



The 3<sup>rd</sup> Pan-Eurasian Experiment (PEEX) Science Conference  
<https://www.atm.helsinki.fi/peex/index.php/3rd-sci-home>  
**AGENDA**

TUESDAY 19 September 2017	
10:00–12:00	<b>REGISTRATION</b>
12:00–12:15	<b>OPENING CEREMONY</b> , chair: Sergey Dobrolyubov & Sergey Chalov, Moscow State University, Russia <b>Welcoming words</b>
12:15–12:30	<b>Welcome word:</b> Victor A. Sadovnichy, rector of MSU
12:30–14:00	<b>INTRODUCTORY</b> Andrey A. Fursenko, Associate to President of Russian Federation Vladislav Ya. Panchenko, President of Russian Foundation for Basic Research Alexander V. Khlunov, Director General of Russian Science Foundation  <b>PANEL DISCUSSION</b> (moderator: Hanna Lappalainen, PEEX Secretary General, Finland) <b>Environment and sustainable development: key topics for Europe-Russia-China collaboration</b> Andrey A. Fursenko, Associate to President of Russian Federation Vladislav Ya. Panchenko, President of Russian Foundation for Basic Research Alexander V. Khlunov, Director General of Russian Science Foundation Attilio Gambardella, Policy Officer of Action and Earth Observations Unit, DG Research & Innovation of the European Commission, Belgium Paavo-Petri Ahonen, Senior Ministerial Adviser, Ministry of Education and Culture, Finland Guo Huadong, Chinese Academy of Sciences, China Nikolay S. Kasimov, Russian Geographical Society / MSU, Russia Markku Kulmala, University of Helsinki / PEEX, Finland Sergej Zilitinkewich, Finnish Meteorological Institute / PEEX, Finland  <b>AIMS OF THE CONFERENCE</b> , Markku Kulmala, University of Helsinki / PEEX, Finland
14:00–14:15	<b>SHORT BREAK</b>
14:15–14:45	<b>CONFERENCE OPENING KEYNOTE</b> , chair Markku Kulmala, University of Helsinki, Finland <ul style="list-style-type: none"> <li>Changing Climate and Biogeochemical Cycles of the North, Meinrat Andreae, Max Planck Institute for Chemistry, Germany</li> </ul>
14:45–15:30	<b>SESSION: System understanding, Biogeochemical cycles, feedbacks, Earth system modelling, and Climate models</b> , chairs Veli-Matti Kerminen, University of Helsinki, Finland & Lise-Lotte Sørensen, Aarhus University, Denmark <ul style="list-style-type: none"> <li><b>14:45</b> Atmosphere–land/hydrosphere interaction: turbulent fluxes in the surface layer, Sergej Zilitinkevich, Finnish Meteorological Institute, Finland</li> <li><b>15:00</b> Observations and modelling of lake–atmosphere interactions, Ivan Mammarella, University of Helsinki, Finland</li> <li><b>15:15</b> Quantifying the carbon-based positive feedback loop: aerosol-solar radiation photosynthesis, Ekaterina Ezhova, University of Helsinki, Finland</li> </ul>
15:30–15:40	<b>GROUP PHOTO</b>
15:40–16:00	<b>COFFEE BREAK</b>
16:00–16:30	<ul style="list-style-type: none"> <li><b>From urban meteorology, climate and environment research to integrated city services: concept and applications for the Northern Eurasian region</b>, Alexander Baklanov, WMO-GAW, Switzerland (INVITED TALK)</li> </ul>
16:30–19:00	<b>SESSION: Urban air quality &amp; meteorology</b> , chairs Sergej Zilitinkewich, University of Helsinki, Finland & Igor Ezau, Nansen Environmental and Remote Sensing Center, Norway <ul style="list-style-type: none"> <li><b>16:30</b> Enviro-HIRLAM downscaling to metropolitan areas for forecasting weather and atmospheric composition, Alexander Mahura, University of Helsinki, Finland</li> <li><b>16:45</b> First experiment on tropospheric NO<sub>2</sub> retrieval over urban areas with high spatial resolution basing on satellite measurements, Oleg Postlyakov, A.M. Obukhov Institute of Atmospheric Physics RAS, Russia</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>17:00</b> The climate of Moscow in the modern era, Alexander Kislov, Moscow State University, Russia</li> <li>• <b>17:15</b> Results of the MarcoPolo project: air quality forecasting in China, Ronald van der A, Royal Netherlands Meteorological Institute, the Netherlands</li> <li>• <b>17:30</b> The variability of meteorological fields and gas constituents near Moscow and Beijing caused by internal gravity waves in the atmosphere, Igor Chunchuzov, Obukhov Institute of Atmospheric Physics, Russia</li> <li>• <b>17:45</b> Towards a global climatology of the planetary boundary layer, Richard Davy, Nansen Environmental and Remote Sensing Center, Norway</li> </ul> <p><b>short break (15 min)</b></p> <p><b>SPECIAL SESSION chair Sergej Zilitinkewich, University of Helsinki, Finland</b></p> <ul style="list-style-type: none"> <li>• <b>18:15</b> On societal impact of research and universities, Arto Mustajoki, University of Helsinki, Finland (<b>INVITED TALK – PEEEX</b> in collaboration with IEAS and Sofia Earth Forum)</li> <li>• <b>18:30</b> Arctic Atlas, Nikolay Kasimov, Moscow State University, Russia</li> <li>• <b>18:45</b> Towards seamless modelling - Tribute to Alexander Baklanov 60, Alexander Mahura, University of Helsinki, Finland</li> </ul>
<b>19.00–21.00</b>	<p><b>WELCOMING RECEPTION &amp; POSTER SESSION</b></p> <p>Bus transfer departure from the conference hall at 21:15 (time to-be-confirmed)</p> <p><i>*) Note; posters will be available during the whole conference</i></p>
<b>WEDNESDAY 20 September 2017</b>	
<b>09:00–09:30</b>	<ul style="list-style-type: none"> <li>• <b>Intermagnet observations and directional drilling in the Northern Eurasian region, Alexey Gvishiani, Geophysical Center of the Russian Academy of Sciences, Russia (INVITED TALK)</b></li> </ul>
<b>09:30–10:30</b>	<p><b>PARALLEL SESSIONS</b></p> <ul style="list-style-type: none"> <li>○ <b>Natural hazards &amp; remote sensing</b></li> <li>○ <b>Meteorological aspects , heat islands of urban environments</b></li> </ul>
	<p><b>PARALLEL SESSION I: Natural hazards &amp; remote sensing, chairs Valery Bondur, AEROCOSMOS, Russia &amp; Jiahu Zhang, Institute of Remote Sensing and Digital Earth (RADI) CAS , China</b></p> <ul style="list-style-type: none"> <li>• <b>09:30</b> Reaction of island geosystems on the volcanic activity (on example of Kurile Islands), Kirill Ganzei, Pacific Institute of Geography FEB RAS, Russia</li> <li>• <b>09:45</b> Development and implementation of methods for ecological monitoring of bays and shores of the Barents Sea and the arctic region, scenario modelling of emergency situations during transportation of petroleum products and radioactive waste, and experimental technologies for these areas protection from contamination under the periglacial conditions (MEMO–PRO), Gennady Matishov, Murmansk Marine Biological Institute RAS, Russia</li> <li>• <b>10:00</b> Changes in greenhouse gas fluxes caused by fire in Siberian boreal forest, Kajar Köster, University of Helsinki, Finland</li> <li>• <b>10:15</b> Long-term country-wide monitoring of land cover and wildfires using Earth observations for climate change research in Russia, Sergey Bartalev, Space Research Institute (IKI) RAS, Russia</li> </ul>
	<p><b>PARALLEL SESSION II: Meteorological aspects, heat islands of urban environments, chairs Igor Ezau, Nansen Environmental and Remote Sensing Center, Norway &amp; Pavel Konstantinov, Moscow State University, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>09:30</b> Surface urban heat island in northern west Siberian cities, Igor Esau, Nansen Environmental and Remote Sensing Centre, Norway</li> <li>• <b>09:45</b> Arctic and sub-arctic urban heat island depends on the surrounding temperature, Victoria Miles, Nansen Environmental and Remote Sensing Centre, Norway</li> <li>• <b>10:00</b> Anthropogenic and natural factors of intensive urban heat island in the Arctic, Mikhail Varentsov, Moscow State University, Russia</li> <li>• <b>10:15</b> Urban “heat island” and urban “dry island” in Moscow city, Mikhail Lokoshchenko, Moscow State University, Russia</li> <li>• <b>10:30</b> Heat wave events in Russian big cities in 1966–2015 and inhabitants’ thermal comfort, Pavel Konstantinov, Moscow State University, Russia</li> </ul>
<b>10:30–11:00</b>	<b>COFFEE BREAK (30 min)</b>
<b>11:00–12:00</b>	<p><b>PARALLEL SESSIONS:</b></p> <ul style="list-style-type: none"> <li>○ <b>Environment Change &amp; Health</b></li> </ul>



	<ul style="list-style-type: none"> <li>○ Arctic Aerosols, a session organized by PEEEX in collaboration with IASOA, WMO–GAW</li> <li>○ DBAR, PEEEX and BRICS Program Cooperation Meeting (Close Door Meeting)</li> </ul>
	<p><b>PARALLEL SESSION I: Environment Change &amp; Health, Svetlana Malkhazova, Moscow State University, Russia &amp; Irina Bashmakova, University of Helsinki, Finland</b></p> <ul style="list-style-type: none"> <li>● <b>11:00</b> Assessment of climatic factor influence on foci activity of naturally determined diseases in the context of regional and global environmental changes, Svetlana Malkhazova, Moscow State University, Russia (<b>INVITED TALK</b>, 30 min)</li> <li>● <b>11:30</b> Assessment of the impact of environmental factors on the population health in the central region of Russia, Tatiana Trifonova, Vladimir State University, Russia</li> <li>● <b>11:45</b> Assessment of bioclimatic conditions for living in urban areas, Natalia Shartova, Lomonosov Moscow State University, Russia</li> </ul>
	<p><b>PARALLEL SESSION II: Arctic Aerosols, a session organized by PEEEX in Collaboration with IASOA, WMO–GAW, chairs Olga Popovicheva, Moscow State University, Russia &amp; Alexander Baklanov, WMO, Switzerland</b></p> <ul style="list-style-type: none"> <li>● <b>11:00</b> Results of surface heat balance, aerosol, and soil active layer observations at HMO Tiksi and research station «ICE BASE «CAPE BARANOVA», Alexander Makshtas, Arctic and Antarctic Research Institute, Russia</li> <li>● <b>11:15</b> On the recent increase of atmospheric methane concentrations as observed at three arctic stations: Tiksi, Pallas and Ice Base Cape Baranova, Tuomas Laurila, Finnish Meteorological Institute, Finland</li> <li>● <b>11:30</b> Black carbon in the Russian Arctic. Using a dispersion model to track the origin of black carbon in snow and atmosphere, Nikolaos Evangeliou, Norwegian Institute for Air Research, Norway</li> <li>● <b>11:45</b> The complexity of the origin of high Arctic aerosols observed at Villum Research Station, Andreas Massling, Århus University, Denmark</li> </ul>
<b>12:00–13:00</b>	<b>LUNCH (PEEX Steering Group lunch meeting)</b>
<b>13:00–13:30</b>	<ul style="list-style-type: none"> <li>● <b>DBAR: An international science program for regional sustainable development, Huadong Guo, Institute of Remote Sensing and Digital Earth (RADI) CAS, China (INVITED TALK)</b></li> </ul>
<b>13:30–14:30</b>	<p><b>SESSION: Digital Belt and Road Initiative (DBAR), chairs Yubao Qiu, Institute of Remote Sensing and Digital Earth (RADI) CAS, China and Jiahua Zhang, Institute of Remote Sensing and Digital Earth (RADI), CAS, China</b></p> <ul style="list-style-type: none"> <li>● <b>13:30</b> DBAR-AGRI: Shared agronomic information community based on CropWatch-Cloud, Igor Savin, People's Friendship University of Moscow, Russia</li> <li>● <b>13:50</b> Observations and Scientific Understanding to High Mountain and Cold Regions (HiMAC): A Digital Belt and Road Program's Perspective, Yubao Qiu, RADI CAS, China</li> <li>● <b>14:20</b> Spatial distribution characteristics of world heritage sites in China a geographical perspective, Lei Luo, RADI CAS, China</li> </ul> <p>Discussion</p>
<b>14:30–15:00</b>	<b>COFFEE BREAK (30 min)</b>
<b>15:00–17:00</b>	<p><b>PARALLEL SESSIONS on "TOWARDS PEEEX IMPLEMENTATION" by PEEEX WORKING GROUPS</b></p> <ul style="list-style-type: none"> <li>○ I PEEEX In situ observations: atmospheric–land system</li> <li>○ II PEEEX In situ observations: water systems</li> <li>○ III PEEEX Remote sensing</li> <li>○ IV PEEEX Modelling Platform</li> <li>○ V PEEEX Education</li> <li>○ VI PEEEX Environmental change &amp; epidemics</li> </ul> <p><b>PARALLEL SESSION I: PEEEX In situ observations: atmospheric &amp; land systems, chairs Tuukka Petäjä, University of Helsinki, Finland &amp; Hanna Lappalainen, University of Helsinki, Finland</b></p> <ul style="list-style-type: none"> <li>● <b>15:00</b> Integrated Arctic Observation System - INTAROS, Stein Sandven, Nansen Environmental and Remote Sensing Center, Norway (<b>INVITED TALK</b>)</li> <li>● <b>15:15</b> Integrated carbon observation system (ICOS), Lise-Lotte Sørensen, Aarhus University, Denmark</li> </ul>

- **15:30** A concept for integrated, multidisciplinary measurements on ecosystems–atmosphere feedbacks, Jaana Bäck, University of Helsinki, Finland
- **15:45** Aerosol–cloud interactions in liquid clouds observed during BAEEC CAMPAIGN, Ksenia Tabakova, University of Helsinki, Finland
- **16:00** Heterogeneity in the flux footprint at SMEAR Estonia, Steffen Noe, Estonian University of Life Sciences, Estonia
- **16:15** Particle sources at a High Arctic location Villum Research Station, Station Nord in North Greenland, Henrik Skov, Aarhus University, Denmark
- **16:30** Changes in meteorology, surface turbulent energy fluxes, radiation fluxes, cloud forcing, greenhouse gases and aerosols during a summer to winter transition at an IASOA observatory, Taneil Uttal, National Oceanic and Atmospheric Administration, USA
- **16:45** Aerosol emission in the arid zones of southern Russia, Natalia Vazaeva, Institute of Atmospheric Physics RAS, Russia

**PARALLEL SESSION II: PEEEX In situ observations & water systems, chairs Petteri Uotila, Finnish Meteorological Institute, Finland & Yuliya Troitskaya, Institute of Applied Physics RAS, Russia**

- **15:00** Towards the arctic ocean component of PEEEX, Petteri Uotila, Finnish Meteorological Institute, Finland
- **15:10** Seasonal variability of tides in the Arctic seas of Russia, Mikhail Kulikov, Moscow State University, Russia
- **15:20** Investigation of CO<sub>2</sub> fluxes in the ocean - atmosphere boundary layer, Daniil Sergeev, Institute of Applied Physics RAS, Russia
- **15:30** Ice cover determination of the Volga and the Don river reservoirs on the base of JASON–2 satellite observation, Yuliya Troitskaya, Institute of Applied Physics, Russia
- **15:40** Revisiting the Southern Ocean hypothesis with an eddy-permitting ocean model, Roman Nuterman, University of Copenhagen, Denmark
- **15:50** The integrated study of the current state of the hydrological regime and water ecosystems of Russian largest (great) lakes, Nikolai Filatov, Northern Water Problems Institute KRC RAS, Russia
- **16:00** Baikal Selenga Network (BaSeNet) – towards understanding of atmosphere-landscape–river interactions in large drainage basin, Sergey Chalov, Moscow State University, Russia
- **16:10** Methane emission from western Siberia tundra lakes in 2016 year, Vladimir Kazantsev, Institute of Atmospheric Physics RAS, Russia (*ref. Young Scientist Competition*)
- **16:20** High-resolution modelling of the Arctic Ocean and its marginal seas, Roman Nuterman, University of Copenhagen, Denmark
- **16:30** *Discussion & drafting short report for the PEEEX Program*

**PARALLEL SESSION III: PEEEX Remote sensing, chairs Gerrit de Leeuw, Finnish Meteorological institute, Finland & Valery Bondur, AEROCOSMOS, Russia**

- **15:00** Satellite monitoring of trace gas and aerosol emissions caused by natural and anthropogenic factors, Valery Bondur, Aerocosmos, Russia (**INVITED TALK**)
- **15:15** Satellite remote sensing of atmospheric constituents over the PEEEX area, Gerrit de Leeuw, Finnish meteorological Institute, Finland (**INVITED TALK**)
- **15:30** Satellite-based estimate of warm cloud properties variability associated with aerosol and meteorological conditions, Jiahua Zhang, RAD, China
- **15:45** 13 years of air quality observations at high latitudes from the ozone monitoring instrument, Anu-Maija Sundström, Finnish Meteorological Institute, Finland
- **16:00** Inorganic carbon production by coccolithophores: a space borne study, Dmitry Pozdnyakov, Nansen International Environmental and Remote Sensing Centre, Russia
- **16:15** Evaluation of AVHRR aerosol properties over Pan-Eurasian region from NASA/DEEPBL, Yong Xue, University of Derby, UK
- **16:30** Seasonal variation and time series of aerosol optical depth over different parts of China from space using (A)ATSR (1995–2012) and MODIS (2000–2015), Larisa Sogacheva, Finnish Meteorological institute, Finland
- **16:45** Evaluating CO<sub>2</sub> satellite retrievals at northern latitudes, Hannakaisa Lindqvist, Finnish Meteorological Institute, Finland (*ref. Young Scientist Competition*)

**PARALLEL SESSION IV: PEEEX Modelling Platform, chairs Alexander Baklanov, World Meteorological Organization, Switzerland & Alexander Mahura, University of Helsinki, Finland**

- **15:00** PEEEX-Modelling-Platform for seamless multi-dimensional environmental prediction, Alexander Baklanov, World Meteorological Organization, Switzerland
- **15:10** Research vs. operational applications of Enviro-HIRLAM: regional and sub-regional scale modelling for PEEEX, Alexander Mahura, University of Helsinki, Finland
- **15:20** The role of different aerosol climatologies in uncertainties of shortwave radiation computations by NWP COSMO model and their temperature effects, Aleksei Poliukhov, Moscow State University, Russia
- **15:30** Experience with high resolution meteorological information for end users –opportunities, needs and challenges, Tobias Wolf–Grosse, Nansen Environmental and Remote Sensing Center, Norway
- **15:40** From socio-economic data to pollutant and greenhouse gas emissions and concentrations, Pauli Paasonen, University of Helsinki, Finland
- **15:50** The global SL-AV atmosphere model: application to seamless prediction, Mikhail Tolstykh, Institute of Numerical Mathematics RAS & HydroMetCentre, Russia
- **16:00** PEEEX modelling platform: numerical algorithms for global and regional environmental inverse modelling problems, Alexey Penenko, Institute of Computational Mathematics and Mathematic Geophysics SB RAS, Russia
- **16:10** Regional scale online integrated modelling in North-West Russia: case studies on impact evaluation, Georgy Nerobelov, Russian State Hydrometeorological University (RSHU), Russia (*ref. Young Scientist Competition*)
- **16:20** *Discussion & drafting short report for the PEEEX Program*

**PARALLEL SESSION V: PEEEX Education, chairs Antti Lauri, University of Helsinki, Finland & Irina Fedorova, St. Petersburg State University, Russia**

- **15:00** PEEEX educational component: a contribution from tempus and ERASMUS+ projects coordinated by University of Helsinki, Svyatoslav Tyuryakov, University of Helsinki, Finland
- **15:15** Environmental education in changing world and climate, Sergey Dobrolyubov, Moscow State University, Russia
- **15:30** Small-scale research projects as part of science-education: young scientist summer schools experience and plans, Alexander Mahura, University of Helsinki, Finland
- **15:45** Educational function of Institute of Earth Sciences (St. Petersburg State University) on Polar science, Irina Fedorova, St. Petersburg State University, Russia
- **16:00** Pedagogical aspects and provision of transferable skills on short multidisciplinary research–intensive courses, Antti Lauri, University of Helsinki, Finland
- **16:15** *Discussion & drafting short report for the PEEEX Program*

**PARALLEL SESSION VI: PEEEX Environmental change & epidemics, early warning, chairs Svetlana Malkhazova, Moscow State University, Russia & Irina Bashmakova, University of Helsinki, Finland**

- **15:00** Influence of climate on tularemia distribution in Russia, Dmitry Orlov, Moscow State University, Russia
- **15:15** The possibility of vivax malaria transmission under the global climatic changes in European Russia, Varvara Mironova, Moscow State University, Russia
- **15:30** The assessment of comfort level of weather-climatic conditions in the Volga federal district, Yurii Perevedentsev, Kazan Federal University, Russia
- **15:40** Terms of beginning of some pollen allergy plants spring flowering, Mikhail Soldatov, Moscow State University, Russia
- **15:50** Environment and health of the Russian Far East population, Svetlana Lozovskaya, Pacific Institute of Geography FEB RAS, Russia
- **16:00** Microbiota of ground layers in natural and industrial zones of the Kola Arctic, Maria Korneykova, Institute of the Industrial Ecology Problems of the North of Kola SC of RAS, Russia
- **16:10** Possible changes of the medical-geographic situation on natural-territory infections in the European territory of Russia in connection with global climate change, Polina Pestina, All-Russian Research Institute for Environmental Protection, Russia
- **16:20** *Discussion & drafting short report for the PEEEX Program*



<p><b>17:30–19:00</b></p>	<p><b>7<sup>th</sup> PEEEX MEETING</b> – open for all the conference participants to join in  <b>17:30–18:30 Short reports &amp; recommendations based on “PEEX IMPLEMENTATION SESSIONS” (10 min per topic/Working Group)</b></p> <ul style="list-style-type: none"> <li>• PEEEX In situ observations</li> <li>• PEEEX In situ Arctic Ocean &amp; water systems</li> <li>• PEEEX Remote sensing</li> <li>• PEEEX Modelling platform</li> <li>• PEEEX Education</li> <li>• PEEEX Environmental change &amp; health</li> </ul> <p><b>18:30–19:00 Discussion</b></p> <ul style="list-style-type: none"> <li>• education of PhD students, Post Docs</li> <li>• establishing new PEEEX offices</li> </ul>
<p><b>19:30–22:00</b></p>	<p style="text-align: center;"><b>DINNER</b></p>
<p><b>THURSDAY 21 September 2017</b></p>	
<p><b>09:00–09:30</b></p> <p><b>09:30–10:30</b></p>	<p><b>CONFERENCE KEYNOTE, chair Sergey Chalov, Moscow State University, Russia</b></p> <ul style="list-style-type: none"> <li>• Recent findings in greenhouse gas exchanges in Arctic terrestrial ecosystems, Mikhail Mastepanov, Lund University, Sweden and Aarhus University, Denmark</li> </ul> <p><b>PARALLEL SESSIONS:</b></p> <ul style="list-style-type: none"> <li>○ Permafrost thawing &amp; Arctic greening (Land system)</li> <li>○ Arctic Boreal atmospheric composition (Atmospheric system)</li> </ul> <p><b>PARALLEL SESSION I: Permafrost thawing &amp; Arctic greening, chairs Jaana Bäck, University of Helsinki, Finland and Marina Leibman, University of Tyumen, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>09:30</b> Conditions, dynamics and stability of the Eurasian permafrost, Ilmo Kukkonen, University of Helsinki, Finland</li> <li>• <b>09:45</b> Satellite based monitoring of seasonal soil freezing for climate research, Kimmo Rautiainen, Finnish Meteorological Institute, Finland</li> <li>• <b>10:00</b> Ground penetrating radar using for active layer monitoring in 2015–2016, Maria Sudakova, Earth Cryosphere Institute SB RAS, Russia</li> <li>• <b>10:15</b> Emission of greenhouse gases from natural and human–changed cold soils: results and prospects, Sergey Goryachkin, Institute of Geography RAS, Russia</li> </ul> <p><b>PARALLEL SESSION II: Arctic Boreal atmospheric composition, chairs Tuukka Petäjä, University of Helsinki, Finland &amp; Andrey Skorokhod, Institute of Atmospheric Physics RAS, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>09:30</b> A 10 year climatology of greenhouse gas measurements and aerosols at the Zotino tall tower observatory (Zotto) in central Siberia, Martin Heimann, Max Planck Institute for Biogeochemistry, Germany</li> <li>• <b>09:45</b> Isoprene and monoterpenes over Russia and their impact in tropospheric ozone formation, Andrey Skorokhod, Institute of Atmospheric Physics RAS, Russia</li> <li>• <b>10:00</b> CCN variability in Eastern Siberia, Risto Makkonen, University of Helsinki, Finland</li> <li>• <b>10:15</b> Regional GAW stations and background monitoring networks over the Russian federation territory as an infrastructure for research on atmospheric deposition in boreal and arctic regions of Eurasia, Sergey Gromov, Institute of Global Climate and Ecology (IGCE) Roshydromet and RAS, Russia</li> </ul>
<p><b>10:30–11:00</b></p>	<p style="text-align: center;"><b>COFFEE BREAK (30 min)</b></p>
<p><b>11:00–11:30</b></p> <p><b>11:30–13:00</b></p>	<p><b>CONFERENCE KEYNOTE, chair Alexander Baklanov, World Meteorological Organization, Switzerland</b></p> <ul style="list-style-type: none"> <li>• AARI complex studies of the Arctic environment, Alexander Makshtas on behalf of Ivan Frolov, AARI, Russia</li> </ul> <p><b>PARALLEL SESSIONS</b></p> <ul style="list-style-type: none"> <li>○ The Arctic Ocean, the Arctic maritime environments: Lakes, wetlands and large river systems</li> <li>○ Arctic–boreal land ecosystem &amp; inland waters</li> <li>○ Arctic atmospheric composition, PEEEX in collaboration with IASOA (continues)</li> </ul> <p><b>PARALLEL SESSION I: The Arctic Ocean, Arctic maritime environments, lakes, wetlands and large river systems, chairs Nikolay Filatov, Northern Water Problems Institute KRC RAS &amp; Sergey Dobrolyubov, Moscow State University, Russia</b></p>

	<ul style="list-style-type: none"> <li>• <b>11:30</b> Interannual variability of storm waves in the Baltic, Barents and White Seas, Sergey Dobrolyubov, Moscow State University, Russia (<b>INVITED TALK</b>)</li> <li>• <b>12:00</b> Trends in hydrological and ice conditions in the Large Marine Ecosystems of the Russian Arctic during periods of climate change, Gennady Matishov, Murmansk Marine Biological Institute, Russia</li> <li>• <b>12:15</b> Water acidification and critical loads: case study European Russia and Western Siberia, Tatiana Moiseenko, Moscow State University, Russia</li> <li>• <b>12:30</b> River inflow into the Arctic seas of Russia and its changes, Dmitry Magritsky, Moscow State University, Russia</li> <li>• <b>12:45</b> Long term probabilistic projections of extreme hydrological events in the Arctic, Elena Shevnina, Finnish Meteorological Institute, Finland</li> </ul>
	<p><b>PARALLEL SESSION II: Arctic–boreal land ecosystem &amp; inland waters, chairs Jaana Bäck, University of Helsinki, Finland &amp; Steffen Noe, Estonian University of Life Sciences, Estonia</b></p>
	<ul style="list-style-type: none"> <li>• <b>11:30</b> Linking stem growth respiration to the seasonal course of stem growth and GPP, Tommy Chan, University of Helsinki, Finland</li> <li>• <b>11:45</b> The annual and interannual variability of biogenic VOC emissions from boreal forest soil, Mari Mäki, University of Helsinki, Finland</li> <li>• <b>12:00</b> Belowground hydraulic conductance is driven by soil temperature in spring and autumn at SMEAR II station in Finland, Anna Lintunen, University of Helsinki, Finland</li> <li>• <b>12:15</b> Modelling of lake greenhouse gases in the ESM land surface scheme, Victor Stepanenko Moscow State University, Russia</li> <li>• <b>12:30</b> Comfort of bioclimatic conditions in the central federal district of Russia, Ekaterina Kulagina, Vladimir State University, Russia</li> <li>• <b>12:45</b> Carbonaceous aerosol and carbon monoxide in central Siberia: 5-year measurements, Eugene Mikhailov, Saint-Petersburg State University, Russia</li> </ul>
	<p><b>PARALLEL SESSION III: Arctic atmospheric composition , PEEEX in collaboration with IASOA, chairs Taneil Uttal, National Oceanic and Atmospheric Administration, USA &amp; Sara Pryor, Cornell University, USA</b></p>
	<ul style="list-style-type: none"> <li>• <b>11:30</b> Investigating the efficacy of black carbon emission reductions in slowing arctic warming, Harri Kokkola, Finnish Meteorological Institute, Finland</li> <li>• <b>11:45</b> Historical concentrations, sources, and estimated future climate impacts of black carbon in the Eurasian Arctic, Aki Virkkula, Finnish Meteorological Institute, Finland</li> <li>• <b>12:00</b> Direct connection of oceanic emissions to new particle formation in Ny-Ålesund, Svalbard, Olga Garmash, University of Helsinki, Finland</li> <li>• <b>12:15</b> Noctilucent clouds and stratospheric aerosol particle sizes from wide-field colorimetry and polarimetry of the twilight sky, Oleg Ugolnikov, Space Research Institute RAS, Russia</li> <li>• <b>12:30</b> Season-dependent and source-influenced aerosol in Northern Siberia, Russian Arctic, Olga Popovicheva, Moscow State University, Russia</li> <li>• <b>12:45</b> Ice nucleating particles in the marine boundary layer in the Canadian Arctic, Victoria Irish, University of British Columbia, Canada</li> </ul>
<p><b>13:00–14:00</b></p>	<p><b>LUNCH</b></p>
<p><b>14:00–15:00</b></p>	<p><b>PARALLEL SESSIONS</b></p> <ul style="list-style-type: none"> <li>○ <b>Arctic boreal environments &amp; meteorology &amp; weather</b></li> <li>○ <b>Long term trends in arctic boreal system</b></li> </ul>
	<p><b>PARALLEL SESSION I: Arctic boreal environments &amp; meteorology &amp; weather, chair Harri Kokkola Finnish Meteorological Institute, Finland &amp; Irina Repina, Institute of Atmospheric Physics RAS, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>14:00</b> Lagged effects of Earth surface temperature anomalies on Northeast European weather, Natalia Gnatiuk, Nansen International Environmental and Remote Sensing Centre, Russia</li> <li>• <b>14:15</b> Classification of atmospheric circulation regimes in the North Atlantic and the subarctic zone of Europe and the methodology of seasonal weather prediction using a neuro-fuzzy model, Oleg Pokrovsky, Russian State Hydrometeorological University, Russia</li> <li>• <b>14:30</b> Abnormal wind waves in Arctic: evaluation of expectancy, Vladimir Kudryavtsev, Russian State Hydrometeorological University, Russia</li> <li>• <b>14:45</b> Numerical weather prediction in the Hydrometeorological Center of Russia: state and prospects, Roman Vilfand, Hydrometeorological centre of Russia, Russia</li> </ul>

	<p><b>PARALLEL SESSION II: Long term trends in the arctic boreal system, HC Hansson University of Stockholm &amp; Stein Sandven Nansen Environmental Remote Sensing Center</b></p> <ul style="list-style-type: none"> <li>• <b>14:00</b> Interannual changes and trends in biologically active UV irradiance over Northern Eurasia during 1979-2015: main drivers and consequences for human health, Natalia Chubarova, Moscow State University, Russia</li> <li>• <b>14:15</b> Semi-long term in-situ cloud measurements in sub-arctic Finland, Heikki Lihavainen, Finnish Meteorological Institute, Finland</li> <li>• <b>14:30</b> Results of long-term investigations of trace gases and characteristics of atmospheric aerosol in Southern Pribaikalye (East Siberia), Tamara Khodzher, Limnological Institute SB RAS, Russia</li> <li>• <b>14:45</b> Changes in trends of atmospheric composition over Eurasia, Vadim Rakitin, Institute of Atmospheric Physics RAS, Russia</li> </ul>
<b>15:00–15:30</b>	<b>COFFEE BREAK (30 min)</b>
<b>15:30–16:00</b>	<ul style="list-style-type: none"> <li>• <b>Arctic stability and resilience amidst world order change - geopolitical imagination or potential to reformulate world politics?</b> Lassi Heininen, University of Lapland, Finland (<b>INVITED TALK</b>)</li> </ul>
<b>16:00–17:00</b>	<p><b>SESSION: Arctic Futures – PEEEX in collaboration with IIASA, IEAS and Sofia Earth Forum, chairs Tuukka Petäjä, University of Helsinki, Finland and Natalia Chubarova, Moscow State University, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>16:00</b> The Environment in Russia’s’ Energy Diplomacy – The year of the environment 2017” in the Russian media, Veli-Pekka Tynkkynen, University of Helsinki, Finland</li> <li>• <b>16:15</b> Synthesis of main results from AMAP’s recent climate change assessments, Martin Forsius, Finnish Environment Institute, Finland (<b>INVITED TALK</b>)</li> <li>• <b>16:30</b> Simulation of recent climate changes in Arctic and Northern Eurasia by climate model INMCM50, Evgeny Volodin, Inst. of Numerical Mathematics RAS, Russia</li> <li>• <b>16:45</b> Future reductions of anthropogenic aerosol emissions in the mid latitudes affect the Arctic climate, Hans–Christen Hansson, University of Stockholm, Sweden</li> </ul>
<b>17:00–18:00</b>	<p><b>CONFERENCE CLOSING REMARKS, chair Nikolay Kasimov, Moscow State University, Russia &amp; Sergey Dobrolyubov, Moscow State University, Russia</b></p> <ul style="list-style-type: none"> <li>• <b>17:00</b> Grand Challenges and the Northern Eurasian environments, Markku Kulmala, University of Helsinki, Finland (<b>INVITED TALK</b>)</li> <li>• <b>17:15</b> Pan-Eurasian experiment (PEEX) Program - overview and future prospects, Hanna Lappalainen, University of Helsinki, Finland</li> <li>• <b>17:30</b> Final remarks</li> <li>• <b>17:35</b> Closing ceremony</li> </ul>
<b>FRIDAY 22 September 2017</b>	
<b>9:00–11:00</b>	<b>International Eurasian Academy of Sciences (IEAS) Meeting (Close Door Meeting)</b>
<b>13:00–16:00</b>	<b>ZOTTO Meeting (Close Door Meeting)</b>

<p><b>09:00–15:00</b></p>	<p><b>Systems Analysis for the Arctic IIASA-AFI Workshop, chairs Anni Reissell, IIASA and Lassi Heininen, University of Lapland</b></p>
	<ul style="list-style-type: none"> <li>• <b>09:00</b> Welcome and aims of workshop, Alexander Shestakov, WWF Global Arctic Program, and Lassi Heininen, University of Lapland and IIASA</li> <li>• <b>09:30</b> Systems Analysis for the Arctic: The Arctic Futures Initiative, Anni Reissell, IIASA and the University of Helsinki</li> <li>• <b>09:45</b> Participatory methods for inclusive approach, Nadejda Komendatova-Amann, Risk and Resilience Program, IIASA</li> </ul> <p><b>Invited input (presentations) to AFI:</b></p> <ul style="list-style-type: none"> <li>• Timur Makhmutov, Russian International Affairs Council (RIAC)</li> <li>• Sergey A. Sokratov, Faculty of Geography, Lomonosov Moscow State University</li> <li>• Fuad Aleskerov, Faculty of Economic Sciences, Higher School of Economics, National Research University</li> <li>• Tatiana E. Khromova, Institute of Geography, Russian Academy of Sciences</li> <li>• Alena Rybkina, Sector of Innovation Projects, Geophysical Center, Russian Academy of Sciences</li> <li>• Alexander Pelyasov, Council for Research for Productive Forces, Russian Academy of Sciences, and Ministry for Economy and Trade (SOPS) (tbc)</li> <li>• Alexander Sokolov, Insitute for Statistical Studies and Economics of Knowledge, Higher School of Economics, National Research University (tbc)</li> <li>• Nikolay Korgin, Institute of Control Sciences (tbc)</li> <li>• Vasily Bogoyavlensky, Oil and Gas Research Institute, Russian Academy of Sciences (tbc)</li> <li>• Svetlana Malkhazova, Department of Biogeography, Lomonosov Moscow State University, Higher School of Economics, National Research University (tbc)</li> <li>• Business representatives (tbc)</li> </ul> <p><b>12:00-12:30</b> Lunch</p> <ul style="list-style-type: none"> <li>• <b>12:30</b> How to share disputable zones in Arctic region, Fuad Aleskerov, Faculty of Economic Sciences, Higher School of Economics</li> <li>• <b>12:45</b> Discussion</li> </ul> <p><b>15:00</b></p>