

**Conference organizers:**

Institute of Natural and Technical Systems

Sevastopol State University

Institute of Global Climate and Ecology

Sevastopol city branch of the Russian Geographical Society

Obukhov Institute of Atmospheric Physics of the Russian Academy of Sciences

Institute of Geography of the Russian Academy of Sciences



**PROGRAM**

**of International scientific and practical conference**

**«Environmental control systems – 2023»**



Sevastopol

November 07 – 10, 2023

**PROGRAM**  
**of International scientific and practical conference**  
**«Environmental control systems – 2023»**  
November 07 – 10, 2023

**CONFERENCE PROGRAM COMMITTEE**

**Chairman – Voskresenskaya E.N.**, Doctor of Geographical Sciences, Prof., Deputy Director for Scientific Work, Institute of Natural and Technical Systems, Sevastopol, Russian Federation.

Co-chairs:

**Maslova V.N.** – Ph.D., Director of the Institute of Natural and Technical Systems, Sevastopol, Russian Federation.

**Polonsky A.B.** – Doctor of Geographical Sciences, Prof., Corresponding Member RAS, scientific adviser of the Institute of Natural and Technical Systems, Sevastopol, Russian Federation.

**Members of the Program Committee:**

**Cao Xuan** – Doctor of Science, Senior Researcher, Institute of Oceanographic Instrumentation, Academy of Sciences of Shandong Province, China.

**Zhang Ying Ying** – Doctor of Science, Senior Researcher, Institute of Oceanographic Instrumentation, Academy of Sciences of Shandong Province, China.

**Belan B.D.** – Doctor of Physical and Mathematical Sciences, Prof., Deputy Directors of the V.E. Zuev Institute of Atmospheric Optics, Siberian Branch of the Russian Academy of Sciences, Tomsk, Russian Federation.

**Grekov A.N.** – Ph.D., deputy Head of the Center, Institute of Natural and Technical Systems, Sevastopol, Russian Federation.

**Grekov N.A.** – Doctor of Technical Sciences, Prof., Chief Researcher, Institute of Natural and Technical Systems, Sevastopol, Russian Federation.

**Nechaev V.D.** – Doctor of Pedagogical Sciences, Professor, Rector of the Sevastopol State University, Sevastopol, Russian Federation.

**Romanovskaya A.A.** – Doctor of Biological Sciences, corresponding member RAS, Director of the Institute of Global Climate and Ecology, Moscow, Russian Federation.

**Sadakov V.A.** – Ph.D., associate professor, captain 1st rank, deputy head of the school for educational and scientific work, Black Sea Higher Naval School of the Order of the Red Star named after P.S. Nakhimov, Sevastopol, Russian Federation.

**Semenov V.A.** – Doctor of Physical and Mathematical Sciences, Prof., Academician of the Russian Academy of Sciences, Deputy Directors of the Obukhov Institute of Atmospheric Physics of the Russian Academy of Sciences, head. Laboratory of the Institute of Geography Russian Academy of Sciences, Moscow, Russian Federation.

**Solomina O.N.** – Doctor of Geographical Sciences, Prof., Corresponding Member RAS, Director of the Institute of Geography of the Russian Academy of Sciences, Moscow, Russian Federation.

## ORGANISING COMMITTEE

**Chairman – E.V. Vyshkvarkova**, Ph.D., leading researcher at the Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Lubkov A.S.** – Chairman of SYS, Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Kashirina E.S.** – Ph.D., head of the educational program “Geography”, Branch of Moscow State University named after. M.V. Lomonosov in Sevastopol, Sevastopol, Russian Federation.

**Beitzer S.S.** – head Department, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Bernadina S.A.** – engineer, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Grebneva E.A.** – Junior Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Gubarev A.V.** – Junior Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Zhuravsky V.Yu.** – Junior Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Novikov A.A.** - Senior Lecturer, Branch of Moscow State University named after. M.V. Lomonosov in Sevastopol, Sevastopol, Russian Federation.

**Onyshko A.A.** – Engineer, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Stefanovich A.A.** – Junior Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

**Shishkin Yu.E.** – Candidate of Technical Sciences, Researcher, Institute of Natural-Technical Systems, Sevastopol, Russian Federation.

## **SCHEDULE**

*November 7 (Tuesday)*

Arrival and accommodation of conference participants in hotels

*November 8 (Wednesday)*

Institute of Natural and Technical Systems

9.30 – 10.00	Registration of participants
10.00 – 10.10	Opening of the conference
10.10 – 11.40	Plenary reports
12.00– 17.00	Oral presentations
17.00 – 17.45	Poster presentations

*November 9 (Thursday)*

Institute of Natural and Technical Systems

9.30 – 15.15	Oral presentations
15.15– 17.00	Poster presentations

*November 10 (Friday)*

Institute of Natural and Technical Systems

9.30 – 15.15	Oral presentations
15.15– 17.00	Poster presentations
17.00 – 18.00	Closing of the conference

### ***Schedule of speeches:***

Plenary report – 30 minutes,  
Oral presentation – 15 minutes,  
Poster presentation – 2-3 minutes

## Wednesday, November 8

<b>09.30– 10.00</b>	<b>Registration of participants</b>
<b>10.00–10.15</b>	<b>Opening of the conference</b>
<b>Plenary reports</b>	
<b>10.15–10.45</b>	<i>Bardin M.Yu.</i> WAVES OF HEAT AND COLD IN THE MAIN GRAIN-PRODUCING REGIONS OF THE RUSSIAN FEDERATION (Institute of Global Climate and Ecology, Moscow, Russia)
<b>10.45–11.15</b>	<i>Antokhina O.Yu., Antokhin P.N., Arshinova V.G., Arshinov M.Yu., Belan B.D., Belan S.B., Davydov D.K., Dudorova N.V., Ivlev G., Kozlov A.V., Rasskazchikova T.M., Savkin D.E., Simonenkov D.V., Sklyadneva T.K., Tolmachev G.N., Fofonov A.V.</i> FEATURES OF AIR COMPOSITION OVER SIBERIA AND THE KARA SEA IN 2022 (V.E. Zuev Institute of Atmospheric Optics SB RAS, Tomsk, Russia)
<b>11.15–11.45</b>	<i>Krasnodubec L.A.</i> IN MEMORY OF DOCTOR OF TECHNICAL SCIENCES, PROF. GAISKY VITALY ALEXANDROVICH (Institute of Natural and Technical Systems, Sevastopol, Russia)

**11.45-12.00 Coffee break**

### Section meetings

**Section «Methods and means of measuring the parameters of the natural environment»**

**12.00–17.00 Oral presentations**

<b>12.00-12.15</b>	<i>Zakaria N., Sammathuria M.K., Jamaluddin A.F.</i> CHARACTERISTICS OF FLASK SAMPLING MEASUREMENTS AT THE DANUM VALLEY GLOBAL ATMOSPHERIC WATCH STATION (Malaysian Meteorological Department, Malaysia)
<b>12.15–12.30</b>	<i>Dyakov N.N., Safonov V.A., Dologlonyan A.V., Klimenko A.G., Zhilyaev S.A., Belogudov A.A.</i> METHOD FOR CONTINUOUS OPERATION OF WIND POWER PLANT (Institute of Natural and Technical Systems, Sevastopol, Russia)

<b>12.30–12.45</b>	<i>Senin V.G., Mikhailova A.V., Kuzmina T.G., Simakina Ya.I., Senin P.V.</i> HYDROGELS – NEW GENERATION SORBENTS IN NATURAL WATER MONITORING FOR COMBINED ANALYSIS METHODS (Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Moscow, Russia)
<b>12.45–13.00</b>	<i>Moe Thanda Kyi.</i> APPARATUS AND ANALYTICAL TECHNIQUE FOR BIOMASS AND MATERIALS (Myanmar Aerospace Engineering University Meiktila Township, Mandalay Region, Myanmar)
<b>13.00-13.15</b>	<i>Varagushin P.A.</i> MODIFICATION OF THE LORA PROTOCOL STACK FOR THE DEPLOYMENT OF WIRELESS SENSOR NETWORKS FOR RECORDING ENVIRONMENTAL PARAMETERS (Federal State Autonomous Educational Institution of Higher Education “Crimean Federal University named after. V. I. Vernadsky”, Simferopol, Russia)

### 13.15– 14.00 Lunch break

<b>14.00–14.15</b>	<i>A.V. Dologlonyan, V.T. Matveenko, A.G. Klimenko</i> CONTROL OF HEAT GENERATION IN COGENERATION MICROGAS TURBINE PLANTS WITH REGENERATION AT PARTIAL LOADS UNDER VARIOUS LOADING METHODS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>14.15–14.30</b>	<i>Nurzai V.A., Gubarev F.A., Lei V.A.</i> APPLICATION OF OPTICAL DISPLACEMENT MEASUREMENT METHODS TO MONITOR ENGINE VIBRATION (Sevastopol State University, Sevastopol, Russia)
<b>14.30–14.45</b>	<i>D.V. Torganov, M.S. Tsiron, A.A. Lavrenchuk, M.Y. Spiransky, F.A. Gubarev</i> HIGH-SPEED VISUALIZATION OF ELECTRIC ARC SYNTHESIS OF CERAMIC MATERIALS (Sevastopol State University, Sevastopol, Russia)
<b>14.45–15.00</b>	<i>Chachev D.R., Sosnovskiy U.V., Milykov V.V.</i> IMPROVEMENT OF THE EMERGENCY CONTROL SYSTEM USING LORA TECHNOLOGY (V.I. Vernadsky Crimean Federal University, Simferopol, Russia)
<b>15.00–15.15</b>	<i>Fischenko V.K., Goncharova A.A., Zimin P.S., Golik A.V.</i> PROGRAM QAVIS FOR EXPRESS ANALYSIS OF IMAGES AND VIDEOS: APPLICATION IN TASKS OF THE WATER AREAS CONDITION PARAMETERS ESTIMATION (V.I. Il'ichev Pacific Oceanological Institute of FEB RAS, Vladivostok, Russia)

### 15.15-15.30 Coffee break

15.30-16.45	<i>Podolskaya E.P.</i> ANALYTICAL SYSTEM FOR RAPID DETECTION OF REACTIVE METABOLITES OF XENOBIOTICS - POTENTIAL ENVIRONMENTAL POLLUTANTS (Institute of Analytical Instrumentation RAS, St. Petersburg, Russia)
15.45-16.00	<i>Grekov A.N., Grekov N.A., Kuzmin K.A., Peliushenko S.S.</i> EXPERIMENTAL STUDIES OF THE EFFECTS OF ACOUSTIC AND VIBRATION SIGNALS OF VARIOUS FREQUENCIES ON BIOSENSORY SYSTEMS (Institute of Natural and Technical Systems, Sevastopol, Russia)
16.00-16.15	<i>Grekov A.N., Grekov N.A., Sychov E.N.</i> UNCERTAINTIES OF SENSORS FOR INDIRECT MEASUREMENTS OF SEAWATER SALINITY (Institute of Natural and Technical Systems, Sevastopol, Russia)
16.15-16.30	<i>Shishkin Iu.E.</i> DEVELOPMENT OF INFORMATION TECHNOLOGY FOR VISUALIZATION AND ALGORITHMIC SUPPORT FOR AUTOMATING PROCESS ANALYSIS OF MARINE ENVIRONMENT PROFILE MEASUREMENTS DATA (Institute of Natural and Technical Systems, Sevastopol, Russia)
16.30-16.45	<i>Stepanova O.A.<sup>1</sup>, Sholar S.A.<sup>2</sup>, Penkov M.N.<sup>1</sup></i> STUDY OF INFLUENCE OF ELECTROMAGNETIC FIELD WITH FREQUENCY 300 Hz ON MARINE MICROBIOTA ( <sup>1</sup> Institute of Natural and Technical Systems, Sevastopol, Russia; <sup>2</sup> Marine Hydrophysical Institute of RAS, Sevastopol, Russia)
16.45–17.00	<i>Samoilov S.Yu.<sup>1</sup>, Evstigneev V.P.<sup>1,2</sup>, Egorkin A.A.<sup>1,2</sup>, Vakhoneev V.V.<sup>1</sup>, Minsky I.A.<sup>1</sup></i> PROTOTYPE OF A DIGITAL MODEL OF ENVIRONMENTAL MONITORING BASED ON THE ONTOLOGICAL APPROACH ( <sup>1</sup> Sevastopol State University, Sevastopol, Russia, <sup>2</sup> Institute of Natural and Technical Systems, Sevastopol, Russia)

**17.00 – 17.45 Poster presentations of the section «Methods and means of measuring the parameters of the natural environment»**

<i>Krasnodubec L.A., Kanov L.N.</i> FEATURES OF TRANSFORMATION OF ENERGY IN WIND ELECTRIC PLANTS (Institute of natural and technical systems, Sevastopol state university, Russia, Sevastopol)
<i>Moiseev D.V., Shokin A.G.</i> MATHEMATICAL MODEL OF OPTIMIZATION OF INFORMATION LOGISTICS (Sevastopol State University, Sevastopol, Russia)
<i>Oleynikov A.M., Kanov L.N.</i> MATHEMATICAL DESIGN OF PASSING TO ELECTRIC POWER FROM REMOTE WIND ELECTRIC STATIONS (Institute of natural and technical systems, Sevastopol state university, Russia, Sevastopol)
<i>Rudnev V.P.</i> CORROSION CRACKING OF ALUMINUM ALLOYS IN THE

COASTAL ATMOSPHERE OF HUMID SUBTROPICS (Branch of Institute of natural and technical systems, Sochi, Russia)
<i>Shishkin Iu.E.</i> THE CONCEPT OF USING PRESSURE MEASUREMENT CHANNEL FOR EXPRESS ANALYSIS OF SEA WATER LOCAL DENSITY AT SHALLOW DEPTHS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Shapovalov O.Y.</i> DEVELOPMENT OF A NAVIGATION SYSTEM MODULE FOR A CONDITIONALLY DISPOSABLE OCEANOGRAPHIC PROBE (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Penkov M.N.</i> PRACTICAL ASPECTS OF SEAWATER DENSITY PROFILE MEASURING (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Komarova E.P.<sup>1</sup>, Gudimov A.V.<sup>2</sup>, Alloyarov K.B.<sup>3</sup></i> ON THE ISSUE OF TECHNOLOGY AND SENSORS FOR RECORDING THE ACTIVITY OF AQUATIC ORGANISMS IN ONLINE BIOMONITORING ( <sup>1</sup> Southern Federal University, Rostov on Don, Russia <sup>2</sup> Murmansk Marine Biological Institute of RAS, Murmansk, Russia, <sup>3</sup> Murmansk Arctic University, Murmansk, Russia)
<i>Klimenko A.V.<sup>1</sup>, Evdokimov P.A.<sup>1,2</sup></i> DEVELOPMENT OF A TWO-CHAMBER DENSITY MEASUREMENT DEVICE INVARIANT TO INCLINATION DURING IMMERSION (Institute of Natural and Technical Systems, Sevastopol, Russia Sevastopol State University, Sevastopol, Russia)
<i>A.G. Klimenko, A.V. Dologlonyan, V.T. Matveenko.</i> REFINED MATHEMATICAL MODEL FOR CALCULATION OF HEAT CAPACITY OF WORKING BODIES AFFECTING EFFICIENT AND ENVIRONMENTAL PARAMETERS OF ICE (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Trusevich V.V.</i> TO NON-INVASIVE EFFECTS OF PHYSICAL ENVIRONMENTAL FACTORS IN COMPLEXES OF AUTOMATED BIOSENSOR CONTROL OF WATER IN NATURAL CONDITIONS OF RESERVOIRS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Ablaev R.R.<sup>1</sup>, Klimenko A.G.<sup>2</sup>, Dologlonyan A.V.<sup>2</sup></i> CRITERION FOR OPTIMIZING THE NUMBER OF SOLAR COLLECTORS IN THE STRUCTURE OF HYBRID GAS TURBINE PLANTS (Sevastopol State University, Sevastopol, Russia; Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Ryazanov V.A., Pasyukov M.A., Alekseev S.Iu., Shmyreva I.G.</i> AUTOMATED LABORATORY STAND FOR STUDYING THE INFLUENCE OF INHOMOGENEITIES IN WATER ON THE OUTPUT SIGNALS OF THE DEVELOPED MEASURING CHANNELS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Mavrin A.S., Grekov A.N., Vyshkvarkova E.V.</i> BIVALVE MOLLUSKS SERIES ACTIVITIES ANOMALIES DETECTION BY THE SARIMAX MODEL FOR THE AQUATIC ENVIRONMENT'S AUTOMATED COMPLEX (Institute of Natural and Technical Systems, Sevastopol, Russia)



## Thursday, November 9

### Section meetings

#### Section «Ecology and environmental management»

##### 09.30-11.00 Oral presentations

<b>09.30-09.45</b>	<i>Skrylnik G.P.</i> FEATURES OF THE STRUCTURE OF UNITY "SPACE IS TERRITORY (using the example of Pacific Russia) (FGBUN Pacific Institute of Geography FEB ORAS, Vladivostok, Russia)
<b>09.45-10.00</b>	<i>Salikhov D.G.</i> POLLUTION FACTOR AND POLLUTION DEGREE AS COMPLEMENTARY INDICES FOR ASSESSING SOIL POLLUTION WITH HEAVY METALS (Kazan (Volga Region) Federal University", Kazan, Russia)
<b>10.00-10.15</b>	<i>Akhsalba A.K., Marandidi S.I., Kishmaria Y.Sh.</i> REMOTE METHODS FOR STUDYING GREENHOUSE GAS EMISSIONS ON THE TERRITORY OF THE REPUBLIC OF ABKHAZIA (Institute of Ecology ANA, Abkhazia, Sukhum, Abkhaz State Institute, Abkhazia, Sukhum)
<b>10.15-10.30</b>	<i>Fedoseeva N.V., Sergeeva N.O.</i> SMOG ANALYSIS IN BEIJING (FGBOU VO Russian State Hydrometeorological University, St. Petersburg, Russia)
<b>10.30-10.45</b>	<i>Lysenko V. I.</i> COMPOSITION OF FLUID EMISSIONS FROM LASPI BAY INTO THE ATMOSPHERE AND HYDROSPHERE (SOUTH COAST OF CRIMEA) ( <i>Lomonosov Moscow State University, the branch in Sevastopol, Russian</i> )
<b>10.45-11.00</b>	<i>Theint Theint Win.</i> DEGRADATION OF SOIL QUALITY IN MANDALAY REGION OF MYANMAR DUE TO OVERUSE OF PESTICIDES IN AGRICULTURE (Food Technology Centre, Naypyitaw Technological University, Naypyitaw, Myanmar)

##### 11-00 – 11.15 Coffee break

<b>11.15-11.30</b>	<sup>1</sup> <i>Kashirina E.S.</i> , <sup>2</sup> <i>Novikov A.A.</i> USING GIS TECHNOLOGIES AND REMOTE SENSING DATA FOR MANAGEMENT OF NATURAL RESERVES ( <sup>1</sup> <i>Branch of Moscow State University in Sevastopol, Sevastopol, Russia;</i> <sup>2</sup> Institute of Natural-Technical Systems, Sevastopol, Russia)
<b>11.30-11.45</b>	<i>Kharybina A.S., Vorotyntsev K.D.</i> APPLICATION OF REMOTE SENSING DATA IN THE OIL AND GAS COMPLEX FOR THE CONTROL OF HAZARDOUS GEOLOGICAL PROCESSES (ON

	THE EXAMPLE OF THE MAKAROVSKY DISTRICT OF THE SAKHALIN REGION) (National University of Oil and Gas «Gubkin University», Moscow, Russia)
<b>11.45-12.00</b>	<i>Kulnev V.V.</i> THE USE OF FRACTAL CHARACTERISTICS OF DOWNY BIRCH ( <i>BETULA PUBESCENS</i> ) LEAVES FOR BIOINDICATION IN THE ZONE OF INFLUENCE OF A METALLURGICAL PLANT (Central Black Earth Interregional Directorate of the Federal Service for Supervision of Natural Resources, Voronezh, Russia)
<b>12.00-12.15</b>	<i>Romanovskaya K.S.</i> APPLICATION OF MICROBIOLOGICAL PREPARATIONS IN IN BIOORGANIC WASTE MANAGEMENT TO REDUCE ODOR POLLUTION OF THE ENVIRONMENT (Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia)
<b>12.15-12.30</b>	<i>Andreeva N.A.</i> <sup>1</sup> , <i>Snarskaya D.D.</i> <sup>2</sup> CYANOBACTERIA STRAINS FROM PHYTOBENTHOS OF THE BLACK SEA COAST OF CRIMEA (Institute of Natural and Technical Systems, Sevastopol, Russia; <sup>2</sup> Saint Petersburg State University, Saint Petersburg, Russia)
<b>12.30-12.45</b>	<i>Gorbunova T.L.</i> , <i>Gudkova N.K.</i> , <i>Rubanova N.I.</i> GEOLOGICAL AND HYDROBIOLOGICAL CHARACTERISTICS OF ENVIRONMENTALLY HAZARDOUS RIVERS OF THE SOCHI BLACK SEA REGION (Branch of «Institute of Natural and Technical Systems, Sevastopol, Sochi, Russia)

#### **12.45-14.00 Lunch break**

<b>14.00-14.15</b>	<i>Kazankova I.I.</i> CONTROL OF THE POTENTIAL RECRUITMENT OF THE BIVALVE MOLLUSCA <i>ANADARA</i> – A RECENT INVADER IN THE BLACK SEA (Institute of Natural-Technical Systems, Sevastopol, Russia)
<b>14.15–14.30</b>	<i>Kozlova T.A.</i> WASTEWATER TREATMENT WITH THE USE OF MICROALGAE IN THE SUPERTOURISM ZONE OF THE SOCHI REGION AND METHODS OF TOXICOLOGICAL CONTROL OF WASTEWATER ADAPTED TO THE REGION (Branch of Institute of natural and technical systems, Sochi, Russia; Institute of natural science, Tambov, Russia)
<b>14.30–14.45</b>	<i>Rubanova N.I.</i> IDENTIFICATION OF INTACT FOREST LANDSCAPES USING NEUROTECHNOLOGIES (Branch of Institute of natural and technical systems, Sochi, Russia)
<b>14.45–15.00</b>	<i>Smyrnova L.L.</i> THE MUSSELS <i>MYTILUS GALLOPROVINCIALIS</i> LAM AS INDICATORS OF Ba, Xe, Zr AT VARIOUS DEPTHS OF THE SEVASTOPOL SEASHORE (BLACK SEA) (Institute of

	Natural and Technical Systems, Sevastopol, Russia)
<b>15.00 –15.15</b>	<i>Shakirova F.M., Latypova V.Z., Nikitin O.V.</i> THE ROLE OF NATURAL AND ANTHROPOGENIC FACTORS IN THE FORMATION OF ICHTHYOFAUNA AND PRODUCTIVITY KUIBYSHEVSK (All-Russian Research Institute of Fisheries and Oceanography, Tatar branch of the Federal State Budgetary Institution "VNIRO", "TatarstanNIRO", Kazan, Russia, Kazan (Volga Region) Federal University, Kazan, Russia, Institute of Ecology and Subsoil Use of the Academy of Sciences of the Republic of Tajikistan, Kazan, Russia)
<b>15.15-15.30</b>	<i>Silkin P.P.</i> DENSITY OF TRACHEIDS CELL WALLS SIBERIAN LARCH ( <i>LARIX SIBIRICA</i> LEDEB.). MEASURING METHOD AND DISTRIBUTION FEATURES (Institute of Natural and Technical Systems, Sevastopol, Russia)

**15.30 – 16.00 Coffee break**

**16.00–17.00 Poster presentations of the section « Ecology and environmental management »**

<i>Agarkova-Lyakh I.V., Shchodro A.E., Chernykh S.L.</i> THE PROJECT TO CREATE ARTIFICIAL ISLANDS AS A PROMISING WAY TO PROTECT THE CRIMEAN COAST (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Andreeva N.A.<sup>1,2</sup>, Mosunov A.A.<sup>2</sup>, A.A. Sizova A.A.<sup>1,2</sup></i> COMPOSITION OF MICROALGAE-FOULING ON PLATES COATED WITH PAINTS WITH NANOPARTICLES (Institute of Natural and Technical Systems, Sevastopol, Russia; <sup>2</sup> Sevastopol State University, Sevastopol, Russia)
<i>Galushin D.A.<sup>1</sup>, Gromov S.A.<sup>1,2</sup>.</i> LONG-TERM DYNAMICS AND TRENDS OF OXIDIZED SULFUR AND NITROGEN DEPOSITION WITH PRECIPITATION IN THE AREAS OF EMEP STATIONS ( <sup>1</sup> Yu. A. Izrael Institute of Global Climate and Ecology, Moscow, Russia; <sup>2</sup> Institute of Geography of the Russian Academy of Sciences, Moscow, Russia)
<i>Egorkin A.A.</i> JOINT USE OF WRF AND CFD MODELS FOR THE DEVELOPMENT OF DECISION SUPPORT SYSTEMS TO ENSURE ENVIRONMENTAL SAFETY (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Krasovskay V.S.</i> DYNAMICS OF VEGETATION INDEX IN CRIMEA (Institute of Natural and Technical Systems, Sevastopol State University, Sevastopol, Russia)
<i>Musina A.A., Shagidullin A.R., Nurmukhametova V.A., Gilyazova A.F.</i> ASSESSMENT OF THE COMPLEX INDEX OF ATMOSPHERIC AIR POLLUTION IN NIZHNEKAMSK ACCORDING TO THE DATA OF AUTOMATIC MONITORING STATIONS (Institute of Ecology and Subsoil Use Problems of the Academy of Sciences of the Republic of Tatarstan, Kazan, Russia)

<i>Nagina M.A.</i> ANALYSIS OF RECREATIONAL ENVIRONMENTAL MANAGEMENT IN PROTECTED AREAS OF CRIMEA (Branch of Moscow State University named after. M.V. Lomonosov in Sevastopol, Sevastopol, Russia)
<i>Nikitin O.V.<sup>1</sup>, Kuzmin R.S.<sup>1</sup>, Vaziev I.I.<sup>2</sup>, Latypova V.Z.<sup>3,4</sup></i> NITROGEN DIOXIDE CONTENT ESTIMATION WITHIN THE TROPOSPHERE OVER THE REPUBLIC OF TATARSTAN TERRITORY BASED ON TROPOMI SPECTROMETER DATA ( <sup>1</sup> LLC Ecoaudit, Kazan, Russia; <sup>2</sup> Center for Children's Creativity "Tankodrom", Kazan, Russia; <sup>3</sup> Kazan Federal University, Kazan, Russia; <sup>4</sup> Research Institute for Problems of Ecology and Mineral Wealth Use of Tatarstan Academy of Sciences, Kazan, Russia)
<i>A.A. Uglava, R.S. Dbar, I.P. Neshenko, R.Y. Zhiba.</i> HYDROCHEMICAL PARAMETERS OF THE NEW ATHOS SWAN POND AND FACTORS OF THEIR INFLUENCE ON THE DEVELOPMENT OF ELODEA ALGAE (Institute of Ecology of the Academy of Sciences of Abkhazia, Sukhum, Abkhazia)
<i>Khalikov I.S., Lukyanova N.N.</i> ON THE QUESTION OF THE RIVER DRAIN OF POLYCYCLIC AROMATIC HYDROCARBONS INTO THE BOTTOM SEDIMENTS OF LAKE BAIKAL (FSBI "RPA "Typhoon", Obninsk, Russia)
<i>Khalikov I.S., Lukyanova N.N.</i> COMPOSITION OF SOME NAPHTHALENE IN BOTTOM SEDIMENTS OF SOUTHERN BAIKAL AT DIFFERENT SEASONS OF THE YEAR (FSBI "RPA "Typhoon", Obninsk, Russia)
<i>Yushuk R.V.<sup>1</sup>, Krasnobaeva D.Yu.<sup>2</sup>, Korobeynikova K.R.<sup>1</sup></i> DIRECTIONS OF NEUTRALIZATION OF NITROGEN TETRAOXIDE ( <sup>1</sup> Moscow state automobile and road technical University (MADI), Moscow, Russia; <sup>2</sup> Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia)

**Friday, November 10**

### Section meetings

#### Section «Global and regional climate and environmental changes»

##### 09.30- 11.00 Oral presentations

<b>09.30-09.45</b>	<i>Dobrolyubov N.Yu.</i> REGIONAL MANIFESTATION OF SEASONALITY IN THE YEARLY COURSE OF SURFACE MONTHLY MEAN AIR TEMPERATURE (Yu.A. Izrael Institute of Global Climate and Ecology, Moscow, Russia)
<b>09.45-10.00</b>	<sup>1</sup> <i>Gurevich D.A.,</i> <sup>1,2</sup> <i>Cheredko N.N.</i> EFFECTS OF SOLAR ACTIVITY IN THE DYNAMICS OF CHARACTERISTICS OF ATMOSPHERE ACTION CENTERS IN THE NORTH ATLANTIC ( <sup>1</sup> Tomsk State University, Tomsk, Russia; <sup>2</sup> Institute of Monitoring of Climatic and Ecological Systems SB RAS, Tomsk, Russia)
<b>10.00-10.15</b>	<i>Shishkin G.I., Guryanov V.V.</i> RELATIONSHIP OF SURFACE TEMPERATURE WITH ATMOSPHERIC CIRCULATION

	INDICES IN THE CENTER OF THE EUROPEAN PART OF RUSSIA (Kazan (Volga Region) Federal University, Kazan, Russia)
<b>10.15-10.30</b>	<i>Bogdanovich A.Yu.</i> A SYSTEM FOR TRACKING SHIFTS IN SPECIES CLIMATIC RANGES (Yu. A. Izrael Institute of Global Climate and Ecology, Moscow, Russia)
<b>10.30-10.45</b>	<i>Pekarnikova M.E.</i> THE MOST LIKELY SCENARIO UNDER THE EXISTING SYSTEM OF LEGAL REGULATION AND CONTROL OF ANTHROPOGENIC GREENHOUSE GAS EMISSIONS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>10.45-11.00</b>	<i>Zotov L.V., Marchukova O.N., Sidorenkov N.S.</i> COMPARISON OF ENSO ACTIVITY WITH FEATURES IN THE EARTH'S ROTATION (GAISH MSU, Moscow, Russia, MIEM NRU HSE Moscow, Russia, Tyumen State University, Russia, Hydrometeorological Center of the Russian Federation)

### 11-00 – 11.15 Coffee break

<b>11.15-11.30</b>	<i>Lubkov A.S., Voskresenskaya E.N.</i> ON THE EXPERIENCE OF THE OCEAN HEAT CONTENT IN THE UPPER 300-METER LAYER USING AS AN ADDITIONAL PREDICTOR OF THE NEURAL NETWORK MODEL FOR THE ENSO FORECAST (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>11.30-11.45</b>	<i>Torbinsky A.V., Polonsky A.B., Gubarev A.V.</i> INFLUENCE OF THE INDIAN OCEAN DIPOLE ON SPATIO-TEMPORAL VARIABILITY OF SURFACE AIR TEMPERATURE IN AFRICAN-EUROPEAN REGION (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>11.45-12.00</b>	<i>Perevedentsev Yu.P., Mirsaeva N.A., Shantalinsky K.M., Nikolaev A.A., Tagirov M.Sh.</i> LONG-TERM CLIMATE CHANGES IN THE MIDDLE VOLGA REGION (Kazan (Volga Region) Federal University, Kazan, Russia, Tatar Research Institute of Agriculture, Kazan, Russia,)
<b>12.00-12.15</b>	<i>Nikishova V. D., Korotkova N.V.</i> INVESTIGATION OF THE "HEAT ISLAND" OF MAGNITOGORSK (Saratov National Research State University named after N. G. Chernyshevsky, Saratov, Russia)
<b>12.15-12.30</b>	<i>B.I. Gartsman<sup>1,2</sup></i> AN ATTEMPT OF SIMULATION MODELING OF THE RUNOFF OF RIVERS AND KARST SPRING SYSTEMS OF THE CRIMEA ( <sup>1</sup> Water Problems Institute RAS, Moscow, Russia; <sup>2</sup> Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>12.30-12.45</b>	<i>T.N. Postnikova<sup>1</sup>, O.O. Rybak<sup>1,2,3</sup>, A.S. Gubanov<sup>4</sup>, H. Zekollari<sup>5,6</sup>, M.</i>

	<i>Huss</i> <sup>5,6,7</sup> MATHEMATICAL MODELING OF ELBRUS GLACIERS IN THE XXI CENTURY ( <sup>1</sup> Water Problems Institute of RAS, Moscow, Russia; <sup>2</sup> FRC SSC RAS, Sochi, Russia; <sup>3</sup> Institute of Natural and Technical Systems, Sevastopol, Russia; <sup>4</sup> Department of Geography, Lomonosov Moscow State University, Moscow, Russia; <sup>5</sup> Earth System Science and Department of Geography, Vrije Universiteit Brussel, Brussels, Belgium; <sup>6</sup> Laboratory of Hydraulics, Hydrology and Glaciology (VAW), ETH Zürich, Zürich, Switzerland; <sup>7</sup> Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf, Switzerland; <sup>7</sup> Department of Geosciences, University of Fribourg, Fribourg, Switzerland)
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### 12.45-14.00 Lunch break

<b>14.00-14.15</b>	<i>Rybak O.O.</i> <sup>1,2,3</sup> , <i>Rybak E.A.</i> <sup>2,3</sup> , <i>Korneva I.A.</i> <sup>4</sup> ARAMETERIZATION OF CLOUDINESS IN ENERGY BALANCE MODELS OF MOUNTAIN GLACIERS ( <sup>1</sup> Water Problems Institute of RAS, Moscow, Russia; <sup>2</sup> FRC SSC RAS, Sochi, Russia; <sup>3</sup> Institute of Natural and Technical Systems, Sevastopol, Russia; <sup>4</sup> Institute of Geography of RAS, Moscow, Russia)
<b>14.15–14.30</b>	<i>Fasolko D.</i> , <i>Pigoltsina G.</i> PRINCIPLES OF ACCOUNTING SPATIAL VARIABILITY OF SNOW COVER IN DIFFICULT TERRAIN FOR CLIMATE SERVICES OF ECONOMIC (Voeikov Main Geophysical Observatory, Saint Petersburg, Russia)
<b>14.30–14.45</b>	<i>Valle A.A.</i> , <i>Polonsky A. B.</i> ON THE VARIABILITY OF DISSOLVED OXYGEN IN THE REGION OF THE COLD INTERMEDIATE LAYER OF THE BLACK SEA WATERS (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>14.45–15.00</b>	<i>Vorontsov A.A.</i> , <i>Bulygin A.M.</i> ASSESSMENT OF THE CURRENT STATE OF TEMPERATURE AND SALINITY IN THE ACTIVE LAYER OF THE BLACK SEA (RIHMI-WDC, Obninsk, Russia)
<b>15.00 –15.15</b>	<i>Grebneva E.A.</i> , <i>Polonsky A.B.</i> THE ROLE OF REGIONAL HYDROMETEOROLOGICAL CONDITIONS IN THE FORMATION OF ANOMALOUS pH VALUES IN THE UPPER LAYER OF WATER IN THE DEEP PART OF THE BLACK SEA (Institute of Natural and Technical Systems, Sevastopol, Russia)
<b>15.15-15.30</b>	<i>Fedotov A.B.</i> NUMERICAL SIMULATION OF THE EVOLUTION OF A JET ZONAL WIND FLOW USING COMBINED DISSIPATION (Institute of Natural and Technical Systems, Sevastopol, Russia)

### 15.30 – 15.45 Coffee break

**15.45–17.00 Poster presentations of the section «Global and regional climate and environmental changes»**

<p><i>Averyanova E. A., Gubarev A.V., Polonsky A.B.</i> COMPARATIVE STUDY OF THE INFLUENCE OF THE EAST ATLANTIC/WESTERN RUSSIAN AND SCANDINAVIAN OSCILLATIONS ON THE WIND STRESS CURL OVER THE BLACK SEA REGION (Institute of Natural and Technical Systems, Sevastopol, Russia)</p>
<p><i>Vyshkvarkova E.V., Sukhonos O.Yu.</i> THE ROLE OF CLIMATE CHANGE IN THE DESTRUCTION OF CULTURAL HERITAGE SITES (Institute of Natural and Technical Systems, Sevastopol, Russia)</p>
<p><i>Gayko L.A.</i> CLIMATIC NORMS AS AN INDICATOR OF VARIABILITY TEMPERATURE ALONG THE COAST OF PRIMORSKY KRAI (V.I. Il'ichev Pacific Oceanological Institute FEB RAS, Vladivostok, Russia; Dalrybvtuz, Vladivostok, Russia)</p>
<p><i>Marchukova O.V., Voskresenskaya E.N.</i> GLOBAL RESPONSES OF LA NIÑA ACCORDING TO ERA5 AND ITS TRIPLE MANIFESTATION IN 2020–2023 (Tyumen State University, Russia, 2 Institute of Natural-Technical Systems, Russia)</p>
<p><i>Marchukova O.V., Voskresenskaya E.N., Afanasyeva V.V.</i> SELECTION AND VERIFICATION OF CMIP6 MODELS FOR STUDYING TRADE WINDS (Tyumen State University, Russia, Institute of Natural-Technical Systems, Russia)</p>
<p><i>Maslova V.N., Zhuravsky V.Y., Lubkov A.S.</i> POSSIBLE CHANGES IN WINTER CYCLONIC ACTIVITY IN THE MEDITERRANEAN-BLACK SEA REGION IN THE 21ST CENTURY BASED ON THE CMIP6 MODEL ENSEMBLE (Institute of Natural and Technical Systems, Sevastopol, Russia)</p>
<p><i>Novoselova E.V., Belonenko T.V., Gordeeva S.M., Budyansky M.V.</i> COMPARISON OF THERMOHALINE CHARACTERISTICS ON THE KOLA MERIDIAN SECTION WITH CLIMATE INDICES FOR THE NORTH ATLANTIC (St. Petersburg State University, St. Petersburg, Russia, Russian Hydrometeorological University, St. Petersburg, Russia, Pacific Oceanological Institute named after V. I. Ilyichev, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia)</p>
<p><i>Ormeli E.I., Solodovnikova Zh.A.</i> CLIMATIC CONDITIONS OF AUTUMN PERIOD IN THE SARATOV REGION (Saratov State University, Saratov, Russia)</p>
<p><i>Serebrennikov A.N., Polonsky A.B.</i> ANOMALIES OF THE THERMAL UPWELLING INDEX IN THE EASTERN PACIFIC OCEAN (Institute of Natural and Technical Systems, Sevastopol, Russia)</p>
<p><i>Serebrennikov A.N., Polonsky A.B.</i> SURFACE TEMPERATURE OF THE OPEN PART OF THE PACIFIC OCEAN, WIND, AND THERMAL INDEX OF EASTERN BORDERAL UPWELLING SYSTEMS (Institute of Natural and Technical Systems, Sevastopol, Russia)</p>
<p><i>Stefanovich A.A., Voskresenskaya E.N., Lubkov A.S.</i> THE INFLUENCE OF EL NIÑO AND LA NIÑA EVENTS ON THE EXTREMENESS OF RECREATIONAL INDICATORS IN THE CRIMEA (Institute of Natural and Technical Systems,</p>

Sevastopol, Russia)
<i>Sukhonos O.Yu., Vyshkvarkova E.V.</i> RELATIONSHIP OF COMPOUND EXTREMES OF AIR TEMPERATURE AND PRECIPITATION WITH MODES OF ATMOSPHERIC CIRCULATION IN EASTERN EUROPE (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Fedotov A.B.</i> INVESTIGATION OF THE EVOLUTION OF JET ZONAL WIND FLOW USING ARTIFICIAL SOURCES AND DRAINS OF VORTICITY (Institute of Natural and Technical Systems, Sevastopol, Russia)
<i>Polonyankin D.A., Lubkov A.S.</i> ASSESSMENT OF THE QUALITY OF REPRODUCTION OF WIND REGIME CHARACTERISTICS IN THE CRIMEAN REGION BY ERA5 REANALYSIS (Institute of Natural-Technical Systems, Sevastopol, Russia)
<i>Polonsky A.B., Sukhonos P.A.</i> PROJECTIONS OF CHANGES IN THE AMOUNT OF WINTER PRECIPITATION IN THE BLACK SEA REGION IN THE 21ST CENTURY (Institute of Natural-Technical Systems, Sevastopol, Russia)
<i>Cherednichenko A.V., Chednichenko V.S., Cherednichenko A.V.</i> POSSIBLE CONSEQUENCES OF CLIMATE CHANGE FOR THE DZHUNGAR ALATAU MOUNTAIN SYSTEM (Almaty University of Energy and Communications, Almaty, Kazakhstan)
<i>Khoroshunova D.A.</i> IDENTIFICATION OF HIDDEN PERIODICITIES IN THE MASS BALANCE SERIES OF THE DZHANKUAT GLACIER (Branch of Moscow State University named after M.V. Lomonosov in the city of Sevastopol)

**17.00-18.00** Discussion. Adoption of resolution. Closing of conference