

**The X<sup>th</sup> International Symposium on "C/H<sub>2</sub>O/Energy balance and climate over the boreal and Arctic regions with special emphasis on Eastern Eurasia"**

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**1<sup>st</sup> Joint Research Laboratory meeting on Sustainable Development of the North**

**DATE:** Oct 4-7, 2019, Sapporo, Japan

**VENUE:** Hokkaido University, Sapporo, Japan

- Oct 4-6 for Sessions and Oct 7 for Excursion.
- Plycom meeting with Yakutsk.

This meeting is the X<sup>th</sup> International Symposium on "C/H<sub>2</sub>O/Energy balance and climate over the boreal and Arctic regions with special emphasis on Eastern Eurasia", and we also celebrate the first symposium of the Joint Research Laboratory established by Hokkaido University, North-Eastern Federal University, and Institute for Biological Problems of Cryolithozone. In this symposium,

observational results on boreal and arctic ecosystems and flux measurements will be discussed, and sustainable development of the arctic including natural science and social science and humanity will be also discussed for the meeting of Joint Research Laboratory.



**THE OBJECTIVES OF THE SYMPOSIUM**

- Presentation and discussion of research results obtained on the territory of permafrost
- Discussion of further plans on global climate change studies.
- Promote international corroborative research activities.

**SESSIONS**

- Permafrost ecosystems and climate change
- Biodiversity and conservation
- Atmosphere, river, marine, glaciers, and ice
- Economy, policy, culture, and engineering for sustainable development
- Multiple observation points comparison on terrestrial carbon cycles in the ecosystems in northeastern-Siberia current status and future challenges : Celebration of achievements by Prof. Ohta (J Arc Net)
- People and Community in the Arctic: Possibility of Sustainable Development (ArCS)
- Response and biodiversity status of the Arctic ecosystems under environmental change (ArCS)
- Carbon budget of ecosystems and cities and villages on permafrost in eastern Russian Arctic (COPERA)

## Outline of the symposium

Venue: D101 at Faculty of Environmental Science, Hokkaido University

**Oct 4**

**9:50- Guidance**

**10:00-10:30: Greetings**

Yasushi Fukamachi (Arctic Research Center, Hokkaido University)

Anatoly Nikolaev or Vladlen Kugunurov (North-Eastern Federal University) by Polycom

Innokentiy Okhlopkov (Institute for Biological Problems of Cryolithozone, RAS)

**Greetings: Flux Networks**

Takeshi Ohta (Nagoya University)

Trofim Maximov (Institute for Biological Problems of Cryolithozone, RAS)

Monique Heijmans (Wageningen University)

**10:30-11:30: Keynote speeches**

Russian-Japanese studies on climate change effect of on the cryosphere and biosphere Siberian regions in 1992-2019 years. I. Okhlopkov, IBPC

Ecophysiological and biochemical peculiarities of Larch trees in Eastern Siberia. T. Maximov, IBPC

**11:40-12:30** 25min x 2 presentation

***Atmosphere, river, marine, glaciers, and ice*** [Chaired by Kotani, Machida](#)

Social and economic consequences of climate warming-induced degradation of ice-rich permafrost landscapes in Yakutia: Alexander Fedorov

Seasonal variations of atmospheric greenhouse gases over the Spasskaya Pad tower, Yakutsk: Toshinobu Machida

**14:00-17:10** 25min x 7 presentation + 15 min break [Chaired by Kotani, Machida](#)

Contemporary carbon fuels inland waters of a thawing permafrost tundra landscape: Joshua Dean  
Snow cover properties observed in Indigirka lowland near Chokurdakh, Northeastern Siberia: Shinya Takano

Status and Drivers of the Arctic Tundra Surface Energy Budget: Jacqueline Oehri

Warm Air Masses and Active Fires in Boreal Forests: Hiroshi Hayasaka

Spatial and temporal variations of stable isotopes in precipitation in Hokkaido: Xiaoyang Li

***Permafrost ecosystems and climate change*** [Chaired by Miyamoto, Heijmans](#)

Changes of Soil C Stock under Establishment and Abandonment of Arable Lands in Permafrost Area: Alexey Desyatkin

Ecological consequences of increasing of permafrost soils seasonal thawing depth in the context of global changes: Roman Desyatkin

**17:20-19:00** Tour at The Hokkaido University Museum

**Oct 5**

**9:30-12:40** 25min x 7 presentation + 15 min break **Chaired by Miyamoto, Heijmans**

Interactions Between Topography, Permafrost, and Vegetation in Siberian Larch Forest: a Simulation Study: Hisashi Sato

Recovery of vegetation and permafrost in the *Betula nana* removal experiment?: Monique Heijmans

Extreme summer precipitation increases permafrost thawing depth in Siberian lowland tundra over multiple years: Rúna Magnússon

Effects of snow cover depth manipulation on taiga forest ecosystem of Northeastern Siberia: Ruslan Shakhmatov

Spatial variations in foliar carbon isotopes and nitrogen contents and NDVI in larch forest of Eastern Siberia after extreme wet event: Aleksandr Nogoviteyn

Arctic biodiversity – status, changes, and feedbacks in the Arctic system: Gabriela Schaepman

LAI and aboveground production of willows at Indigirka river lowland northeast Siberia: Kei Tanekura

**14:00-17:10** 25min x 7 presentation + 15 min break

***Multiple observation points comparison on terrestrial carbon cycles in the ecosystems in northeastern-Siberia current status and future challenges : Celebration of achievements by Prof. Ohta*** **Chaired by Tei**

Variability in seasonal transition indices and surface energy balance in larch forest of eastern Siberia: Ayumi Kotani

Pan-Arctic Water-Carbon Cycles (PAWCs): A new research project focusing on water and carbon cycles in northern Eurasia: Tetsuya Hiyama

Interannual and seasonal variability of carbon balance of typical tundra ecosystem in the North-East Russia: Roman Petrov

Preliminary analysis of stocks of carbon and nitrogen in the upper part of the ice complex in Central Yakutia: Egor Starostin

***Carbon budget of ecosystems and cities and villages on permafrost in eastern Russian Arctic (COPERA)*** **Chaired by Sugimoto**

Spatio-temporal variation in forest ecosystem response to climate change over northern high latitude region: Shunsuke Tei

Soil respiration responses to temperature and moisture in a taiga forest of eastern Siberia: Yumiko Miyamoto

Accurate evaluation of leaf area index in a deciduous coniferous forest, Eastern Siberia: Shin Nagai

**17:30-** Official Dinner

**Oct 6**

**9:30-12:40** 25min x 7 presentation + 15 min break

**Chaired by Tei**

Thermal state of permafrost in Eastern Siberia: Kenji Yoshikawa

Collaborative Research Action for COPERA (Carbon budget of ecosystems and cities and villages on permafrost in eastern Russian Arctic): Atsuko Sugimoto

***People and Community in the Arctic: Possibility of Sustainable Development (ArCS)*** **Chaired by**  
**Tatsuzawa, Goto**

Flow of financial resources between the Federal Budget and Arctic regions in Russia: Shinichiro Tabata

Validation of the Environmental Kuznets Curve Hypothesis for Sakha Republic (Yakutia): Tuyara Gavrilyeva

Indigenous species of livestock in Sakha (Yakutia) and adaptation to natural environment: Masanori Goto

***Response and biodiversity status of the Arctic ecosystems under environmental change (ArCS)***  
**Chaired by Tatsuzawa, Goto**

Causes and effects of migration route shifts and confluence of three wild “tundra” migratory reindeer herds in eastern Siberia: Shirow Tatsuzawa

Assessment of the present state of mammalian resources and the traditional use of natural resources by the indigenous people of the North in the eastern sector of the Russian Arctic: I. Okhlopkov

**14:00-15:15** 25min x 3 presentation

***Economy, policy, culture, and engineering for sustainable development*** **Chaired by Hiyama**

Scaling Potential Macroeconomic Impacts of Climate Effects of Siberian Wildfires: Insights from MIROC-SPRINTARS AOGCM Experiments: Daiju Narita

Investigation of CO<sub>2</sub> emissions from Arctic shipping: Natsuhiko Otsuka

Characteristics of recent NSR shipping activities along the Northern Sea Route: Xiaoyang Li

**15:15-15:20 Closing Remarks**

Atsuko Sugimoto (Arctic Research Center, Hokkaido University)

**15:30-17:00** Laboratory tours to Environmental Earth Science

**Oct 7**

Excursion

**REGISTRATION FEE**

Regular 2,500 JY (about \$25)

Student Free (Please have your student ID)

**OFFICIAL DINNER**

Date: Oct 5<sup>th</sup>, 2019 17:30-

Place: Sapporo Beer Garden (Fresh lamb, traditional Genghis Khan, and grilled vegetables)

Cost:

Regular 5,000~6,000 JY

Student 3,000~3,500 JY (Please have your student ID)

##You can eat and drink as much as you want within 100 min.

**EXCURSION~OTARU Tourism**

Date: Oct 7<sup>th</sup>, 2019

Cost: About 3,000 JY (The cost include travel expense and lunch fee)

About OTARU:

The city of Otaru grew to become one of Japan’s most prominent port cities between the end

of the 19th century and the middle part of the 20th century. Many of the historical buildings as well as the trademark Otaru canal were built at the height of Otaru's trade dominance when the city moved markets as far away as London. Today, the charm of Otaru's unique townscape, which features a mix of Japanese and Western style architecture, draws in many visitors from around the world.

## CONTACT INFORMATION

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## COMMITTEE

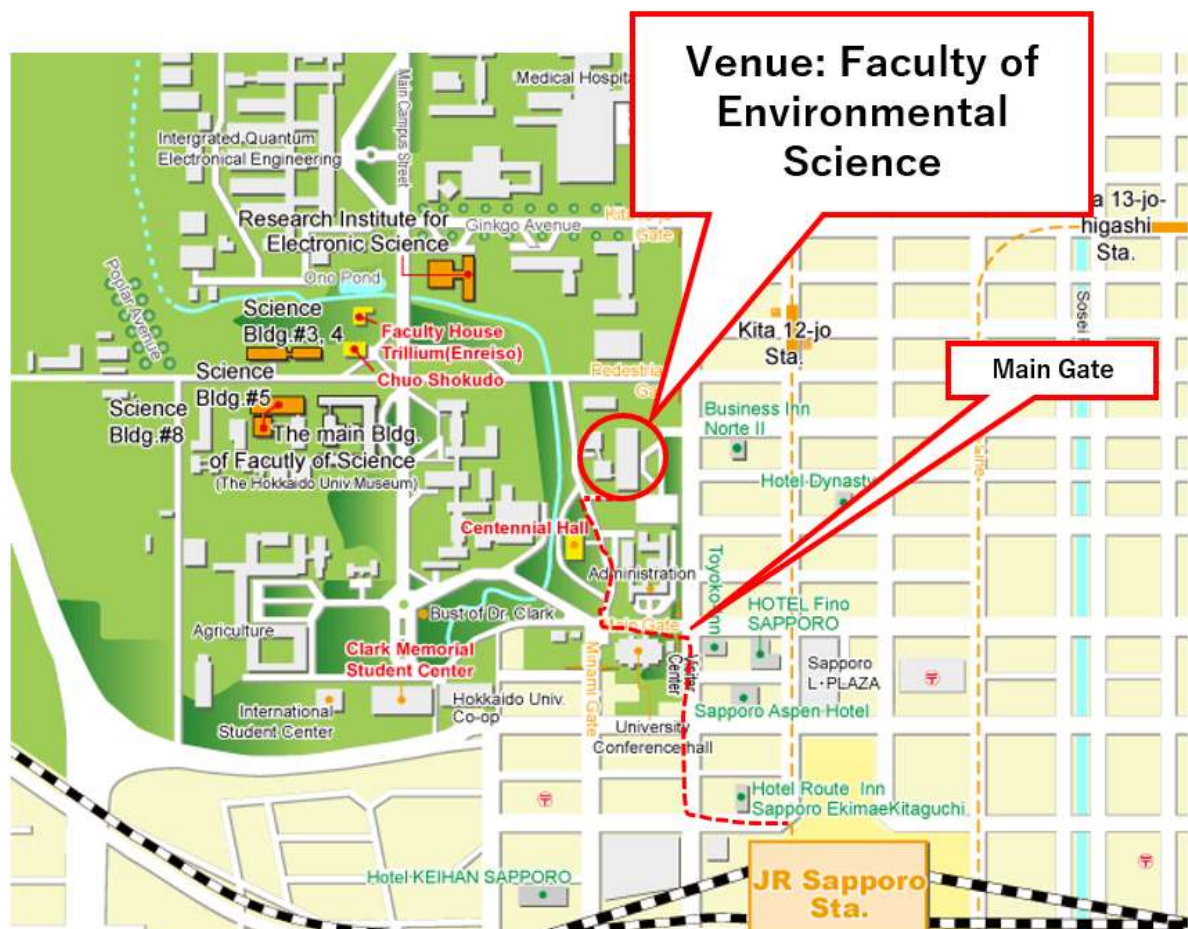
### International symposium committee

T. Maximov, I. Okhlopkov, Nikolaev, V. Kugunurov, M. Prisyazhny, T. Gavrilyeva, S. Tabata, Y. Fukamachi, J. Dolman, G. Schaepman-Strub, M. Heijmans, T. Hiyama, A. Kotani

### Local symposium committee

A. Sugimoto, N. Otsuka, S. Tei, Y. Miyamoto, T. J. Yasunari, S. Tatsuzawa, M. Goto

## ACCESS MAP



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