

## THE ORGANIZING COMMITTEE OF THE CONFERENCE

### Chairman:

**Yury H. Hihiniak**, PhD, docent, lead researcher of the Sector of Fauna Monitoring and Cadaster, the Scientific and Practical Center for Biological Resources.

### Co-chairs:

**Vladislav Ye. Miamin**, PhD, lecturer of the Department of Microbiology, the Biology Faculty, Belarusian State University;

**Dmitry A. Lukashanets**, PhD, lead researcher of the Laboratory of Hydrobiology, the Scientific and Practical Center for Biological Resources.

### Members:

**Alexey A. Gaidashov**, head of the Belarusian Antarctic Expedition, deputy director of the Republican Center for Polar Research;

**Sergey V. Kakareka**, doctor of science, chief of the Laboratory of Transboundary Pollution and Climatology, the Institute for Nature Management;

**Vladimir H. Levashkevich**, doctor of science, Deputy Academician-Secretary of the Department of Chemistry and Earth Sciences, the NAS of Belarus;

**Igor M. Pilshchikov**, director of the Republican Center for Polar Research;

**Vladimir N. Drabo**, head of the Belarusian Fund of Extreme Expedition Support «Pole», current member of the Arctic Academy of Sciences;

**Anna V. Vysochenko**, PhD, head of the Management Group of Scientific and Technical Programs;

**Yekaterina M. Setrakova**, junior researcher of the Laboratory of Terrestrial Invertebrates, the Scientific and Practical Center for Biological Resources;

**Leonid N. Valentovich**, PhD, head of the laboratory «Center for Analytical and Genetic Engineering Studies», the Institute of Microbiology.

## THE SCIENTIFIC COMMITTEE OF THE CONFERENCE

### Chairman:

**Vladimir F. Loginov**, doctor of science, professor, academician of the NAS of Belarus, principle researcher of the Laboratory of Transboundary Pollution and Climatology, the Institute for Nature Management.

### Co-chair:

**Oleg I. Borodin**, PhD, docent, lead researcher of the Laboratory of Terrestrial Invertebrates, the Scientific and Practical Center for Biological Resources

### Members:

**Mihail Ye. Nikiforov**, doctor of science, professor, academician of the NAS of Belarus, principle researcher of the Laboratory of Molecular Zoology, the Scientific and Practical Center for Biological Resources;

**Alexander K. Karabanov**, doctor of science, academician of the NAS of Belarus, director of the Institute for Nature Management;

**Vladimir P. Kurchenko**, PhD, lead researcher of the Laboratory of Applied Problems in Biology of the Department of Zoology, the Biology Faculty, Belarusian State University;

**Alexander V. Klepikov**, PhD, deputy director of the Arctic and Antarctic Research Institute, head of the Russian Antarctic Expedition, Russia;

**Valeriy V. Lukin**, head of the department «Interaction with authorities of the Antarctic Treaty System» of the Russian Antarctic Expedition Logistic Center, Russia;

**Valeriy A. Litvinov**, PhD, deputy director of the National Antarctic Scientific Center of Ukraine, Ukraine;

**Sergey V. Goriachkin**, doctor of science, head of the Department of Geography and Soil Evolution, the Institute of Geography, Russia;

**Sergey R. Verkulich**, doctor of science, head of the Department of the Polar Region Geography, the Arctic and Antarctic Research Institute, Russia;

**Yevgeniy V. Moiseenko**, doctor of science, head of the Department of the Biomedical Research in Antarctica, the National Antarctic Scientific Center of Ukraine, Ukraine.

## THE VENUE

Training and health center «Forum», Kryzhovka township, Minsk district, Minsk region, Belarus.

Website: <https://forumhotel.by/>

## CONTACTS

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## SEPTEMBER 17, 2018 MONDAY

- 08.30–10.30 **Registration of participants**  
(Scientific and practical center of the NAS of Belarus for Biological Resources, Minsk, Akademicheskaya str., 27)
- 10.30–11.30 **Transfer of participants: Minsk – Training and health center «Forum» (Minsk district)**
- 11.30–14.00 **Check into the «Forum» hotel. Lunch**
- 14.00–14.30 **Opening of the meeting**  
**Welcome speech of academician Vladimir F. Loginov.**  
**Welcome speeches of the Guests of honor**

**14.30–18.45 Plenary lectures (up to 25 min)**  
**Conference Hall of the Training center «Forum»**  
**Chairman – V.F. Loginov, secretary – O.I. Borodin**

- 14.30–15.00 **Vladimir F. Loginov, Sergey A. Lysenko**  
*Institute for Nature Management, National Academy of Sciences of Belarus, Minsk, Belarus*  
**OCEAN AS A MODIFIER OF CLIMATE CHANGE**
- 15.00–15.30 **Valeriy V. Lukin**  
*Arctic and Antarctic Research Institute, St. Petersburg, Russia*  
**INTERNATIONAL COOPERATION IN THE ANTARCTIC TREATY SYSTEM: ADVANTAGES AND PROBLEMS**
- 15.30–16.00 **Stuart Prior**  
*Honorary Consul for the Republic of Belarus in New Zealand, New Zealand*
- 16.00–16.30 **Peter Convey**  
*British Antarctic Survey, Natural Environment Research Council, Cambridge, United Kingdom*  
**TERRESTRIAL BIODIVERSITY IN ANTARCTICA – HISTORY, BIOGEOGRAPHY AND CHALLENGES**

16.30–16.45 **Alexey A. Gaidashov**  
*Republican Center for Polar Research, Minsk, Belarus*  
PRESENTATION OF THE FILM «X BELARUSIAN  
ANTARCTIC EXPEDITION»

16.45–17.00 **Coffee break**

17.00–17.30 **Yevgeniy V. Moiseenko**  
*National Antarctic Scientific Center of Ukraine, Kiev, Ukraine*  
*A.A. Bogomolets Institute of Physiology, National Academy of*  
*Sciences of Ukraine, Kiev, Ukraine*  
INVESTIGATION OF PATHOLOGY DEVELOPMENT  
MECHANISMS AND PREVENTION OF MORBIDITY OF  
WINTERES AT STATION "ACADEMICIAN VERNADSKY"

17.30–18.00 **Alexey V. Malinka**  
*B.I. Stepanov Institute of Physics, National Academy of Sciences*  
*of Belarus, Minsk, Belarus*  
OPTICAL REMOTE SENSING OF THE ATMOSPHERE AND  
THE EARTH SURFACE IN ANTARCTICA

18.00–18.30 **Denis L. Yanovich**  
*Company «KAMPILAB», Minsk, Belarus*  
SOLUTIONS ‘AGILENT TECHNOLOGIES’ FOR ECOLOGY  
CONTROL AND ENVIRONMENTAL RESEARCH

18.30–18.45 **Alexey A. Gaidashov**  
*Republican Center for Polar Research, Minsk, Belarus*  
PRESENTATION OF THE FILM «MODUL»

19.30 **Dinner**

**SEPTEMBER 18, 2018 TUESDAY**

**09.00–13.30 Oral lectures (up to 15 min)**

**Conference Hall of the Training center «Forum»**

**Chairman – M.P. Andreev, secretary – D.A. Lukashanets**

**I. Study of Antarctic biota; modern methods and approaches**

09.00–09.20 **Dmitry A. Lukashanets**

*Scientific and Practical Center for Biological resources, National Academy of Sciences of Belarus, Minsk, Belarus*

TOTAL BIODIVERSITY ASSESSMENT IN THE AREA OF THE BELARUSIAN ANTARCTIC EXPEDITION (THALA HILLS OASIS, ENDERBY LAND, EAST ANTARCTICA)

09.20–09.40 **Hans-Ulrich Peter**

*Friedrich Schiller University, Jena, Germany*

USE OF SATELLITES, DRONES AND LOGGERS FOR ANTARCTIC BIRD RESEARCH

09.40–10.00 **Mikhail P. Andreev**

*V.L. Komarov Botanical Institute, Russian Academy of Sciences, St. Petersburg, Russia*

EXPERIENCE OF THE LICHEN VEGETATION STUDIES IN ORNITHOGENIC ECOSYSTEMS OF THE FILDES PENINSULA IN MARITIME ANTARCTIC (KING GEORGE ISLAND, THE SOUTH SHETLAND ISLANDS)

10.00–10.20 **Mehmet Gökhan Halici**

*Erciyes University, Faculty of Science, Department of Biology, Kayseri, Turkey*

MOLECULAR TECHNIQUES USED FOR IDENTIFICATION OF LICHENS IN JAMES ROSS ISLAND (MARITIME ANTARCTICA)

- 10.20–10.40 **Alexey V. Neelov, Igor S. Smirnov**  
*Zoological Institute, Russian Academy of Science, St. Petersburg, Russia*  
TRACES OF THE LAST GLACIATION OF THE  
ANTARCTICA SHOWN IN FEATURES OF VERTICAL  
DISTRIBUTION OF BRITTLE STARS
- 10.40–11.00 **Alexander Yu. Ryss**  
*Zoological Institute, Russian Academy of Science, St. Petersburg, Russia*  
NEMATODE BIOTA OF THE ORNITHOGENIC SOIL  
PROFILES OF THE PENGUINS' NESTING PLACES IN  
FILDES PENINSULA, KING GEORGE ISLAND (WEST  
ANTARCTICA)
- 11.00–11.10 **Alexey A. Gaidashov**  
*Republican Center for Polar Research, Minsk, Belarus*  
PRESENTATION OF THE FILM "GNOM"
- 11.10–11.30 **Coffee break**
- 11.30–11.50 **Viacheslav A. Krylenkov**  
*Saint Petersburg State University, St. Petersburg, Russia*  
MICROBIOTA OF THE EARTH CRYOSPHERE
- 11.50–12.10 **Artemiy Ye. Goncharov**  
*I.I. Mechnikov North-Western State Medical University, St. Petersburg, Russia*  
*Institute of experimental medicine, St. Petersburg, Russia*  
*Saint Petersburg State University, St. Petersburg, Russia*  
PATHOGENIC POTENTIAL OF BACTERIA IN POLAR  
REGIONS: APPROACHES TO DECODING AND  
ESTIMATION
- 12.10–12.30 **Vladimir Yu. Khoroshilov**  
*I.I. Mechnikov North-Western State Medical University, St. Petersburg, Russia*  
MICROBIOLOGICAL MONITORING OF NATURAL AND  
ANTHROPOGENOUSLY MODIFIED ENVIRONMENT OF  
ANTARCTIC: PROBLEMS AND PROSPECTS

12.30–12.50 **Margarita V. Smirnova**  
*Norwegian University of Life Sciences, Ås, Norway*  
*Belarusian State University, Minsk, Belarus*  
CHARACTERIZATION AND IDENTIFICATION OF  
BACTERIA ISOLATED FROM "GREEN SNOW" OF  
COASTAL AREA OF EASTERN PART OF ANTARCTICA

12.50–13.10 **Andrey M. Trigubovich**  
*Institute of Microbiology, National Academy of Sciences of  
Belarus, Minsk, Belarus*  
CHARACTERISTICS OF BACTERIA ALLOCATED IN  
EASTERN ANTARCTIC, FROM MATERIALS OF  
ANTHROPOGENIC ORIGIN

13.10–13.30 **Andrey Yu. Burdo**  
*Saint Petersburg State University, St. Petersburg, Russia*  
ALGAE OF TERRESTRIAL BIOTOPES IN THE  
SURROUNDINGS OF THE RUSSIAN ANTARCTIC  
SCIENTIFIC STATION BELLINGSHAUSEN, KING GEORGE  
ISLAND

13.30–15.00 **Lunch**

**15.00–18.30 Oral lectures (up to 15 min)**  
**Conference Hall of the Training center «Forum»**  
**Chairman – V.G. Levashkevich, secretary – V.Ye. Miamin**

## **II. Studies of Antarctic nature environment. Soils of Antarctica**

15.00–15.20 **Sergey V. Kakareka**  
*Institute for Nature Management, National Academy of Sciences  
of Belarus, Minsk, Belarus*  
APPLICATION OF DISPERSION MODELING FOR  
ATMOSPHERIC DEPOSITIONS ASSESSMENT IN THE  
ANTARCTIC



- 15.20–15.40 **Sergey V. Klok**  
*Ukrainian Hydrometeorology Institute, Kiev, Ukraine*  
SOME CHARACTERISTICS, VARIABILITY AND  
STRATIGRAPHY OF THE SNOW LAYER IN THE AREA OF  
THE UKRAINIAN ANTARCTIC STATION "ACADEMICIAN  
VERNADSKY" (THE ANTARCTIC PENINSULA)
- 15.40–16.00 **Andrey V. Dolgikh**  
*Institute of Geography, Russian Academy of Sciences, Moscow,  
Russia*  
SOILS AND LANDSCAPES OF THE BUNGER HILLS, EAST  
ANTARCTICA
- 16.00–16.20 **Ilya G. Shorkunov**  
*Institute of Geography, Russian Academy of Sciences, Moscow,  
Russia*  
POLYNCHRONOUS WEATHERING OF MASSIVE  
CRYSTALLINE ROCKS IN THE OASES OF EAST  
ANTARCTICA
- 16.20–16.40 **Andrey I. Ivashchenko**  
*M.V. Lomonosov Moscow State University, Moscow, Russia*  
*Arctic and Antarctic Research Institute, St. Petersburg, Russia*  
THE SPECIFICS OF CARBON EMISSIONS IN THE  
TERRESTRIAL ECOSYSTEMS OF THE SCHIRMACHER  
OASIS IN SUMMER SEASON 2017–2018

16.40–17.00 **Coffee break**

### **III. Legal aspects of activities in the Antarctic Treaty System. Promoting the international scientific cooperation in the Antarctic**

- 17.00–17.20 **Mikhail S. Vladimirov**  
*Arctic and Antarctic Research Institute, St. Petersburg, Russia*  
EXPERIENCE OF THE SAINT PETERSBURG STATE  
UNIVERSITY IN THE PREPARATION OF THE ARCTIC AND  
ANTARCTIC INTERNATIONAL EDUCATIONAL  
PROGRAMS, PREPARATION AND REALISATION

- 17.20–17.50 **Nikita M. Kuprikov**  
*Scientific and Information Center “Polar Initiative”, Moscow, Russia*  
*Arctic and Antarctic Research Institute, St. Petersburg, Russia*  
MAIN ASPECTS OF TECHNICAL REGULATION AND STANDARDIZATION IN THE SPHERE OF POLAR ACTIVITY
- 17.50–18.10 **Sergey N. Baykov**  
*Republican Center for Polar Research, Minsk, Belarus*  
CERTAIN ISSUES BY AGREEMENT OF THE CONSULTATIVE PARTY STATUS ANTARCTIC TREATY
- 18.10–18.30 **Nikolay N. Kukharev**  
*Kerch branch of the Azov Scientific Research Institute of Fisheries, Kerch*  
ON CHANGES IN NATURE PROTECTION ACTIVITIES OF CCAMLR

**Poster session**

**Posters are demonstrated from 09.00, September 18**

**Yevgeniy V. Abakumov**

*Saint-Petersburg State University, St. Petersburg, Russia*

ORNITHOGENIC SOILS OF ANTARCTICA: DIVERSITY, FEATURES AND FUNCTIONING

**Olga D. Akulova**

*Belarusian State University, Minsk, Belarus*

PRIMARY ANALYSIS OF THE YELLOW AND ORANGE-RED PIGMENTS IN BACTERIA ISOLATED FROM TEMPORARY WATER RESERVOIRS ON THE TERRITORY OF THE EAST ANTARCTICA

**Ivan I. Alekseev**

*Saint Petersburg State University, St. Petersburg, Russia*

SOILS OF EASTERN AND WESTERN ANTARCTICA: MORPHOLOGY, CHEMISM AND ECOLOGICAL FUNCTIONS

**Anna Ye. Berezkina**

*National Antarctic Scientific Center of Ukraine, Kiev, Ukraine*

CURRENT HUMAN IMPACT AND PROPOSED CONSERVATION  
MEASURES IN THE AREA OF THE UKRAINIAN ANTARCTIC STATION  
AKADEMIK VERNADSKY

**Alina S. Boronina**

*Saint Petersburg State University, St. Petersburg, Russia*

USING THE PHYSICAL MODELING FOR INTERPRETATION OF RADIO-  
ECHO AND GROUND-PENETRATING RADAR DATA

**Inessa A. Gontcharova**

*Belarusian Research Institute of Documentation and Archival Affairs, Minsk,  
Belarus*

FUNGAL COLONIZATION OF WOOD CONSTRUCTIONS IN EASTERN  
ANTARCTICA

**Olga L. Kandelinskaya**

*V.F. Kuprevich Institute of Experimental Botany, National Academy of Sciences  
of Belarus, Minsk, Belarus*

ECOLOGICAL FEATURES AND ENDOGENOUS LECTINE ACTIVITY OF  
SOME REPRESENTATIVES OF MARITIME AND CONTINENTAL  
ANTARCTIC LICHEN BIOTA

**Tamara I. Kukharchyk**

*Institute for Nature Management, National Academy of Sciences of Belarus,  
Minsk, Belarus*

MONITORING OF THE SOILS OF THE VECHERNY OASIS, ENDERBY  
LAND

**Alexander S. Terentyev**

*Kerch branch of the Azov Scientific Research Institute of Fisheries, Kerch*

THE RESULTS OF BIRD OBSERVATION IN THE ROSS AND AMUNDSEN  
SEAS IN THE SUMMER SEASON (DECEMBER 2013–JANUARY 2014)

## SEPTEMBER 19, 2018 WEDNESDAY

09.00–13.20 Oral lectures (up to 15 min)

Conference Hall of the Training center «Forum»

Chairman – A.V. Malinka, secretary – E.M. Setrakova

### IV. Climatic, meteorological and aerospace researches in Antarctica

09.00–09.20 **Viktor I. Melnik**

*Institute for Nature Management, National Academy of Sciences of Belarus, Minsk, Belarus*

MAIN RESULTS OF HYDROMETEOROLOGICAL  
OBSERVATIONS OF THE BELARUS ANTARCTIC STATION

09.20–09.40 **Boris V. Ivanov**

*Arctic and Antarctic Research Institute, St. Petersburg, Russia*

INVESTIGATIONS OF ALBEDO OF SNOW-GLACIOUS  
COVERES BY MEANS OF GROUND AND REMOTE  
MEASURES IN THE AREA OF STATIONS PROGRESS AND  
NOVOLAZAREVSKAYA

09.40–10.00 **Vladislav Ye. Timofeev**

*Ukrainian Hydrometeorological Institute, Kiev, Ukraine*

*National Antarctic Scientific Center of Ukraine, Kiev, Ukraine*

PECULIARITIES OF THE PRESENT-DAY REGIONAL  
CLIMATE OF THE ANTARCTIC PENINSULA

10.00–10.20 **Mikhail M. Korol**

*B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus*

INVESTIGATION OF THE SUBSTRATE SURFACE  
SPECTRAL ALBEDO IN THE AREA OF THE BELARUS  
ANTARCTIC EXPEDITION

10.20–10.40 **Vladimir P. Dik**

*B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus*

COMPARISON OF THE CURVES OF THE SNOW COVER  
SPECTRAL REFLECTION IN BELARUS AND EAST  
ANTARCTICA

10.40–11.00 **Natalya S. Metelskaya**  
*B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus*  
ESTIMATION OF AEROSOL VOLUME CONCENTRATION IN THE ATMOSPHERE AT VECHERNAYA HILL SITE OF THE AERONET RADIOMETRIC NETWORK

11.00–11.20 **Coffee break**

11.20–11.40 **Timofey V. Shlender**  
*National Ozone Monitoring Research and Education Center, Belarusian State University, Minsk, Belarus*  
ATMOSPHERIC CIRCULATION OVER ANTARCTICA IN THE PERIOD OF OZONE ANOMALY GROWTH

11.40–12.00 **Ilya I. Bruchkovskiy**  
*National Ozone Monitoring Research and Education Center, Belarusian State University, Minsk, Belarus*  
*A.N. Sevchenko Research Institute of Applied Physical Problems, Belarusian State University, Minsk, Belarus*  
RESULTS OF MEASUREMENTS OF THROPOSPHERIC AEROSOL BY MAX-DOAS METHOD IN THE COASTAL ZONE OF ANTARCTIC (EAST ANTARCTICA)

## V. Development of the instrumentation base for scientific research in Antarctica

12.00–12.20 **Anatoliy V. Zelenchuk**  
*LLC “Scientific-Technical Company LVPT (Light-Vacuum-Pulsing Therapy)”, Moscow, Russia*  
PROBES FOR THE STUDY OF THE THICK ICE SHEETS AND SUBGLACIAL ENVIRONMENT OF THE PLANETS OF THE SOLAR SYSTEM

## VI. Geological, geophysical, glaciological and paleogeographic researches in Antarctica

- 12.20–12.40 **Yadviga K. Yelovicheva**  
*Belarusian State University, Minsk, Belarus*  
ANTARCTIC AND ATLANTIC GEOCHRONOLOGICAL  
SCALES AS A EVIDENCE OF THE GLOBAL PLANETARY  
NATURAL EVENTS IN THE GLACIOPLEISTOCENE
- 12.40–13.00 **Alina S. Boronina**  
*Saint Petersburg State University, St. Petersburg, Russia*  
BREAKTHROUGHS OF GLACIAL AND INTERGLACIAL  
LAKES IN THE AREAS OF PROGRESS STATION AND  
MOLODEZHNAYA FIELD BASE (EAST ANTARCTICA)
- 13.00–13.20 **Pavel V. Shablyko**  
*Institute for Nature Management, National Academy of Sciences of  
Belarus, Minsk, Belarus*  
GEOPHYSICAL RESEARCH IN THE VECHERNYAYA  
MOUNTAIN AREA, EAST ANTARCTICA, ENDERBY LAND
- 13.20–15.00 **Lunch**
- 15.00 **Summarizing the results of the Conference**  
**Closing ceremony**