



UNIVERSITY OF HELSINKI



United Nations
Educational, Scientific and
Cultural Organization



International Centre on Space Technologies for
Natural and Cultural Heritage
under the auspices of UNESCO



FINNISH METEOROLOGICAL
INSTITUTE



NordForsk



Pan-Eurasian Experiment

PEEX

The 2nd Pan-Eurasian Experiment (PEEX) Science Conference

The Conference is part of the series of CRAICC-PEEX Workshops funded by Nordforsk and continuation of the series of PEEX meetings being the 6th PEEX Meeting

Agenda

TUESDAY 17 May, 2016

14:00-18:00

REGISTRATION

WEDNESDAY 18 May, 2016

8:00-9:00

REGISTRATION

9:00-10:00

OPENING CEREMONY

Chair: Ms. Jie Liu, RADI, China

9:00-9:10

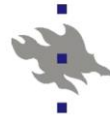
Welcoming Remarks given by Prof. Huadong Guo, RADI, China

9:10-9:20

Remarks given by Dr. William Paton, IRDR, Canada

9:20-9:30

Remarks given by Prof. Sergej Zilitinkevich; Finnish Met. Inst, Finland



UNIVERSITY OF HELSINKI



9:30-9:40	Remarks given by Prof. Valery G. Bondur, AEROCOSMOS, Russia
9:40-10:00	Aims of the Conference given by Prof. Markku Kulmala, Univ. Helsinki, Finland
10:00-10:30	GROUP PHOTO & COFFEE BREAK
10:30-12:00	<p>PLENARY SESSION (plenary 30 min, 20 mins presentation)</p> <p>Co-Chair: Prof. Tuukka Petäjä, Univ. Helsinki, Finland & Prof. Jiahua Zhang, RADI, China</p>
10:30-11:00	<ul style="list-style-type: none"> Air quality - climate interactions and feedbacks, Prof. Markku Kulmala, Univ. Helsinki, Finland (PLENARY)
11:00-11:20	<ul style="list-style-type: none"> Seamless coupled meteorology-composition modeling: historical overview and future research needs, Prof. Alexander Baklanov, WMO, Switzerland
11:20-11:40	<ul style="list-style-type: none"> Towards further understanding of the impact of land use and cover change on regional climate in Monsoon Asia, Prof. Congbin Fu, Univ. Nanjing, China
11:40-12:00	<ul style="list-style-type: none"> Eurasian great lakes: diagnosis and prediction of the water level fluctuations under climate changes and anthropogenic impacts, Prof. Nikolay Filatov, Northern Water Problems Inst., Russia
12:00-13:30	LUNCH
13:30- 15:00	<p>GLOBAL SCALE – FEEDBACKS – INTERACTIONS (15mins/talk)</p> <p>Co-Chair: Prof. Alexander Baklanov, WMO, Switzerland & Prof. Jiahua Zhang, RADI, China</p>
13:30-13:45	<ul style="list-style-type: none"> Cognitive chaos: turbulence and planetary boundary layers in Earth systems, Prof. Sergej Zilitinkevich, Finnish Met. Inst., Finland
13:45-14:00	<ul style="list-style-type: none"> Toward global picture of atmospheric new particle formation based on observations, Prof. Veli-Matti Kerminen, Univ. Helsinki, Finland
14:00-14:15	<ul style="list-style-type: none"> Feedback of aerosol pollution to atmospheric chemistry in Eastern China, Dr. Wei Nie, Univ. Nanjing, China
14:15-14:30	<ul style="list-style-type: none"> Environmental and climatic changes in the northern hemisphere and international ecological co-operation, Prof. Gennady



GEO GROUP ON EARTH OBSERVATIONS



UNIVERSITY OF HELSINKI



United Nations Educational, Scientific and Cultural Organization



International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO



FINNISH METEOROLOGICAL INSTITUTE



NordForsk



14:30-14:45	Matishov, Southern Scientific Center, Russia
14:45-15:00	<ul style="list-style-type: none"> Terrestrial ecosystem climate feedbacks in boreal and tropical forests, Prof. Jaana Bäck, Univ. Helsinki, Finland Biogenic Aerosols – Effects on Clouds and Climate (BAECC) study as an example for scientific integration, Prof. Tuukka Petäjä, Univ. Helsinki, Finland
15:00-15:30	COFFEE BREAK
15:30-17:30	FROM AIR QUALITY TO PERSONAL WEATHER (15mins/talk) Chair: Prof. Aijun Ding, Univ. Nanjing, China
15:30-15:45	<ul style="list-style-type: none"> The characteristics of vertical distribution and regional transport of PM2.5 within the lower troposphere during high pollution episode winter of 2015 in Shanghai, China based on tethered balloon, Dr. Qingyan Fu, Shanghai Environmental Monitoring Center, China
15:45-16:00	<ul style="list-style-type: none"> Monitoring and assessment of regional air quality in China using space observations (MARCO POLO), Prof. Ronald van der A, KNMI, the Netherlands
16:00-16:15	<ul style="list-style-type: none"> Impact of accurate description of land use type and vegetation on simulation of the East Asian monsoon precipitation, Dr. Weidong Guo, Univ. Nanjing, China
16:15-16:30	<ul style="list-style-type: none"> Potential impact of pollution on clouds and precipitation over China, Prof. Olaf Kruger, Univ. Helsinki, Finland
16:30-16:45	<ul style="list-style-type: none"> Remote sensing of aerosol optical, microphysical and chemical properties based on sun-sky radiometer measurements over polluted cities, Prof. Zhengqiang Li, RADI, China
16:45-17:00	SHORT BREAK
17:00-18:00	I - CRAICC-PEEX SPECIAL WS SESSION: TURBULENT EXCHANGE ACROSS STRONGLY HETEROGENEOUS INTERFACE (FRACTURED ICE, SUMMER TUNDRA, ARCTIC COASTAL & URBAN AREAS) (20 min Keynote, 15mins/talk) Co-Chair: Prof. Timo Vesala, Univ. Helsinki, Finland & Prof. Sergej Zilitinkevich, Finnish Met. Inst., Finland



UNIVERSITY OF HELSINKI



United Nations Educational, Scientific and Cultural Organization



International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO



FINNISH METEOROLOGICAL INSTITUTE



17:00-17:20	<ul style="list-style-type: none"> Effects of land surface heterogeneities on convective boundary layers. What did we learn from large-eddy simulation so far?, Prof. Siegfried Raasche, Inst. of Meteorology and Climatology, Germany (Keynote)
17:20-17:35	<ul style="list-style-type: none"> Numerical modelling of lake-atmosphere continuum in forested landscapes, Dr. Victor Stepanenko, Moscow State Univ., Russia
17:35-17:50	<ul style="list-style-type: none"> Long term effects of fire on northern greenhouse gas exchanges in Northern Forests, Dr. Frank Berninger, Univ. Helsinki, Finland
17:50-18:05	<ul style="list-style-type: none"> The effect of surface cover and climate conditions on the surface energy and water balance in cold climate cities, Dr. Leena Järvi, Univ. Helsinki, Finland
18:30	Welcome Dinner
THURSDAY 19 May, 2016	
9:00-10:00	<p>SPECIALL SESSION (20 mins presentations)</p> <p>Chair: Prof. Sergej Zilitinkevich, Finnish Met. Inst., Finland</p>
9:00-9:20	<ul style="list-style-type: none"> Satellite monitoring of trace gas and aerosol emissions into the atmosphere of Northern Eurasia, Prof. Valery G. Bondur, AEROCOSMOS, Russia
9:20-9:40	<ul style="list-style-type: none"> Spaceborne Earth observing technologies for environmental monitoring in the Belt and Road region, Prof. Huadong Guo, RADI, China
9:40-10:00	<ul style="list-style-type: none"> Geographic and geo-economic factors of long-term development of Pacific Russia, Prof. Petr Ya. Baklanov, Pacific Inst. of Geography, Russia
10:00-10:30	COFFEE BREAK
10:30-12:00	<p>BIG DATA & RESEARCH INFRAs & OBSERVATION NETWORKS (15mins/talk)</p> <p>Co-Chair: Prof. Gerrit De Leeuw, Finnish Met. Inst., Finland & Prof. Yong Xue, RADI, China</p>



GEO GROUP ON EARTH OBSERVATIONS



UNIVERSITY OF HELSINKI



United Nations Educational, Scientific and Cultural Organization



International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO



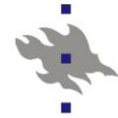
FINNISH METEOROLOGICAL INSTITUTE



NordForsk



10:30-10:45	<ul style="list-style-type: none"> High performance retrieval of FY3 global surface albedo, Prof. Yong Xue, RADI, China
10:45-11:00	<ul style="list-style-type: none"> Efficient remote sensing data storage and management based on parallel file system and NOSQL database, Prof. Jochen Garcke, Fraunhofer Institute for Algorithms and Scientific Computing SCAI, Germany
11:00-11:15	<ul style="list-style-type: none"> Integrated Carbon Observation System (ICOS) Research Infrastructure, Dr. Eija Juurola, ICOS-ERIC HQ, Finland
11:15-11:30	<ul style="list-style-type: none"> COOP+: Promoting the cooperation among international Research Infrastructures to address global environmental challenges, Dr. Ari Asmi, Univ. Helsinki, Finland
11:30-11:45	<ul style="list-style-type: none"> First year of research activities at Villum Research Station, Station Nord, North Greenland, Prof. Henrik Skov, Aarhus Univ., Denmark
11:45-12:00	<ul style="list-style-type: none"> Satellite remote sensing of aerosol and cloud properties over the PEEEX area, Prof. Gerrit De Leeuw, Finnish Met. Inst., Finland
12:00-13:30	LUNCH (PEEX Steering Group lunch meeting / Working Group lunch meetings)
13:30-15:00	<p>ARCTIC AND COLD REGIONS: OBSERVATIONS AND IMPACT OF CRYOSPHERE (15mins/talk)</p> <p>Chair: Dr. Bin Cheng, Finnish Met. Inst., Finland</p>
13:30-13:45	<ul style="list-style-type: none"> Summer ice transformation in the Eurasian arctic seas in the 20th and 21st centuries, Dr. Leonid Bobylev, NIERSC, Russia
13:45-14:00	<ul style="list-style-type: none"> Satellite-based snow cover and climatology analysis over Center Asia and Xinjiang province, China, Dr. Yubao Qiu, RADI, China
14:00-14:15	<ul style="list-style-type: none"> Observed and modeled snow and ice thickness in Chukchi Sea with CHINARE 2014 data, Dr. Bin Cheng, Finnish Met. Inst., Finland
14:15-14:30	<ul style="list-style-type: none"> Three epochs of data on glacier changes on the Tibetan Plateau derived from Landsat imagery, from the 1970s to 2013, Dr. Qinghua Ye, Inst. of Tibetan Plateau Research, China
14:30-14:45	
14:45-15:00	<ul style="list-style-type: none"> Spatio-temporal analysis of Greenland snowmelt using microwave radiometer data (1988-2014), Dr. Xingdong Wang, RADI, China



UNIVERSITY OF HELSINKI



United Nations
Educational, Scientific and
Cultural Organization



International Centre on Space Technologies for
Natural and Cultural Heritage
under the auspices of UNESCO



FINNISH METEOROLOGICAL
INSTITUTE



	<ul style="list-style-type: none"> On GEO-GEOSS, Cold Regions, Dr. Yubao Qiu, RADI
15:00-15:15	SHORT COFFEE BREAK
15:15-16:30	<p>I LAND ECOSYSTEM & ENVIRONMENT: OBSERVATION AND MODELING (15mins/talk)</p> <p>Co-Chair: Prof. Jaana Bäck, Univ. Helsinki, Finland & Prof. Li Zhang, RADI, China</p>
15:15-15:30	<ul style="list-style-type: none"> Dynamics of carbon, nitrogen and other climate relevant trace gases measured at SMEAR Estonia, Dr. Steffen Noe, Estonian Univ. of Life Sciences, Estonia
15:30-15:45	<ul style="list-style-type: none"> Ozone in the Western Yangtze river delta OF China: A synthesis study based on ground, aircraft and sounding measurement, 2011-2015, Prof. A.J. Ding, Nanjing Univ., China
15:45-16:00	<ul style="list-style-type: none"> Complicate observations and multi-parameter land information constructions on allied telemetry experiment (COMPLICATE), Prof. Xin Tian, Inst. of Forest Resource Information Techniques, China
16:00-16:15	<ul style="list-style-type: none"> The emissions of biogenic greenhouse gases from arctic and north boreal soils due to the different types of anthropogenic land use at local and regional scales: prospects and dynamics, Dr. Dmitry Karelin, Inst. of Geography, Russia
16:15-16:30	<ul style="list-style-type: none"> Simulation of forest carbon flux by model incorporation and assimilation, Dr. Min Yan, Inst. of Forest Resource Information Techniques, China
16:30-16:45	SHORT COFFEE BREAK
16:45-18:00	<p>II - CRAICC-PEEX SPECIALL WS SESSION: ESTIMATING AND MONITORING ANTHROPOGENIC EMISSIONS AND THEIR IMPACTS IN THE ARCTIC BY USING REMOTE SENSING (15mins/talk)</p> <p>Chair: Dr. Leonid Bobylev, NIERSC, Russia</p>
16:45-17:00	<ul style="list-style-type: none"> New continuous aerosol and greenhouse gas measurements in Russian arctic ice base cape Baranova -station, Dr. Tuomas Laurila,



UNIVERSITY OF HELSINKI



United Nations
Educational, Scientific and
Cultural Organization



International Centre on Space Technologies for
Natural and Cultural Heritage
under the auspices of UNESCO



FINNISH METEOROLOGICAL
INSTITUTE



17:00-17:15	Finnish Met. Inst., Finland <ul style="list-style-type: none"> Modelling black carbon: from international climate law to impact on Arctic climate, Dr. Thomas Kuehn, Univ. of Eastern Finland, Finland
17:15-17:45	<ul style="list-style-type: none"> Contribution of local emissions and the long range transport to the black carbon concentrations in the Eurasian Arctic in WRF-Chem model simulations, Dr. Carolina Cavazos-Guerra, Inst. for Advanced Sustainability Studies, Germany
17:45-18:00	<ul style="list-style-type: none"> Radiative forcing sensitivity to model bias in high latitude ozone profiles, Dr. Stephen Arnold, Univ. of Leeds; United Kingdom
18:00-20:00	POSTER SESSION Co-Chair: Prof. Markku Kulmala, Univ. Helsinki, Finland & Prof. Timo Vesala, Univ. Helsinki, Finland
19:00-20:00	"From Vertigo to Blue Velvet – Connotations between movies and climate change", Prof. Timo Vesala, Univ. Helsinki, Finland
FRIDAY 20 May, 2016	
9:00-10:00	PLENARY SESSION (30 mins presentations) Chair: Sergej Zilitinkevich, Finnish Met. Inst., Finland
9:00-9:30	<ul style="list-style-type: none"> Challenges for Stable Atmospheric Boundary Layers, Prof. Bert Holtslag, Wageningen Univ., the Netherlands (PLENARY)
9:30-10:00	<ul style="list-style-type: none"> Observation and simulation of polluted urban boundary layers in a changing climate, Prof. Robert Bornstein, San Jose State Univ., USA (PLENARY)
10:00-10:30	COFFEE BREAK
10:30-12:00	FROM SOCIETY TO KNOWLEDGE TRANSFER AND INTERNATIONAL COLLABORATION (15mins/talk) Co-Chair: Dr. Taina Ruuskanen, Univ. Helsinki, Finland & Joni Kujansuu, Univ. Helsinki, Finland
10:30-10:45	<ul style="list-style-type: none"> Russian climate policies and local reality, Prof. Veli-Pekka Tynkkynen, Univ. Helsinki, Finland
10:45-11:00	<ul style="list-style-type: none"> Adaptability indigenous arctic population by "urban heat island", Dr. Sergei Petrov, Tyumen Scientific Center, Russia



11:00-11:15	<ul style="list-style-type: none"> Variational modeling technology with data assimilation for environmental prediction and risk assessment, Dr. Alexey Penenko, Institute of Computational Mathematics and Mathematical Geophysics, Russia
11:15-11:30	<ul style="list-style-type: none"> Atmosphere-land-lake carbon cycle provides possibilities for economic studies, Dr. Jouni Heiskanen, Univ. Helsinki, Finland
11:30-11:45	<ul style="list-style-type: none"> Future Earth: co-designing global change research to respond to grand societal challenges, Dr. Tanja Suni, Univ. Helsinki, Finland
11:45-12:00	<ul style="list-style-type: none"> The atmospheric science paradigm and horizontal learning: experiences from short research-intensive courses, Dr. Antti Lauri, Univ. Helsinki, Finland
12:00-13:30	LUNCH
13:30-15:00	<p>II LAND ECOSYSTEM & ENVIRONMENT: OBSERVATION AND MODELING (15mins/talk)</p> <p>Co-Chair: Prof. Zhihai Gao, Inst. of Forest Resource Information Techniques, China & Prof. Aleksander Baklanov, WMO, Switzerland</p>
13:30-13:45	<ul style="list-style-type: none"> Satellite based drought and vegetation changes over semi-arid areas, Dr. Anzhi Zhang, IAP, China
13:45-14:00	<ul style="list-style-type: none"> Analysis of long-term carbon stocks in permafrost-dominated forest ecosystems of North-East Russia, Prof. Trofim Maximov, Inst. for Biological Problems of Cryolithozone, Russia
14:00-14:15	<ul style="list-style-type: none"> Land degradation assessment by coupling NPP and climate in Xilin Gol Legue, Inner Mongolia, China, Prof. Zhihai Gao, Inst. of Forest Resource Information Techniques, China
14:15-14:30	<ul style="list-style-type: none"> Hydroclimatic impacts on catchment-scale water cycle and metal and carbon fluxes in Selenga-Baikal river system, Dr. Sergey Chalov, Moscow State Univ., Russia
14:30-14:45	<ul style="list-style-type: none"> Online measurements of fluorescent aerosol particles at a polluted regional site in the North China Plain: insights into the potential impact of burning activities Dr. Hang Su, Max Planck Inst. for Chemistry, Germany
14:45-15:00	<ul style="list-style-type: none"> The importance of moisture recycling in China, Mr. Tolga Cömert, Delft Univ. of Technology, the Netherlands
15:00-15:30	COFFEE BREAK



GEO GROUP ON EARTH OBSERVATIONS



UNIVERSITY OF HELSINKI



United Nations Educational, Scientific and Cultural Organization



International Centre on Space Technologies for Natural and Cultural Heritage under the auspices of UNESCO



FINNISH METEOROLOGICAL INSTITUTE



NordForsk



15:00-16:30	<p>III - CRAICC-PEEX SPECIAL WS SESSION: CLIMATOLOGY OF THE HIGH-LATITUDE PLANETARY BOUNDARY LAYER (15mins/talk)</p> <p>Chair: Dr. Igor Esau, NERSC, Norway</p>
15:00-15:15	<ul style="list-style-type: none"> • Surface air temperature changes in the high-latitude boundary layer, Dr. Richard Davy, NERSC, Norway
15:15-15:30	<ul style="list-style-type: none"> • Extra-tropical Ocean Warming and Winter Arctic Sea Ice Cover since the 1990s, Dr. Yongqi Gao, NERSC, Norway
15:30-15:45	<ul style="list-style-type: none"> • Revisiting the drives of Northern Hemisphere winter surface air temperature variability during 1901-2010, Dr. Linling Chen, NERSC, Norway
15:45-16:00	<ul style="list-style-type: none"> • Remote-sensing indicators of urban effects in the Arctic: Focus on northern West Siberia, Dr. Victoria V. Miles, NERSC, Norway
16:00-16:15	<ul style="list-style-type: none"> • Breeze induced modification of the local circulation in a coastal mountainous valley, Mr. Tobias Wolf, NERSC, Norway
16:15-16:30	<ul style="list-style-type: none"> • Surface urban heat islands in northern cities, Dr. Igor Esau, NERSC, Norway
16:30-16:45	SHORT COFFEE BREAK
16:45-17:30	<p>CLOSING CEREMONY</p> <p>Co-Chair: Prof. Markku Kulmala, Univ. Helsinki, Finland & Prof. Huadong Guo, RADI, China</p>
16:45-17:00	<ul style="list-style-type: none"> • PEEX Program - Future prospects, Dr. Hanna Lappalainen, Univ. Helsinki, Finland
17:00-17:20	<ul style="list-style-type: none"> • Concluding Remarks given by Prof. Markku Kulmala (Univ. Helsinki, Finland), Prof. Valery G. Bondur (AEROCOSMOS, Russia), Prof. Sergej Zilitinkewich (Finnish Met. Inst., Finland), Prof. Alexander Baklanov (WMO, Switzerland), Prof. Aijun Ding (Nanjing Univ, China), Prof. Tuukka Petäjä (Univ. Helsinki, Finland)
17:20-17:30	<ul style="list-style-type: none"> • Closing Remarks given by Prof. Huadong Guo, RADI, China