

International Online Symposium „Focus Siberian Permafrost“, 24 – 25 March, 2021

	Wednesday, 24th March	Thursday, 25th March	
08:30 – 09:00	<b>Waiting room</b>	<b>Waiting room</b>	
08:45 – 09:00			
09:00 – 09:15	Official Opening Pfeiffer, Graener, Overbeck, Fretzdorff	Panel discussion <i>„Importance of permafrost ecosystems for future climate“</i>	
09:15 – 09:30			
09:30 – 09:45	Beer		
09:45 – 10:00	Abakumov		
10:00 – 10:15	Kutzbach	Yurkevich	
10:15 – 10:30	Bolshiyarov	Zdorovenova	<b>Sessions</b>
10:30 – 10:45	Liebner	Tsibizova	Process dynamics in heterogeneous permafrost landscapes under climate change
10:45 – 11:00	Zimov	Kaverin	
11:00 – 11:15	<b>Break</b>	<b>Break</b>	
11:15 – 11:30			
11:30 – 11:45	Shibistova	Juhls	Permafrost changes under environment and climate pressure
11:45 – 12:00	Laschinskiy	Tsibisov	
12:00 – 12:15	Shevtsova	Zdorovenov	Biogeochemical dynamics in permafrost landscapes
12:15 – 12:30	Brovkin	Faguet	
12:30 – 12:45	Stepanenko	Kut	
12:45 – 13:00	Grosse	Veremeeva	
13:00 – 13:15	Sabrekov	Runge	Past and recent permafrost ecosystem dynamics
13:15 – 13:30	<b>Lunch</b>	<b>Lunch</b>	
13:30 – 13:45			
13:45 – 14:00			
14:00 – 14:15	Fedorova	Zaplavnova	Transfer of permafrost knowledge for science community and society
14:15 – 14:30	Evgrafova	Dietze	
14:30 – 14:45	Prokushkin	Rivkina	
14:45 – 15:00	Poliakov	Eliseev	Poster session
15:00 – 15:15	Porada	Georgievski	
15:15 – 15:30	Habeck	Pravkin	
15:30 – 15:45	Fiencke	<b>Break</b>	
15:45 – 16:00	van Delden		
16:00 – 16:15	<b>Break</b>	Jongejans	
16:15 – 16:30		Lehmann	
16:30 – 16:45	Mangelsdorf	Vybornova	
16:45 – 17:00	Jongejans	Morgenstern	
17:00 – 17:15	de Vrese	<b>Poster Session</b>	
17:15 – 17:30	Heim		
17:30 – 17:45	Buchwal		
17:45 – 18:00	Heslop		
18:00 – 18:15	Knoblauch		
18:15 – 18:30	Walz	<b>Public talk – Permafrost for everyone Martin Heimann, Jena</b>	
18:30 – 18:45	Strauss		
18:45 – 19:00	Ramm	Official Closing Beer	

**Program of the International Symposium**  
**“Focus Siberian Permafrost –**  
**Terrestrial Cryosphere and Climate Change”**

**24 – 25 March 2021**

organized by Institute of Soil Science, Universität Hamburg

Online Conference

Join us via link (for registered participants):

<https://uni-hamburg.zoom.us/j/96918527793?pwd=VkJlL2VZWUNhWUhpQzNINIZLTmk2dz09>

or via Zoom Client

Meeting-ID: 969 1852 7793

Passcode: 82788852

**Day 1: Wednesday, 24 March 2021**

(all timeslots are given in CET)

08:30 – 09:00 Check-in the meeting (Technical support)

**09:00 – 09:30 Official opening of the Symposium**

*Welcome greetings and Introduction by*

*Prof. Dr. Eva-Maria Pfeiffer / Prof. Dr. Christian Beer (UHH)*

*Prof. Dr. Heinrich Graener (MIN UHH)*

*Dr. Norbert Overbeck (BMBF)*

*Dr. Susanne Fretzdorff (PTJ)*

**09:30 – 11:00 Session I: “Process dynamics in heterogeneous permafrost landscapes under climate change”**

*Session chair: Dmitry Bolshiyarov, Christian Beer*

09:30 – 09:45 *Christian Beer, N. Zimov, J. Olofsson, P. Porada, S. Zimov*  
Protection of permafrost soils from thawing by increasing herbivore density

09:45 – 10:00 *Evgeny Abakumov, V. Polyakov, E. Morgun*  
Pedodiversity and soil taxonomy of abandoned agricultural ecosystems of central Yamal

10:00 – 10:15 *Lars Kutzbach, N. Röbger, T. Sachs, C. Wille, J. Boike, I. Fedorova, M.N. Grigoriev, E.-M. Pfeiffer*

- Methane flux dynamics across temporal scales at polygonal tundra of the Siberian Lena River Delta
- 10:15 – 10:30 *Dmitry Bolshiyarov, J. Boike, S. Pravkin*  
Permafrost rate of the Siberian Arctic
- 10:30 – 10:45 *Susanne Liebner, S. Yang, J. Kallmeyer, C. Knoblauch, J. Strauss, M. Jenrich, M. Angelopoulos, P.P. Overduin, E. Damm, I. Busmann, M.N. Grigoriev, E. Rivkina, B.K. Biskaborn, D. Wagner, G. Grosse*  
Microbial controls on the fate of methane along a thermokarst lake to lagoon transition
- 10:45 – 11:00 *Sergey Zimov, O. Anisimov*  
Methane emission in the Russian permafrost zone
- 11:00 – 11:30** **Group photo and Break** (private discussions in Break-out rooms)
- 11:30 – 13:15** **Session II: “Permafrost changes under environment and climate pressure”**  
*Session chair: Victor Stepanenko, Zoé Rehder*
- 11:30 – 11:45 *Olga Shibistova, J. Boy, G. Guggenberger, D. Boy, M. Aguirre Morales, R. Godoy*  
Biota as driver of mineral weathering and soil formation in maritime Antarctica
- 11:45 – 12:00 *Nikolay Laschinskiy, E. Talovskaya*  
Combination of ice and wind erosion in Lena Delta landscape desertification (Eastern Siberia)
- 12:00 – 12:15 *Iuliia Shevtsova, U. Herzschuh, B. Heim, L.A. Pestryakova, S. Kruse*  
Recent dynamics of total above-ground biomass (AGB) and future tree AGB in central Chukotka
- 12:15 – 12:30 *Victor Brovkin*  
Permafrost carbon in Earth System Models: Progress and challenges
- 12:30 – 12:45 *Victor Stepanenko, A.I. Medvedev, V.Y. Bogomolov, A.V. Debolskiy, E.D. Drozdov, E.A. Marchuk, V.N. Lykosov*  
Representing cold-climate hydrological processes in the INM RAS-MSU land surface model
- 12:45 – 13:00 *Guido Grosse, I. Nitze, A. Runge, M. Fuchs, T. Henning, S. Barth, B. Heim, F. Günther, J. Boike, M. Grigoriev*  
Remote sensing of permafrost landscape change in the Lena Delta Region using multispectral timeseries and spatially very high resolution change detection
- 13:00 – 13:15 *Aleksandr Sabrekov, I. Terentieva, I. Filippov, M. Glagolev, Y. Litt*  
Origin of methane seeping in West Siberian middle taiga river floodplains
- 13:15 – 14:00** **Lunch** (private discussions in Break-out rooms)

- 14:00 – 16:00**      **Session III: "Biogeochemical dynamics in permafrost landscapes"**  
*Session chair: Ulrike Herzs Schuh, Vyacheslav Poliakov*
- 14:00 – 14:15      *Irina Fedorova, E. Shestakova, A. Pashovkina, A. Chetverova, G. Nigamatzyanova, R. Zdorovenov, G. Zdorovenova, N. Alekseeva, V. Dimitriev*  
Recent biogeochemical dynamics in Arctic lakes ecosystems
- 14:15 – 14:30      *Svetlana Evgrafova, V. Kadutskii, V. Polyakov, E. Abakumov, O. Novikov, G. Guggenberger, D. Wagner*  
Field-based incubation experiment in tundra: Buried soil organic matter decomposition
- 14:30 – 14:45      *Anatoly Prokushkin, A. Steinhof*  
Tracing the permafrost carbon release using radiocarbon dating of dissolved and particulate organic carbon in the Yenisei River and its major tributaries
- 14:45 – 15:00      *Vyacheslav Poliakov, E. Abakumov*  
Stabilization of organic matter from the Ice Complex, Lena River Delta, Russia
- 15:00 – 15:15      *Philipp Porada, C. Beer*  
Impact of mosses and lichens on future carbon emissions from permafrost soils
- 15:15 – 15:30      *Joachim O. Habeck, M. Ulrich*  
Animal husbandry in permafrost regions of Siberia and northern Mongolia: How permafrost has shaped the ecological conditions for pastoral forms of land use, and how the latter interact with permafrost dynamics
- 15:30 – 15:45      *Claudia Fiencke, T. Sanders, N. Zell, E.-M. Pfeiffer*  
Microbial transformation and availability of dissolved nitrogen in the active layer of cryosols
- 15:45 – 16:00      *Lona van Delden, M. Marushchak, C. Voigt, G. Grosse, A. Faguet, N. Lashchinskiy, J. Kerttula, C. Biasi*  
Towards the first circumarctic N<sub>2</sub>O budget – Extrapolating to the landscape scale
- 16:00 – 16:30**      **Break** (private discussions in Break-out rooms)
- 16:30 – 19:00**      **Session III cont.: "Biogeochemical dynamics in permafrost landscapes"**  
*Session chair: Christian Knoblauch, Loeka Jongejans*
- 16:30 – 16:45      *Kai Mangelsdorf, J.G. Stapel, L. Schirrmeister, J. Walz, C. Knoblauch*  
Assessment of the Substrate Potential of Terrestrial Permafrost Deposits from NE Siberia for microbial Greenhouse Gas Production

- 16:45 – 17:00 *Loeka Jongejans, S. Liebner, C. Knoblauch, G. Grosse, J. Strauss*  
CO<sub>2</sub> and CH<sub>4</sub> production in in-situ thawed Yedoma sediments in the Yukechi alas, Yakutia
- 17:00 – 17:15 *Philipp de Vrese, V. Brovkin*  
The high latitudes' response to temperature overshoot scenarios
- 17:15 – 17:30 *Birgit Heim, S. Lisovski, I. Shevtsova, S. Kruse, N. Bornemann, M. Langer, J. Boike, A. Morgenstern, U. Herzsuh, S. Evgrafova, E. Abramova, C. Rixen*  
,Seeing' vegetation green-up after snowmelt using MODIS satellite time series in the Lena Delta, Siberia
- 17:30 – 17:45 *Agata Buchwal, G. Rachlewicz, B. Heim*  
Dendrochronological records from tundra shrubs in the vicinity of Samoylov island
- 17:45 – 18:00 *Joanne K. Heslop, S. Liebner, K.M. Walter Anthony, M. Winkel, R.G.M. Spencer, D.C. Podgorski, P. Zito, R. Neumann*  
MicroModel: Microscale controls on greenhouse gas production from thawing permafrost
- 18:00 – 18:15 *Christian Knoblauch, C. Beer, A. Schütt, L. Sauerland, S. Liebner, E. Abakumov, J. Rethemeyer, E.-M. Pfeiffer*  
Carbon dioxide and methane release following abrupt thaw of Pleistocene permafrost deposits in arctic Siberia
- 18:15 – 18:30 *Josefine Walz, F. Gehrman, E.A.S. Andersen, E. Dorrepaal*  
Year-round CO<sub>2</sub> flux partitioning from snow-covered Arctic heath ecosystems
- 18:30 – 18:45 *Jens Strauss, P.J. Mann, M. Bedington, M. Fuchs, G. Grosse, C. Haugk, G. Mollenhauer, B. Juhls, O. Ogneva, P. Overduin, J. Palmtag, L. Polimene, R. Torres*  
Assessing the dynamic interface between land and ocean in the Arctic: results from the joint BMBF-NERC project Changing Arctic organic Carbon cycle in the coastal Ocean Near-shore (CACOON)
- 18:45 – 19:00 *Elisabeth Ramm, C. Liu, X. Wang, H. Yue, W. Zhang, Y. Pan, B. Hu, M. Schloter, S. Gschwendtner, C.W. Mueller, H. Rennenberg, M. Dannenmann*  
Current research on Eurasian permafrost in northeast China: The DFG-NSFC NIFROCLIM project
- 19:00 – Check-out the meeting (End of Day 1)**

**Day 2: Thursday, 25 March 2021**

(all timeslots are given in CET)

- 08:30 – 09:00 Check-in the meeting (Technical support)
- 09:00 – 10:00 Panel discussion ,Importance of permafrost ecosystems for future climate‘**  
*Session chair: Lars Kutzbach, Mikhail Grigoriev*  
Podium speakers: Elizaveta Rivkina, Irina Fedorova, Rica Wegner, Sergey Zimov, Guido Grosse, Christian Beer
- 10:00 – 11:00 Session III cont.: “Biogeochemical dynamics in permafrost landscapes”**  
*Session chair: Dmitry Kaverin, Alexandra Runge*
- 10:00 – 10:15 *Nataliya Yurkevich, A. Kartoziia*  
Water ecosystems of the Siberian tundra: Geochemical and geomorphological features (Samoylov and Kurungnakh islands, Lena Delta)
- 10:15 – 10:30 *Galina Zdrovennova, I. Fedorova, A. Shadrina, T. Efremova, R. Zdrovennov, N. Palshin*  
Dissolved oxygen in ice-covered lakes
- 10:30 – 10:45 *Ekaterina Tsibizova, N. Yurkevich, T. Fedorova*  
Chemical composition of water and bottom sediments in thermokarst lakes on Kurungnakh island, Lena Delta
- 10:45 – 11:00 *Dmitry Kaverin, A.V. Pastukhov, M. Marushchak, C. Biasi*  
Impact of microclimatic and landscape changes on the temperature regime and thaw depth under a field experiment in the Bolshezemelskaya tundra
- 11:00 – 11:30 Break** (private discussions in Break-out rooms)
- 11:30 – 13:15 Session II cont.: “Permafrost changes under environment and climate pressure”**  
*Session chair: Alexey Faguet, Bennet Juhls*
- 11:30 – 11:45 *Bennet Juhls, C.A. Stedmon, A. Morgenstern, H. Meyer, B. Heim, J. Hölemann, V. Povazhniy, Paul P. Overduin*  
Seasonality in Lena River biogeochemistry and dissolved organic matter
- 11:45 – 12:00 *Leonid Tsibizov, V. Olenchenko, V. Potapov, A. Faguet, K. Bazhin, D. Aynov, E. Esin*  
Geophysical studies of permafrost on Samoylov and Kurungnakh islands, Lena Delta
- 12:00 – 12:15 *Roman Zdrovennov, G. Zdrovennova, A. Guzeva, S. Evgrafova, S. Golosov, I. Zverev, I. Fedorova*  
Thermal regime and hydrodynamics of Arctic lakes and rivers

- 12:15 – 12:30 *Alexey Faguet, A. Kartoziia, N. Lashchinskiy*  
Permafrost evolution in Lena Delta as seen on 2016-2019 drone survey data. An overview.
- 12:30 – 12:45 *Anna Kut, V. Spektor, B. Woronko*  
Micromorphology of Quartz grains in sediments of Abalakh plate, Central Yakutia
- 12:45 – 13:00 *Alexandra Veremeeva, I. Nitze, F. Günther, G. Grosse, E. Rivkina*  
Thermokarst lake area increase trend and its geomorphic and climatic drivers in the Kolyma lowland yedoma region, NE Siberia
- 13:00 – 13:15 *Alexandra Runge, G. Grosse*  
A comprehensive remote sensing-based assessment of annual retrogressive thaw slump dynamics across North Siberia for 1999-2020
- 13:15 – 14:00 Lunch** (private discussions in Break-out rooms)
- 14:00 – 15:30 Session IV: “Past and recent permafrost ecosystem dynamics”**
- Session chair: Alexey Eliseev, Anne Morgenstern*
- 14:00 – 14:15 *Anna Zaplavnova, V. Potapov*  
Upper part of the geoelectrical section from the Lena River Delta using MTS data
- 14:15 – 14:30 *Elisabeth Dietze, R. Glückler, S. Kruse, K. Mangelsdorf, A. Andreev, L.A. Pestryakova, U. Herzsuh*  
The role of forest fires in Eastern Siberia – Feedbacks between fire, climate, vegetation, permafrost and humans across space and time
- 14:30 – 14:45 *Elizaveta Rivkina, T. Vishnivetskaya*  
Biogeochemical processes in permafrost
- 14:45 – 15:00 *Alexey V. Eliseev, V.V. Malakhova*  
Uncertainty in temperature and sea level datasets for the Pleistocene glacial cycles: Implications for thermal state of the subsea sediments
- 15:00 – 15:15 *Goran Georgievski, P. De Vrese, S. Hagemann, V. Brovkin*  
Evaluating historical simulations of MPI-ESM for key permafrost-relevant climatic variables in high northern latitudes
- 15:15 – 15:30 *Sergei Pravkin, D. Bolshiyarov, A. Aksenov*  
The first river terrace and the Ice Complex of the Lena Delta: Common origin and evolution
- 15:30 – 16:00 Break** (private discussions in Break-out rooms)
- 16:00 – 17:00 Session V: “Transfer of permafrost knowledge for science community and society”**
- Session chair: Eva-Maria Pfeiffer, Irina Fedorova*

- 16:00 – 16:15 *Loeka Jongejans*  
Communicating Arctic Science
- 16:15 – 16:30 *Rainer Lehmann*  
How to bring the Polar regions and Permafrost into the classrooms
- 16:30 – 16:45 *Olga Vybornova, N. Kakhro, H. Kassens, I. Fedorova, C. Beer, E.-M. Pfeiffer*  
Russian-German Higher Education cooperation on Permafrost Science: two research-driven Master Programs between universities Saint-Petersburg and Hamburg
- 16:45 – 17:00 *Anne Morgenstern*  
Russian-German cooperation – driver for international advances in permafrost and Arctic research
- 17:00 – 18:00 Session VI: Poster session**  
*Session chair: Olga Vybornova, Paul Overduin*
- Evgeny Abakumov* The role of vascular plants in stabilization of organic matter in soils of maritime Antarctica, north-west part of Antarctic Peninsula region
- Natalia Alekseeva, I. Fedorova, S. Romanov, A. Chetverova*  
Variability of carbonate system components in Arctic water ecosystem
- Sara E Anthony, C. Rosinger, J. Rethemeyer*  
Controls of organic matter degradability in thawing Holocene permafrost deposits in the Lena Delta, Russia
- Annett Bartsch, ESA DUE GlobPermafrost team, ESA CCI+ Permafrost team*  
Siberian change revealed by satellite - Data collections of ESA DUE GlobPermafrost and ESA CCI+ Permafrost
- Lutz Beckebanze, B.R.K. Runkle, J. Walz, C. Wille, D. Holl, M. Helbig, I. Fedorova, J. Boike, T. Sachs, L. Kutzbach*  
Low impact of lateral carbon export on net ecosystem carbon balance of a polygonal tundra catchment
- Mariya Chernysheva, I. Fedorova*  
Geochemistry of bottom sediments of Yamal anthropogenically impacted lakes exposed
- Damir Gadylyayev, J. Nitzbon, S. Schlüter, J. M. Köhne, G. Grosse, J. Boike*  
Applying Computed Tomography (CT) scanning for segmentation of permafrost constituents in drill cores
- Alina Guzeva, I. Fedorova, E. Krylova*  
Geochemical features and molecular composition of humic acids isolated from lake sediments of the Lena Delta



*Marina Kashkevich, O. Galanina, N. Voropay, T. Parshina, I. Fedorova*  
Geoecological studies of the Tunkinskaya depression (Buryatia, Russia)

*Melanie Kern, X. Rodriguez-Lloveras, C. Beer*  
A novel approach to process-oriented cryoturbation modelling

*Johanna Kerttula, H. Siljanen, M.E. Marushchak, C. Voigt, J. Ronkainen, C. Biasi*  
Microbial community related to observed high N<sub>2</sub>O emissions from thawing Yedoma permafrost

*Sebastian Laboor, S. Muster, B. Heim, A. Haas, A. Walter, J. Matthes, I. Nitze, A. Bartsch, G. Grosse*  
The Arctic Permafrost Geospatial Center – a portal for high-quality open access scientific data related to permafrost in the Arctic

*Liudmila Lebedeva, I. Khristoforov, K. Bazhin, V. Efremov, V. Ogonerov, N. Baishev*  
Suprapermafrost taliks in Central Yakutia

*Maija Marushchak, J. Kerttula, K. Diakova, A. Faguet, J. Gil, G. Grosse, C. Knoblauch, N. Lashchinskiy, M. Nykamb, P.K. Martikainen, A. Morgenstern, J. Ronkainen, H. Siljanen, L. Van Delden, C. Voigt, N. Zimov, S. Zimov, C. Biasi*  
Thawed Yedoma permafrost as a neglected N<sub>2</sub>O source

*Gesine Mollenhauer, J. Hammes, T. Gentz, H. Grotheer, J. Hefter, B. Koch, O. Ogneva, J. Boike, A. Morgenstern*  
Radiocarbon signatures of DOC and POC in small water bodies and streams of Kurungnakh and Samoylov Islands

*Olga Ogneva, G. Mollenhauer, H. Grotheer, M. Fuchs, J. Palmtag, T. Sanders, P. Mann, J. Strauss*  
The permafrost thaw fingerprint: the Isotopic composition of Particulate Organic Carbon From Lena River to Laptev sea

*Juri Palmtag, P.J. Mann, M. Cara, M. Bedington, M. Fuchs, G. Grosse, G. Mollenhauer, B. Juhls, O. Ogneva, P. Overduin, L. Polimene, R. Torres, J. Strauss*  
Seasonal methane and carbon dioxide emissions upon the coastal region of the Kolyma river

*Aleksandr Pastukhov, V. Kovaleva, D. Kaverin, C. Knoblauch*  
Microbial communities in Permafrost-affected peatlands in the South of the East-European Cryolithozone

*Eva-Maria Pfeiffer, C. Beer, D. Bolshiyarov, I. Fedorova, M. Grigoriev, G. Grosse*  
KOPF Synthesis – carbon in terrestrial permafrost landscapes of the Siberian Arctic under a changing climate

*Evgeny Abakumov, V. Polyakov*

The role of microparticles of organic carbon in degradation of ice cover of polar regions of the earths and in the process of soil-like bodies formation

*Zoé Rehder, T. Kleinen, L. Kutzbach, V. Stepanenko, V. Brovkin*

New model MeEP gives insights on the impact of methane emissions from ponds on the local methane budget in the Lena River Delta

*Tina Sanders, M. Fuchs, K. Dähnke*

Fate and transport of nitrogen in soils, sediment and water of the Lena Delta, Northeast Siberia

*Irina Terentieva, I. Filippov, A. Sabrekov, M. Glagolev*

Mapping West Siberian seeps and floodplains using convolutional neural networks

*Yana Tikhonravova*

Isotopic composition within heterogeneous ice wedge

*Stiig Wilkenskjeld, F. Miesner, P. Overduin, M. Puglini, V. Brovkin*

The Fate of Subsea Permafrost under Future Climate Warming

*Torben Windirsch, G. Grosse, J.O. Habeck, M. Ulrich, K. Mangelsdorf, J. Strauss*

Large herbivores as stabilizing ecosystem engineers in thawing terrestrial Arctic environments

*Sizhong Yang, S. Liebner, J. Walz, C. Knoblauch, T. Bornemann, A.*

*Probst, D. Wagner, Mike S.M. Jetten, M. in 't Zandt*

Effects of a long-term warming scenario on microbial community structure and functional potential of permafrost-affected soil

17:00 – 17:30

Short poster presentations (1 min/poster)

17:30 – 18:00

Break-out rooms parallel poster discussions (separate room pro poster)

**18:00 – 18:45**

**Public talk – Permafrost for everyone** (Chair: Eva-Maria Pfeiffer)

*Martin Heimann, M. Goeckede, S. Zimov, N. Zimov, V. Brovkin*

In search of greenhouse gas emissions from permafrost in northeast Siberia

**18:45 – 19:00**

**Official Closing of the Symposium by**

*Prof. Dr. Christian Beer (UHH)*

**19:00 – 20:00**

**Informal Get-Together (<http://bit.ly/Permafrost-Afterparty>)**