center for Collection and Processing Special Seismic Information, Almaty city, 4, L,Chaykina st.; Kurchatov city, «Meridian» site

Branch «IAE» of the RSE «NNC RK» – building 270, premise 202, Kurchatov city, 10. Beibyt atom st.

Branch «IRSE» of the RSE «NNC RK» – small conference-hall, Kurchatov city, 2,

Chairman:

Vladimir Anatolievich Vityuk

– Deputy Director General of the RSE NNC RK for Science, PhD

Deputy Chairman:

Murat Alpyspayevich Umarov

– Deputy Director of the branch «IRSE» of the RSE NNC RK, PhD (Chemistry)

Secretary of the Jury:

Sergey Anatolievich Baranov

– Chief Specialist of the Department for Budget Programs and Personnel Training of the RSE NNC RK, PhD (Biology)

Members of the Jury:

Sergey Borisovich Subbotin

– Senior Research Associate of the Department for Development of Environmental Monitoring System of the branch «IRSE» of the RSE NNC RK, PhD

Alexandr Davidovich Vurim

– Chief Specialist for Nuclear Technologies of the branch «IAE» of the RSE NNC RK, Ph.D. (Physics and Mathematics).

Ulan Amanovich Igibayev

– Head of the Department for Complex Geophysical Researches of the RSE IGR RK;

Yerzhan Yernatuly Sapatayev

– Head of the Laboratory for Radiation Material Science of the branch «IAE» of the RSE NNC RK, PhD

Galymzhan Kulamkadyrovich Mamytbekov

– Chief scientific officer of the Center for Complex Ecological Researches of the RSE INP RK, Ph.D. (Chemistry);

Arman Zharbekovich Miniyazov

– Head of the Laboratory for Testing Materials under Conditions of a Fusion Reactor of the branch «IAE» of the RSE NNC RK, representative of the Council of Young Scientists and Specialists of the RSE NNC RK

WORK PROGRAM OF THE XIX ONLINE VIDEO CONTEST-CONFERENCE

29th of September, 2020, Tuesday

Time	Organization/ Full name/ Competition work title/ Area of work
10.00 - 10.10	OPENING
10.10 - 10.30	RSE «IGR» Igor Olegovich Marchenko Geological- geophysical survey of the traces of tectonic disturbances, as possible channels of migration of artificial radionuclides Applied
10.30 – 10.50	RSE «IGR» Pavel Viktorovich Ryabenko Seismic event of the 11 th of November, 2018 in vicinity of Mayotte island upon the data gathered by monitoring stations in Kazakhstan Applied
10.50 - 11.10	RSE «IGR» Abylai Nursarsenovich Uzbekov Geophysocal fields and seismicity in the Central Kazakhstan Applied
11.10 – 11.30	Technical break
11.30 - 11.50	RSE «INP» Asyl Maksatuly Ahanov Methodical experiments to resaerch gas emission from fusion reaction functional materials Applied
11.50 – 12.10	RSE «INP» Saulet Kanybekuly Askerbekov Research into tritium extraction from lithium metatitanate in course of a long-term irradiation experiment at VVR-K reactor Applied
12.10 – 12.30	RSE «INP» Abay Saparymbetuly Kerimshe A technique of measurement of melting temperature for refractory metals and their alloys Applied
12.30-14.00	Lunch break
14.00 – 14.20	RSE «INP» Alexandr Sergeevich Larionov Development and research of neutron- absorbing cover of titanium boride Applied
14.20 – 14.40	RSE «INP» Moldir Serikkyzy Orakova Ion-plasma fusion, structure and properties of Hf-C alloys Applied
14.40 – 15.00	Branch «IRSE» Baglan Abdygalykovich Abdigamitov Development of a technique for determining radioactive gases in the air at the facility for storage of RONA from «BN – 350» reactor Applied

Time	Organization/ Full name/ Competition work title/ Area of work
15.00 – 15.20	Branch «IAE» Vadim Sergeevich Bochkov Research into generation and yield of tritium and helium from Li15.7Pb lead-lithium eutectics under neutron irradiation Applied
15.20 – 15.40	Technical break
15.40-16.00	Branch «IAE» Olga Sergeevna Bukina Materials engineering researches of solid solutions based on uranium and zirconium oxides Applied
16.00 – 16.20	Branch «IRSE» Ilya Petrovich Dorozhkin Development of field spectrometry database Applied
16.40 – 17.00	Branch «IAE» Diana Ilyinichna Davydenko A concept for creating a facility to test shipping packaging sets in RK Engineering and technical
17.00 – 17.20	Branch «IRSE» Amir Yerlanovich Kairzhanov Development of radioecological interactive atlas of Semiplatinsk Test Site Engineering and technical

30th of September, 2020, Wednesday

Time	Organization/ Full name / Competition work title/ Area of work
09.00 – 09.20	Branch «IRSE» Vladimir Valeryevich Kolbin Determining uranium in urine using the method of inductively-coupled plasma mass-spectrometry as a biophysical method of inner dosimetry Applied
09.20 – 09.40	Branch «IAE» Yerkhat Dauletghanuly Dauletghanov Structural characteristics of E125 zirconium alloy in the local thermal influence area Applied
09.40 – 10.00	Branch «IAE» Lyalya Kalykovna Zhagiparova Technical support of neutron-physical model of the «IVG.1M» reactor Applied
10.00 - 10.20	Branch «IRSE» Pavel Yevgenievich Krivitskiy Assessment of radioactive contamination of the «Balapan» site territory Applied

Time	Organization/ Full name / Competition work title/ Area of work
10.20 – 10.40	Branch «IAE» Ganiya Kaydarkyzy Zhanbolatova Peculiarities in physical processes of tungsten surface carbidization when interact with plasma Applied
10.40 – 11.00	Branch «IRSE» Alexandr Aleksandrovich Kruglykhin Development of the system for radionuclide monitoring of nuclear events and radiation accidents in the NNC RK Applied
11.00 – 11.20	Technical break
11.20 – 11.40	Branch «IRSE» Yelena Aleksandrovna Novikova Mapping the pathways of contaminated groundwater migration from the «Degelen» site (upon the monitoring results) Applied
11.40 – 12.00	Branch «IAE» Olzhas Muratbekovich Zhanbolatov Calculation of a power curve for the experimental device with neutron converter Fundamental
12.00 – 12.20	Branch «IAE» Anar Semeybayevna Zhunusova Modeling the flow of liquid sodium coolant boiling in the experimental facility Applied
12.30-14.00	Lunch break
14.00 – 14.20	Branch «IRSE» Tatyana Sergeevna Ponomareva Assessment of the impact of edaphic factors on migration of artificial radionuclides in «soil-plant» system Applied
14.20 – 14.40	Branch «IAE» Stanislav Alekseyevich Ilyinykh Upgrade of information-control system of the «EAGLE» experimental facility. Automatic control subsystem Engineering and technical
14.40 – 15.00	Branch «IRSE» Sergey Sergeevich Pronin Development of the program for radiological monitoring of surface and ground water of the STS Applied
15.00 – 15.20	Branch «IAE» Yerzhan Askaruly Kabdylkakov Numerical modelling of melting and transferring fuel from the experimental facility Engineering and technical
15.20 – 15.40	Technical break

Time	Organization/ Full name / Competition work title/ Area of work
15.40 – 16.00	Branch «IRSE» Almira Muratovna Raimkanova Methodological approaches for research of radiocarbon in soil in the venues of nuclear tests Applied
16.00 – 16.20	Branch «IAE» Zamanbek Baurzhanovich Kozhabayev Research into possibilities of installation of a heatproof protective cover against the impact of molten materials when carrying out in-pile experiments Engineering and technical
16.20 – 16.40	Branch «IRSE» Zarina Beysembayevna Serzhanova Peculiarities in tritium distribution in the zone of impact of radioactively-contaminated STS territories Applied
16.40 – 17.00	Branch «IAE» Berik Sakenovich Medetbekov Determining impurities in concrete samples from ITER using INAA at «IVG.1M» reactor Applied
17.00 – 17.20	Branch «IRSE» Yelena Sergeevna Sysoyeva Research into distribution of artificail radionulcides in the forest litter Applied

1st of October, 2020, Thursday

Time	Organization/ Full-name/ Competition work title/ Area of work
09.00 – 09.20	Branch «IAE» Kuahysh Kanatuly Samarkhanov A technique of reactor tests of radiation-resistant optic fibers and optical-fiber sensors in the near infrared region with <i>in-situ</i> control Applied
09.20 – 09.40	Branch «IRSE» Yerzhan Nurlanovich Tleukanov Assessmnet of natural and artificial radionuclides content in water objects of the EKR Applied

09.40 – 10.00	<p>Branch «IAE»</p> <p style="text-align: center;">Nurbolat Aydynovich Suleymenov</p> <p>The impact of radiation heating up of construction materials of the experimental device with neutron converter to their temperature profile</p> <p style="text-align: right;">Engineering and technical</p>
10.00 – 10.20	<p>Branch «IAE»</p> <p style="text-align: center;">Stanislav Nikolayevich Svetachev</p> <p>Determination of the yield of fission products from fuel elements of the «IVG.1M» reactor</p> <p style="text-align: right;">Engineering and technical</p>
10.20 – 10.40	<p>Branch «IRSE»</p> <p style="text-align: center;">Togzhan Shalkaruly Toktaganov</p> <p>Assessment of the conditions under that natural and artificial waters are formed at the territory of of the STS</p> <p style="text-align: right;">Applied</p>
10.40 – 11.00	<p>Branch «IAE»</p> <p style="text-align: center;">Artur Sergeevich Surayev</p> <p>Peculiarities in numerical modelling the process of destruction of a steel wall with the melt jet</p> <p style="text-align: right;">Engineering and technical</p>
11.00 – 11.20	Technical break
11.20 – 11.40	<p>Branch «IAE»</p> <p style="text-align: center;">Kuanyshbek Orazbekovich Toleubekov</p> <p>Improvement of the effectiveness of induction heating system for immmitation of residual energy release in corium when interacting with heat-resistant materials</p> <p style="text-align: right;">Engineering and technical</p>
11.40 – 12.00	<p>Branch «IRSE»</p> <p style="text-align: center;">Artyom Alekseevich Kharchenko</p> <p>Development of software for internal exposure dose calculation using biokinetic models</p> <p style="text-align: right;">Engineering and technical</p>
12.00 – 12.20	<p>Branch «IAE»</p> <p style="text-align: center;">Yevgeniy Yurievich Tulubayev</p> <p>Research into interaction of hydrogen isotopes with lithium capillary-porous system in conditions of reactor irradiation using dynamic sorption method</p> <p style="text-align: right;">Applied</p>
12.30-14.00	Lunch break
14.00 – 14.20	<p>Branch «IAE»</p> <p style="text-align: center;">Azamat Serikkazyuly Urkunbay</p> <p>Evolution of structure of the particles of metal powder mixture based on Ti-Al-Nb system when mechanically activated</p> <p style="text-align: right;">Applied</p>

14.20 – 14.40	<p>Branch «IAE»</p> <p>Saltanat Muratkyzy Khasenova Development of optimized model for the sodium loop heat exchanger using ANSYS FLUENT software</p> <p style="text-align: right;">Engineering and technical</p>
14.40 – 15.00	<p>Branch «IAE»</p> <p>Kumar Ardakuly Shiderbay Upgrade of the «IVG.1M» research reactor control and safety system: development of technical requirements</p> <p style="text-align: right;">Engineering and technical</p>
15.00 – 15.20	Technical break
15.20 – 16.00	Consideration by the jury
16.00 – 18.00	SUMMING UP THE NNC RK XIX RESEARCH AND DEVELOPMENT CONTEST-CONFERENCE . CLOSURE.

