1 Curriculum vitae

Current office-✉ *Alfred Wegener Institute (AWI)* Helmholtz Centre for Polar and Marine Research| Telegrafenberg A45 | 14473 Potsdam | Germany
e-✉ and office-☎ jens.strauss@awi.de, +49 (0)331 288 2185
💻 *ResearchGate* | *Google Scholar* | *Alfred Wegener Institute**
ID ORCID: *0000-0003-4678-4982*
Date of birth 08.12.1984 in Luenen, North Rhine-Westphalia (Germany)

Early achievements and track-record

Publication highlights and 🗐-Indices
26 published peer-reviewed papers (including 22 in ISI journals)
Scopus (2019/02): h-index (12) | publications (24) | citations (845)
ISI ResearcherID (2019/02): h-index (12) | publications (25) | citations (783)
Google Scholar (2019/02): h-index (14) | citations (1252)

Five selected publications (independent from PhD supervisor)

2017 **Strauss, J.**, Schirrmeister, L., Grosse, G., et al. (2017) Deep Yedoma permafrost: A synthesis of depositional characteristics and carbon vulnerability, Earth-Science Reviews, 172, pp. 75-86, doi:10.1016/j.earscirev.2017.07.007, **cited: 17**

2016 Kanevskiy, M., Shur, Y., **Strauss, J.** et al. (2016) Patterns and rates of riverbank erosion involving ice-rich permafrost (yedoma) in northern Alaska, Geomorphology, doi:10.1016/j.geomorph.2015.10.023, **cited: 12**

2015 **Strauss, J.**, Schirrmeister, L., Mangelsdorf, K. et al. (2015) Organic-matter quality of deep permafrost carbon – a study from Arctic Siberia, Biogeosciences, 12, pp. 2227-2245, doi:10.5194/bg-12-2227-2015, **cited: 25**

2014 Hugelius, G., **Strauss, J.**, Zubrzycki, S. et al. (2014) Estimated stocks of circumpolar permafrost carbon with quantified uncertainty ranges and identified data gaps, Biogeosciences, **cited: 352**

2012 **Strauss, J.**, Schirrmeister, L., Wetterich et al. (2012) Grain-size properties and organic-carbon stock of Yedoma Ice Complex permafrost from the Kolyma lowland, northeastern Siberia, Global Biogeochemical Cycles, **cited: 51**

Academic education

03/2015 *University of Potsdam*
PhD in Geology, Thesis: "Organic carbon in ice-rich permafrost: Characteristics, quantity and availability", grade: magna cum laude, Supervisor: Prof. Dr. Hubberten

09/2004 - 03/2010 *University of Potsdam*
Graduate studies in Geoecology (Diploma), passed with distinction, overall mark 1.2, Thesis: "Late quaternary environmental dynamics at the Duvanny Yar key section, Lower Kolyma, East Siberia" (mark 1.0)

Professional experience

Since 03/2019
Senior Scientist at AWI, Head of working group "Permafrost Carbon and Nitrogen"

03/2017-02/2019
Postdoctoral researcher at AWI, Head of Laboratory, Permafrost Research Section
Tasks: set up of a new **Permafrost Carbon and Nitrogen Laboratory**, assessment of permafrost carbon vulnerability

*the electronic version of this CV includes links, highlighted in *italic* letters

01/2015 - 03/2017 *AWI*	**Postdoctoral scientist at AWI**, working group 'Rapid **Pe**rmafrost **T**haw in a Warming **A**rctic and Impacts on the Soil Organic **Carb**on Pool' (*PETA-CARB*) (Prof. G. Grosse); Tasks: assessment of permafrost carbon vulnerability
10/2014 - 12/2014 *AWI*	**Postdoctoral research fellow at AWI**, Tasks: data synthesis, acquiring third party funding (Prof. H.-W. Hubberten)
10/2010 - 09/2014	**PhD student** (including two times parental leave of six month) University of Potsdam
02/2010 - 03/2010	**Visiting Scientist** at University of Bremen (Geoscience Department, Helmholtz Young Investigators Group "Applications of molecular ^{14}C analysis" (Prof. G. Mollenhauer)
2007	**Intern** at Helmholtz Centro for Environmental Research (UFZ), *Working Group "Carbon and Nitrogen Dynamics*" (UFZ Halle, Dr. habil Uwe Franco)
2006-2010	**Student assistantships** (University of Potsdam, Prof. H. Elsenbeer, Dr. T. Lipp)

Research grants and externally funded projects

Total value of acquired funds since 2010: >900,000 €; I received more than 50% (~460,000 €) as principal/lead investigator (direct + indirect costs).

Currently funded projects

since 07/2018	**Principal investigator** for German part of the British (NERC)-German (BMBF) project "*Changing Arctic Carbon cycle in the cOastal Ocean Near-shore (CA-COON)*" (804,000€)

Completed projects:

07/2016-06/2018	**Co-investigator** of the IPA (International Permafrost Association) Action Group: "Permafrost and Culture" (5,000 €)
03/2015-02/2017	**Principal investigator** of the IPA (International Permafrost Association) Action Group: "The Yedoma Region" (5,000 €)
05/2012 - 04/2013	**Principal investigator** of the project "Organic matter characteristics of ice-rich permafrost deposits of the Alaskan North Slope Region", German Federal Ministry of Education and Research (BMBF), grant 10DM12011 (13,500 €)
10/2010 - 09/2014	Stipend for PhD project, *Studienstiftung des deutschen Volkes* (75,000 €)
Other grants	
07/2011 - 01/2012	Funding for a student assistant position (support program for young scientists with children) (6,000 €)
since 2010	multiple travel grants funded by e.g. Potsdam Graduate School, Helmholtz Graduate School for Polar and Marine Research, Nenets Autonomous District, International Permafrost Association, Climate and Cryosphere (>15,000 €)

Expedition/fieldwork experience

since 2017	**Expedition leader** of two international winter drilling expeditions to Siberia (*Expedition Bykovsky Peninsula 2017* and Samoylov Deep Drilling 2018)
since 2010	**Participant** in 6 Arctic summer and winter expeditions, Siberia and Alaska
09/2008 - 10/2008	Smithsonian Tropical Research Institute, *Barro Colorado Island*, Panama

Teaching experience and list of conducted courses

upcoming winter semester 2018/19	**Leading and teaching** the master module (lecture and exercise, shared with colleagues) "Permafrost Landscapes (MGEW15)", University of Potsdam
winter semester 2015/16 to 2017/18	**Co-leading and teaching** the master module (lecture and exercise) "Permafrost Landscapes (MGEW15)", University of Potsdam
02/2015 - 05/2016	Qualification program "*Senior Teaching Professionals*"

*the electronic version this CV includes links, highlighted in *italic* letters

10/2010 - 08/2014	Teaching at AWI and University of Potsdam (master modules "permafrost landscapes", "paleoclimate dynamics", supervision of lab exercises at AWI)
tutorials	**Student tutor** of "analysing environmental data with R" (in addition to lectures
2006 - 2008	by Prof. Elsenbeer, University of Potsdam) and "handling geospatial data" (in addition to lectures and seminars by Dr. T. Lipp, University of Potsdam)

(Co-) Supervision and mentoring

Postdocs	
since 07/2018	M. Fuchs, AWI Potsdam: "Soil organic carbon and nitrogen pools in permafrost terrain", mentor
PhD students	*(co-supervision, PhD committee member or mentoring)*
starting 11/2018	PhD project "N_2O biogeochemistry from the Arctic", University of Eastern Finland
since 08/2018	PhD thesis A. Monhonval: "Permafrost thaw and mineral weathering", Université catholique de Louvain, Belgium, PhD committee member
since 08/2018	PhD thesis O. Ogneva: "Permafrost organic matter in Arctic rivers; characteristics and seasonality", University of Bremen
since 07/2018	PhD thesis I. Prater: "The fate of organic carbon in permafrost-affected soils of the Arctic and Antarctic", Technical University of Munich, mentor
02/2014 - 03/2017	PhD thesis G. Tanski: "Fate of organic matter mobilised from eroding permafrost coasts", University of Potsdam, PhD Committee member
03/2014 - 06/2018	PhD thesis M. Fuchs: "Soil organic carbon and nitrogen pools in thermokarst-affected permafrost terrain", University of Potsdam
Master Students	*(1st or 2nd supervisor and reviewer)*
starting 10/2018	Master thesis J. Wiedmann: "Permafrost Characteristics of Subaquatic Permafrost", University of Augsburg
starting 09/2018	Master thesis C. Rutkowski: "Mercury in Siberian Permafrost", University of Salzburg, supervisor
03/2018 – 09/2018	Master thesis T. Windirsch: "Organic Matter Characteristics in a Changing Permafrost Environment", University of Potsdam
12/2016 – 06/2017	Master thesis L. Jongejans: "Paleodynamics and organic carbon characteristics in a thermokarst affected landscape on Baldwin Peninsula, Alaska", Universiteit Utrecht
08/2015 – 02/2016	Master thesis D. Neubauer: "Characterisation of organic matter stored in Yedoma and thermokarst permafrost"; Free University Berlin
Master Students	*(co-supervisor or committee member)*
01/2013 - 06/2013	Master thesis G. Tanski: "Release of dissolved organic carbon from coastal erosion into the southern Canadian Beaufort Sea"; Free University Berlin
08/2011 - 02/2012	Master thesis L. Eichhorn: "Holocene Paleoenvironmental Reconstruction of the Buor Khaya Peninsula - A Multiproxy Approach"; Tech. University Dresden

Awards (selection)

07/2018	**AWI Performance award** for outstanding scientific achievements in 2017 as well as excellent special services (3,000 €)
11/2017	***Congress Award*** as a co-organiser of the 11th International Conference on Permafrost, German Hotel and Restaurants Association (1,000 €)
12/2016	**Finalist** *Understandable Science 2016, (best of seven, nationwide),* Helmholtz-Centre Geesthacht (100 €)
12/2015	***Young Scientist Award*** *2015* for the best dissertation, AWI (2,000 €)

*the electronic version this CV includes links, highlighted in *italic* letters

11/2015 **Nominee** (best of 7, nationwide) of Wladimir Peter Köppen Award (2015), Excellence Cluster "Climate System Analysis and Prediction"

Science community service (selection)

International councils and committees

since 2018 Member of the Russian Science Foundation Expert Council

since 2018 Member of the scientific steering group of the Permafrost and Carbon Budgets Interest Group of the International Permafrost Association

2016 - 2017 Member of the International Scientific Committee of the *2nd Asian Conference on Permafrost, Sapporo, Japan*

06/2014 - 06/2016 Executive Committee of the Permafrost Young Researchers Network (PYRN)

10/2012 - 10/2014 Co-spokesman of PYRN Germany, Austria and Switzerland (PYRN-D.A.CH)

National councils and committees

10/2014 - 12/2016 Local organising committee for the *11th International Conference on Permafrost (~740 participants)*

06/2016 **Chair and organiser** of the "*Young investigators Workshop*" (~150 participants)

Peer-review for Nature Communications, Nature Geoscience, Global Change Biology, Global Biogeochemical Cycles, Biogeosciences, The Cryosphere, Scientific Reports, FEMS Microbiology Ecology, and project proposals (UK Research and Innovation, Japan Society for the Promotion of Science)

Conference Session chairing

10th International Conference on Permafrost (2012), EGU General Assembly (2014, 2015), American Geophysical Union Fall Meeting (2015, 2016, 2018), European Conference on Permafrost (2014, 2018), 2nd Asian Conference on Permafrost (2017), 11th International Conference on Permafrost (2018)

Editorships Reports on Polar and Marine Research (ISSN 1866-3192): Volume 655 (2012) and upcoming volume

Recent Collaborations

North America U of Alaska Fairbanks, USA (Prof. Y. Shur, Prof. M. Kanevskiy, Prof. B. Jones, Prof. V. Romanovsky), U of Northern Arizona, Flagstaff, USA (Prof. E. Schuur), U de Montréal, Canada (Prof. D. Fortier)

Europe U catholique de Louvain, Louvain-la-Neuve, Belgium (Prof. S. Opfergelt), Northumbria U, Newcastle, UK (Dr. P. Mann), Plymouth Marine Laboratory, UK (Dr. R. Torres), Stockholm U, Sweden (Prof. G. Hugelius)

Germany (besides AWI Potsdam): AWI Bremerhaven (Prof. G. Mollenhauer), German Research Centre for Geosciences (Dr. K. Mangelsdorf), Leipzig U (Dr. M. Ulrich), U Hamburg (Dr. C. Knoblauch)

Asia Permafrost Institute Yakutsk, Russia (Prof. M. Grigoriev, Dr. V. Spektor), Trofimuk Institute of Petroleum Geology and Geophysics, Novosibirsk, Russia (Dr. L. Tsibizov, A. Fague), Institute of Physicochemical and Biological Problems in Soil Science, Pushchino, Russia (Dr. L. Rivkina, Dr. A. Veremeeva), State Key Laboratory of Vegetation and Environmental Change, Beijing, China (Prof. Y. Yang)

Memberships

since 06/2014 International Permafrost Association (*IPA*)

since 05/2012 Association of Polar Early Career Scientists (*APECS*)

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since 12/2011	Permafrost Carbon Network (*PCN*)
since 01/2011	American Geophysical Union (*AGU*) und European Geosciences Union (*EGU*)
since 11/2009	Deutsche Gesellschaft für Polarforschung (*DGP*)
since 11/2009	Permafrost Young Researchers Network (*PYRN*)

Science communication and outreach

2017	Web article entitled *Permafrost: Pandoras Freezer?* (Permafrost: Pandoras Gefrierschrank?) for the "Science Year 2016*17 – Seas and Oceans" (Wissenschaftsjahr 2016*17 Meere und Ozeane, in German)
06/2017	Newspaper article in Tagesspiegel "*Camping for Science*" ("Campen für die Forschung", in German)
01/2017	Radio interview with radio station Bayern2 on thawing permafrost and its consequences (in German)
12/2016	Newspaper article in "Welt am Sonntag", entitled "The danger that came from the cold" ("*Die Gefahr die aus der Kälte kam*", in German)
02/2016	Radio interview with radio station "98.2 Paradiso" on record erosion measured in Alaska, based on a paper published in *Geomorphology*
01/2016	Multiple newspaper articles on "Record erosion in Alaska" (*Focus Online*, *Süddeutsche Zeitung*, *Zeit Online, Welt*), in German
12/2015	Radio interview with radio station INFOradio[rbb] about field work and Arctic expeditions, in German, series "WissensWerte"
04/2015	Article in plain language for *AWI Website science highlights* ("How thick is the old ground ice?")
03/2015	Article on "Permafrost - the big unknown in climate change" including results from my research ("Permafrost – die große Unbekannte im Klimawandel, in German (Spektrum der Wissenschaft, March 2015)
since 2015	Co-organising the AWI outreach activities during the "Long N8 of Science Berlin/Brandenburg" (Lange N8 der Wissenschaft)

Further qualifications

Languages	German (native), English (fluent)
Further training	Leadership skills, team management, project management, media training, self- and time management, conflict management, scientific presentation, academic publishing, university didactics, health and safety at work
Personal strength	Organisational skills, ambitioned and committed, methodical and systematic way of working, creative, solution-oriented, interdisciplinary approach

2 Publications

Please find full list available at
http://epic.awi.de/view/ldapid/jestraus.html)

Published datasets are available at:
https://www.pangaea.de/?q=email%3AJens.Strauss%40awi.de&count=25&f.author%5B%5D=Strauss%2C+Jens

2.1.1 ISI peer-reviewed articles

2019

1. Tanski, G., Bergstedt, H., Bevington, A., Bonnaventure, P., Bouchard, F., Coch, C., Dumais, S., Evgrafova, A., Frauenfeld, O., Frederick, J., Fritz, M., Frolov, D., Harder, S., Hartmeyer, I., Heslop, J., Högström, E., Johansson, M., Kraev, G., Kuznetsova, E., Lenz, J., Lupachev, A., Magnin, F., Martens, J., Maslakov, A., Morgenstern, A., Nieuwendam, A., Oliva, M., Radosavljevic, B., Ramage, J., Schneider, A., Stanilovskaya, J., **Strauss, J.**, Trochim, E., Vecellio, D., Weber, S., Lantuit, H., The Permafrost Young Researchers Network (PYRN) is getting older – the past, present, and future of our evolving community, Polar Records, doi: 10.1017/S0032247418000645
2. Treat, C., Kleinen, T., Broothaerts, N., Dalton, A., Dommain, R., Douglas, T., Drexler, J., Finkelstein, S., Grosse, G., Hättestrand, M., Hope, G., Hutchings, J., Jones, M., Kuhry, P., Lacourse, T., Lähteenoja, O., Loisel, J., Notebaert, B., Payne, R., Peteet, D., Sannel, B., Stelling, J., **Strauss, J.**, Swindles, G., Talbot, J., Tarnocai, C., Väliranta, M., Verstraeten, G., Williams, C., Xia, Z., Yu, Z., Brovkin, V., Widespread global peatland establishment and persistence over the last 130,000 years, PNAS, doi: 10.1073/pnas.1813305116

2018

3. Fuchs, M., Grosse, G., **Strauss, J.**, Günther, F., Grigoriev, M. N., Maximov, G. M. and Hugelius, G. (2018b) Carbon and nitrogen pools in thermokarst-affected permafrost landscapes in Arctic Siberia, Biogeosciences, 15, pp. 953-971, doi:10.5194/bg-15-953-2018
4. Liu, F. Chen, L., Abbott, B., Xu, Y., Yang, G., Kou, D., Qin, S., **Strauss, J.**, Wang, Y., Zhang, B., Yang, Y., Reduced quantity and quality of SOM along a thaw sequence on the Tibetan Plateau, Environmental Research Letters, doi: 10.1088/1748-9326/aae43b
5. Jongejans, L., **Strauss, J.**, Lenz, J., Peterse, F., Mangelsdorf, K., Fuchs, M. and Grosse, G., Organic carbon characteristics in yedoma and thermokarst deposits on Baldwin Peninsula, West-Alaska, Biogeosciences
6. Schirrmeister, L., Bobrov, A., Raschke, E., Herzschuh, U., **Strauss, J.**, Pestryakova L. and Wetterich S. (2018) Late Holocene ice-wedge polygon dynamics in northeastern Siberian coastal lowlands, Arctic, Antarctic, and Alpine Research, 50:1, doi:10.1080/15230430.2018.1462595

2017

7. Beermann, F., Langer, M., Wetterich, S., **Strauss, J.**, Boike, J., Fiencke, C., Schirrmeister, L., Pfeiffer, E. M. and Kutzbach, L. (2017) Permafrost Thaw and Liberation of Inorganic Nitrogen in Eastern Siberia, Permafrost and Periglacial Processes, doi:10.1002/ppp.1958
8. Lapointe Elmrabti, L., Talbot, J., Fortier, D., Fréchette, B., **Strauss, J.**, Kanevskiy, M. and Shur, Y. (2017) Middle to late Wisconsinan climate and ecological changes in northern Alaska: Evidences from the Itkillik River Yedoma, Palaeogeography, Palaeoclimatology, Palaeoecology, doi:10.1016/j.palaeo.2017.08.006
9. Schirrmeister, L., Schwamborn, G., Overduin, P., **Strauss, J.**, Fuchs, M., Grigoriev, M. N., Yakshina, I. A., Rethemeyer, J., Dietze, E. and Wetterich, S. (2017) Yedoma Ice Complex of the Buor Khaya Peninsula (southern Laptev Sea), Biogeosciences, 14, pp. 1261-1283, doi:10.5194/bg-14-1261-2017
10. **Strauss, J.**, Schirrmeister, L., Grosse, G., Fortier, D., Hugelius, G., Knoblauch, C., Romanovsky, V. E., Schädel, C., Schneider von Deimling, T., Schuur, E. A. G., Shmelev, D., Ulrich, M. and Veremeeva, A. (2017) Deep Yedoma permafrost: A synthesis of depositional characteristics and carbon vulnerability, Earth-Science Reviews, 172, pp. 75-86, doi:10.1016/j.earscirev.2017.07.007
11. Tanski, G., Lantuit, H., Ruttor, S., Knoblauch, C., Radosavljevic, B., **Strauss, J.**, Wolter, J., Irrgang, A., Ramage, J. and Fritz, M. (2017) Transformation of terrestrial organic matter along thermokarst-affected permafrost coasts in the Arctic, Science of The Total Environment, 581-582, pp. 434-447, doi:10.1016/j.scitotenv.2016.12.152

2016

12. Kanevskiy, M., Shur, Y., **Strauss, J.**, Jorgenson, T., Fortier, D., Stephani, E. and Vasiliev, A. (2016) Patterns and rates of riverbank erosion involving ice-rich permafrost (yedoma) in northern Alaska, Geomorphology, doi:10.1016/j.geomorph.2015.10.023
13. Stapel, J., Schirrmeister, L., Overduin, P., Wetterich, S., **Strauss, J.**, Horsfield, B. and Mangelsdorf, K. (2016) Microbial lipid signatures and substrate potential of organic matter in permafrost deposits - implications for future greenhouse gas production, Journal of Geophysical Research: Biogeosciences, doi:10.1002/2016JG003483

2015

14. Koven, C. D., Schuur, E. A. G., Schädel, C., Bohn, T., Burke, E., Chen, G., Chen, X., Ciais, P., Grosse, G., Harden, J. W., Hayes, D. J., Hugelius, G., Jafarov, E. E., Krinner, G., Kuhry, P., Lawrence, D. M., MacDougall, A. H., Marchenko, S. S., McGuire, A. D., Natali, S. M., Nicolsky, D. J., Olefeldt, D., Peng, S., Romanovsky, V. E., Schaefer, K. M., **Strauss, J.**, Treat, C. C. and Turetsky, M. (2015) A simplified, data-constrained approach to estimate the permafrost carbon–climate feedback, Proceedings of the Royal Society A-Mathematical Physical and Engineering Sciences, 373, doi:10.1098/rsta.2014.0423
15. Schneider von Deimling, T., Grosse, G., **Strauss, J.**, Schirrmeister, L., Morgenstern, A., Schaphoff, S., Meinshausen, M. and Boike, J. (2015) Observation-based modelling of permafrost carbon fluxes with accounting for deep carbon deposits and thermokarst activity, Biogeosciences, 12 (11), pp. 3469-3488, doi:10.5194/bg-12-3469-2015
16. **Strauss, J.**, Schirrmeister, L., Mangelsdorf, K., Eichhorn, L., Wetterich, S. and Herzschuh, U. (2015) Organic-matter quality of deep permafrost carbon – a study from Arctic Siberia, Biogeosciences, 12, pp. 2227-2245, doi:10.5194/bg-12-2227-2015

2014

17. Hugelius, G., **Strauss, J.**, Zubrzycki, S., Harden, J. W., Schuur, E. A. G., Ping, C. L., Schirrmeister, L., Grosse, G., Michaelson, G. J., Koven, C. D., O'Donnell, J. A., Elberling, B., Mishra, U., Camill, P., Yu, Z., Palmtag, J. and Kuhry, P. (2014) Estimated stocks of circumpolar permafrost carbon with quantified uncertainty ranges and identified data gaps, Biogeosciences, 11 (23), pp. 6573-6593, doi:10.5194/bg-11-6573-2014
18. Ulrich, M., Grosse, G., **Strauss, J.** and Schirrmeister, L. (2014) Quantifying wedge-ice volumes in yedoma and thermokarst basin deposits, Permafrost and Periglacial Processes, doi:10.1002/ppp.1810

2013

19. Hugelius, G., Bockheim, J. G., Camill, P., Eberling, B., Grosse, G., Harden, J. W., Johnson, K., Jorgenson, T., Koven, C., Kuhry, P., Michaelson, G., Mishra, U., Palmtag, J., Ping, C. L., O'Donnell, J., Schirrmeister, L., Schuur, E. A. G., Sheng, Y., Smith, L., **Strauss, J.** and Yu, Z. (2013) A new data set for estimating organic carbon storage to 3 m depth in soils of the northern circumpolar permafrost region, Earth System Science Data, 5, pp. 393-402, doi:10.5194/essd-5-393-2013
20. **Strauss, J.**, Schirrmeister, L., Grosse, G., Wetterich, S., Ulrich, M., Herzschuh, U. and Hubberten, H. W. (2013) The Deep Permafrost Carbon Pool of the Yedoma Region in Siberia and Alaska, Geophysical Research Letters, 2013GL058088, doi:10.1002/2013GL058088

2012

21. **Strauss, J.**, Schirrmeister, L., Wetterich, S., Borchers, A. and Davydov, S. (2012) Grain-size properties and organic-carbon stock of Yedoma Ice Complex permafrost from the Kolyma lowland, northeastern Siberia, Global Biogeochemical Cycles, 26 (GB3003), doi:10.1029/2011GB004104

2011

22. Schirrmeister, L., Grosse, G., Wetterich, S., Overduin, P. P., **Strauss, J.**, Schuur, E. A. G. and Hubberten, H. W. (2011) Fossil organic matter characteristics in permafrost deposits of the northeast Siberian Arctic, Journal of Geophysical Research Biogeosience, 116, G00M02, doi:10.1029/2011JG001647

2.1.2 Peer-reviewed, non ISI journals

2018

Fuchs, M., Grosse, G., Jones, BM., **Strauss, J.**, Baughman, CA., Walker DA. (2018a) Sedimentary and geochemical characteristics of two small permafrost-dominated Arctic river deltas in northern Alaska, arktos 4 (1), 20, doi:10.1007/s41063-018-0056-9

Schirrmeister, L., Grigoriev, M., **Strauss, J.**, Grosse, G., Overduin, P., Kholodov, A., Guenther, F., Hubberten, H.-W. (2018) Sediment characteristics of a thermokarst lagoon in the northeastern Siberian Arctic (Ivashkina Lagoon, Bykovsky Peninsula), arktos 4 (1), 13, doi:10.1007/s41063-018-0049-8

Grosse, G. Lenz, J., **Strauss J.**, Permafrostverbreitung und -degradation in den Polarregionen: Folgen des Klimawandels für den Permafrost und Rückkopplungen mit dem Klimasystem, Geographische Rundschau 11, pp. 10- 15 (in German)

2012

Schirrmeister, L., Siegert, C. and **Strauss, J.** (2012) Permafrost ein sensibles Klimaphänomen – Begriffe, Klassifikationen und Zusammenhänge (Permafrost a sensible climate phenomenon – terms, classifications, and relationships), Polarforschung, Bremerhaven, Alfred Wegener Institute for Polar and Marine Research & German Society of Polar Research, 81 (1)

2.1.3 Paper, accepted or under review at ISI journals

Fuchs, M., Lenz, J., Jock, S., Nitze, I., Jones, B., **Strauss, J.**, Günther, F., Grosse, G., Impacts of Successive Thermokarst Lake Stages on Soil Organic Matter, Arctic Alaska, under review at Journal of Geophysical Research: Biogeosciences (accepted)

Schirrmeister, L., Dietze, E., Matthes, H., Grosse, G., **Strauss, J.**, Laboor, S., Ulrich, M., Kienast, F., Wetterich, S., The genesis of Yedoma Ice Complex – endmember modeling analysis (EMMA) of grain-size data from Siberia and Alaska (submitted)

Wetterich, S., Rudaya, N., Kuznetsov, V., Maksimov, F., Opel, T., Meyer, H., Günther, F., Bobrov, A., Raschke, E., Zimmermann, H., **Strauss, J.**, Fuchs, M., Schirrmeister, L., Ice Complex formation on Bol'shoy Lyakhovsky Island (New Siberian Archipelago, East Siberian Arctic) since about 200 ka (accepted at Quaternary Research)

Discussion journals

2018

Jongejans, L., **Strauss, J.**, Lenz, J., Peterse, F., Mangelsdorf, K., Fuchs, M. and Grosse, G. (2018) Organic carbon characteristics in yedoma and thermokarst deposits on Baldwin Peninsula, West-Alaska, Biogeosciences Discussions, doi:10.5194/bg-2018-151

2017

Fuchs, M., Grosse, G., **Strauss, J.**, Günther, F., Grigoriev, M. N., Maximov, G. M. and Hugelius, G. (2017) Carbon and nitrogen pools in thermokarst-affected permafrost landscapes in Arctic Siberia, Biogeosciences Discussions, doi:10.5194/bg-2017-173

Schirrmeister, L., Schwamborn, G., Overduin, P., **Strauss, J.**, Fuchs, M., Grigoriev, M. N., Yakshina, I. A., Rethemeyer, J., Dietze, E. and Wetterich, S. (2016) Yedoma Ice Complex of the Buor Khaya Peninsula (southern Laptev Sea), Biogeosciences Discussions, doi:10.5194/bg-2016-283

2016

Beermann, F., Langer, M., Wetterich, S., **Strauss, J.**, Boike, J., Fiencke, C., Schirrmeister, L., Pfeiffer, E. M. and Kutzbach, L. (2016): Permafrost thaw and release of inorganic nitrogen from polygonal tundra soils in eastern Siberia, Biogeosciences Discussions, doi:10.5194/bg-2016-117

2014

Hugelius, G., **Strauss, J.**, Zubrzycki, S., Harden, J. W., Schuur, E. A. G., Ping, C. L., Schirrmeister, L., Grosse, G., Michaelson, G. J., Koven, C. D., O'Donnell, J. A., Eberling, B., Mishra, U., Camill, P., Yu, Z., Palmtag, J. and Kuhry, P. (2014) Improved estimates show large circumpolar stocks of permafrost carbon while quantifying substantial uncertainty ranges and identifying remaining data gaps, Biogeosciences Discussions, 11, doi:10.5194/bgd-11-4771-2014

Schneider von Deimling, T., Grosse, G., **Strauss, J.,** Schirrmeister, L., Morgenstern, A., Schaphoff, S., Meinshausen, M. and Boike, J. (2014) Observation-based modelling of permafrost carbon fluxes with accounting for deep carbon deposits and thermokarst activity, Biogeosciences Discussions, 11 (12), doi:10.5194/bgd-11-16599-2014

Strauss, J., Schirrmeister, L., Mangelsdorf, K., Eichhorn, L., Wetterich, S. and Herzschuh, U. (2014) Organic matter quality of deep permafrost carbon – a study from Arctic Siberia, Biogeosciences Discussions, 11 (11), doi:10.5194/bgd-11-15945-2014

2013

Hugelius, G., Tarnocai, C., Bockheim, J. G., Camill, P., Eberling, B., Grosse, G., Harden, J., Johnson, K., Jorgenson, T., Koven, C., Kuhry, P., Michaelson, G., Mishra, U., Palmtag, J., Palmtag, J., Ping, C. L., O'Donnell, J., Schirrmeister, L., Schuur, E. A. G., Sheng, Y., Smith, L., **Strauss, J.** and Yu, Z. (2013) Short communication: a new dataset for estimating organic carbon storage to 3 m depth in soils of the northern circumpolar permafrost region, Earth Syst. Sci. Data Discuss., 6, doi:10.5194/essdd-6-73-2013

Book chapters

2018

Strauss, J., Schirrmeister, L., Zubrzycki, S., Kholodov, A., Grigoriev, M., Kunitsky, V., Fuchs, M., Pfeiffer, E.-M., Grosse, G. (2018) Organic Matter Matters – Quantifying the Amount of Carbon in Northern Siberia, in: 20 Years of Terrestrial Research in the Siberian Arctic - The History of the LENA Expeditions / Hubberten, H.-W., Bolshiyanov, D., Grigoriev, M., Grosse, G., Morgenstern, A., Pfeiffer, E.-M., Rachold, V., Schirrmeister, L. (editors), pp. 117-119, Alfred-

Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (in English, Russian and German)

Strauss. J., Grigoriev, M., Overduin, P., Maximov, G., Grosse, G., Fague, A., Tsibizov, L., Schirrmeister, L. (2018) Deep Insights into the Past: Terrestrial Permafrost Drilling Campaigns, in: 20 Years of Terrestrial Research in the Siberian Arctic - The History of the LENA Expeditions / Hubberten, H.-W., Bolshiyanov, D., Grigoriev, M., Grosse, G., Morgenstern, A., Pfeiffer, E.-M., Rachold, V., Schirrmeister, L. (editors), pp. 174-176, Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (in English, Russian and German)

2017

Strauss, J., Lenz, J., Schneider von Deimling, T., Günther, F. and Schirrmeister, L. (2017) Permafrost im Wandel – Regionaler Fokus, globale Bedeutung / Diekmann, B. (editor), in: 25 Jahre Forschungsstelle Potsdam, Germany, Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, 108 p.

Conference Talks (*invited)

2018

***Strauss, J.** (2018) "The Yedoma Region" - An Action Group of the International Permafrost Association, International Permafrost Association Council Meeting, Chamonix Mont-Blanc, France

***Strauss, J.** (2018) The PhD and what comes next: Opportunities in and beyond academia, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Fortier, D., **Strauss, J.**, Sliger, M., Calmels, F., Froese, D. and Shur, Y. (2018) Late Pleistocene yedoma in south-western Yukon (Canada): a remnant of Eastern Beringia?, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Fuchs, M., Grosse, G., Lenz, J., **Strauss, J.**, Nitze, I., Jongejans, L., Jones, B. M. and Walker, D. A. (2018) Soil carbon and nitrogen stocks in Arctic river deltas: New data for three Northwest Alaskan deltas, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Jongejans, L. L., **Strauss, J.**, Lenz, J., Peterse, F., Mangelsdorf, K., Fuchs, M. and Grosse, G. (2018) Organic carbon stored in a thermokarst affected landscape on Baldwin Peninsula, Alaska, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Lenz, J., Walter Anthony, K.M., Winkel, M. Liebner, S. Fuchs, M., **Strauss, J.**, Maio, C.V., Jones, B.M., Grosse, G. (2018) Carbon accumulation in thermokarst lakes: A biogeochemical comparison between Alaskan boreal and tundra lake deposits, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Opfergelt, S., Mauclet, E., Lefebvre, B., Monhonval, A., Bertouille, N., Vandeuren, A., Pereira, B., Hirst, C., Kuhry, P., **Strauss, J.**, Grosse, G. and Conley, D. J. (2018) The permafrost mineral reserve: identify potential mineral nutrient hotspots upon thawing, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Strauss, J., Abbott, B., Beermann, F., Biasi, C., Fuchs, M., Grosse, G., Horn, M., Liebner, S., Sanders, T., Schirrmeister, L., Schneider von Deimling, T., Winkel, M. and Zubrzycki, S. (2018) The nitrogen stock of the ice-rich yedoma domain, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

Strauss, J., Ulrich, M. and Habeck, J. O. (2018) "Permafrost and Culture" (PaC): An Action Group of the International Permafrost Association, International Permafrost Association Council Meeting, Chamonix Mont-Blanc, France

2017

***Strauss, J.** (2017) Deep ice-Rich permafrost and Its Carbon Vulnerability, 2nd Asian Conference on Permafrost, Sapporo, Japan (Plenary talk)

Strauss, J., Fortier, D., Froese, D., Grosse, G., Kanevskiy, M., Kunitsky, V. V., Laboor, S., Schirrmeister, L., Shmelev, D. and Veremeeva, A. (2017) Permafrost Deep Organic Matter: The IPA Yedoma Action Group, Arbeitskreis Permafrost 2017, Einsiedeln, Switzerland

Strauss, J., Grosse, G., Jongejans, L., Jones, B. M., Fuchs, M., Nitze, I., Laboor, S. and Lenz, J. (2017) Filling a White Spot on the Yedoma Map: the Baldwin Peninsula, West Alaska, 2nd Asian Conference on Permafrost, Sapporo, Japan

2016

*Grosse, G., Jones, B. M., Nitze, I. and **Strauss, J.** (2016) Introduction to Remote Sensing of Permafrost Landscapes and Dynamics, 14th International Circumpolar Remote Sensing Symposium, Homer, Alaska, USA

Schirrmeister, L., Grosse, G., **Strauss, J.**, Dietze, E. and Wetterich, S. (2016) The polygenetic hypothesis of Yedoma origin – comparing grain-size distributions of Alaskan and Siberian Yedoma, The Nitrogen Inventory of the Yedoma Permafrost Region, 11th International Conference on Permafrost (ICOP), Potsdam, Germany

Schneider von Deimling, T., Grosse, G., **Strauss, J.**, Schirrmeister, L., Morgenstern, A. and Boike, J. (2016) Observation-based modelling of CO2 and CH4 fluxes from newly thawed carbon, The Nitrogen Inventory of the Yedoma Permafrost Region, 11th International Conference on Permafrost (ICOP), Potsdam, Germany

Strauss, J., Beermann, F., Biasi, C., Fiencke, C., Grosse, G., Kutzbach, L., Sanders, T., Schirrmeister, L., Schneider von Deimling, T., Wetterich, S. and Zubrzycki, S. (2016) The Nitrogen Inventory of the Yedoma Permafrost Region, 11th International Conference on Permafrost (ICOP), Potsdam, Germany

***Strauss, J.** (2016) Permafrost im Arktischen Permafrost – Pandoras Gefrierschrank?, Verständliche Wissenschaft 2016, Geesthacht, Germany

***Strauss, J.** (2016) Updates on Permafrost Deep Organic Matter: Yedoma Carbon and Nitrogen, 6th Annual Meeting of the Permafrost Carbon Network, San Francisco, USA

Tanski, G., Bevington, A., Frolov, D., **Strauss, J.**, Lenz, J., Kuznetsova, E., Hogström, E., Maslakov, A., Harder, S., Radosavljevic, B., Schneider, A. and Longo, W. (2016) PYRN General Assembly: Report from the current (2014-2016) and election of the new Executive Committee (2016-2018), Young Researchers Workshop at the 11th International Conference on Permafrost (ICOP), Potsdam, Germany

Tanski, G., Lantuit, H., Ruttor, S., Knoblauch, C., Radosavljevic, B., **Strauss, J.**, Wolter, J., Irrgang, A., Ramage, J. and Fritz, M. (2016) Carbon and nitrogen mobilization along thermokarst-affected permafrost coasts and its degradation mechanisms before entering the near shore zone, AGU Fall Meeting, San Francisco, USA

Tanski, G., Ruttor, S., Lantuit, H., Knoblauch, C., Radosavljevic, B., Ramage, J., Mollenhauer, G., **Strauss, J.** and Fritz, M. (2016) Permafrost carbon degradation and transport pathways at thermokarst coasts in the Arctic, 11th International Conference on Permafrost (ICOP), Potsdam, Germany

Wetterich, S., **Strauss, J.**, Fuchs, M. C. and Schirrmeister, L. (2016) Late Quaternary accretion and decline of syngenetic ice-rich permafrost, EGU General Assembly 2016, Vienna, Austria

2015

Schneider von Deimling, T., Guido, G., **Strauss, J.**, Schirrmeister, L., Morgenstern, A., Schaphoff, S., Meinshausen, M. and Boike, J. (2015) Observation-based modelling of permafrost carbon fluxes with accounting for deep carbon deposits and thermokarst activity, EGU General Assembly 2015, Vienna, Austria

Schneider von Deimling, T., Grosse, G., **Strauss, J.**, Schirrmeister, L., Morgenstern, A., Schaphoff, S., Meinshausen, M. and Boike, J. (2015) Modelling of carbon release from deep permafrost carbon deposits with accounting for thermokarst activity, CarboPerm meeting 2015, Hamburg, Germany

***Strauss, J.**, Grosse, G., Hugelius, G. and Yang, Y. (2015) Yedoma carbon stocks and other deep permafrost carbon, 5th Meeting of the Permafrost Carbon Network, San Francisco, USA

***Strauss, J.** and Grosse, G. (2015) Yedoma Permafrost Carbon Stocks, Permafrost Carbon Network Meeting, Flagstaff, USA

2014

Hugelius, G., Kuhry, P., **Strauss, J.**, Zubrzycki, S., Harden, J., Schuur, E. A. G., Ping, C. L., Schirrmeister, L., Grosse, G., Michaelson, G., Koven, C., O´Donnell, J., Elberling, B., Mishra, U., Camill, P., Yu, Z., Palmtag, J. and Tarnocai, C. (2014) Estimates of soil carbon stocks in the northern circumpolar permafrost region: progress in the last decades, recent updates and future perspectives, 3rd and final CAPP workshop, Stockholm, Sweden

Kuznetsova,, E., Tanski, G., Bevington, A., Harder, S., Hogström, E., **Strauss, J.**, Maslakov, A., Schneider, A., Longo, W., Blitz, R. and Fritz, M. (2014) The Permafrost Young Researchers Network (PYRN): Involving the young generation of polar scientists to cross disciplinary knowledge exchanges, policy and strategy discussions, Arctic Change 2014, Ottawa, Canada

Pitulko, V., Yakshina, I., **Strauss, J.**, Schirrmeister, L., Kuznetsova, T., Nikolskiy, P. and Pavlova, E. (2014) A MIS 3 Kill-Butchery Mammoth Site on Buor-Khaya Penninsula, Eastern Laptev Sea, Russian Arctic / Kostopoulos, D., Vlachos, E. and Tsoukala, E. (editors), In: Abstract Book of the VIth International Conference on Mammoths and their Relatives, Grevena – Slatista, University of Thessaloniki, 248 p.

Strauss, J., Schirrmeister, L., Mangelsdorf, K., Grosse, G. and Wetterich, S. (2014) The permafrost deep fossil carbon inventory – Quantity and quality, 4th European Conference on Permafrost, Evora, Portugal

Strauss, J., Schirrmeister, L., Wetterich, S. and Kunitsky, V. V. (2014) Yedoma - loess or not loess – that's the question, 4th European Conference on Permafrost, Evora, Portugal

2013

Strauss, J., Mangelsdorf, K., Schirrmeister, L. and Wetterich, S. (2013) Content and Vulnerability of Fossil Organic Matter in Ice-Rich Siberian Permafrost – a Case Study, EGU General Assembly 2013, Vienna, Austria

***Strauss, J.**, Schirrmeister, L., Grosse, G., Wetterich, S., Ulrich, M., Herzschuh, U. and Hubberten, H. W. (2013) The Deep Permafrost Carbon Pool of Siberia and Alaska, AGU Fall Meeting 2013, San Francisco, USA

Strauss, J., Schirrmeister, L., Grosse, G., Wetterich, S., Ulrich, M., Herzschuh, U. and Hubberten, H. W. (2013) The Deep & Frozen Permafrost Carbon Pool of the Yedoma Region, Annual Meeting of the Vulnerability of permafrost carbon RCN 2013, San Francisco, USA

2012

*Hugelius, G., Tarnocai, C., Kuhry, P., Harden, J., Ping, C. L., Schuur, E. A. G., Schirrmeister, L., O'Donnel, J., Mishra, U., Palmtag, J., Grosse, G., Camill, P., Michaelson, G., **Strauss, J.**, Elberling, B., Jorgenson, T., Johnson, K., Yu, Z. and Bockheim, J. G. (2012) Quantity of Soil Organic Carbon in the Upper 3 m of Soil in the Northern Circumpolar Permafrost Region, American Geophysical Union (AGU) Fall Meeting, San Francisco, USA

Schirrmeister, L., Wetterich, S., **Strauss, J.**, Overduin, P. P., Hubberten, H. W. and Grosse, G. (2012) Organic Matter Properties in Late Quaternary Permafrost of NE Siberia, Tenth International Conference on Permafrost : Resources and Risks of Permafrost Areas in a Changing World, Salekhard, Russia

Strauss, J., Schirrmeister, L., Wetterich, S. and Mangelsdorf, K. (2012) Old Organic Matter in Siberian Permafrost Deposits and its Degradation Features, Tenth International Conference on Permafrost - Resources and Risks of Permafrost Areas in a Changing World, Salekhard, Russia

Strauss, J., Mangelsdorf, K., Wetterich, S. and Schirrmeister, L. (2012) Qualität der Organischen Substanz im Eisreichen Sibirischen Permafrost - eine Fallstudie (Organic Matter Quality of Siberian Ice Complex - a Case Study), Arbeitskreis Permafrost der Deutschen Gesellschaft für Polarforschung, Potsdam, Germany

2011

Schirrmeister, L., Wetterich, S., Grosse, G., **Strauss, J.**, Siegert, C., Overduin, P. P. and Hubberten, H. W. (2011) Fossil organic matter in permafrost deposits of northern East Siberia contents and characteristics, Fourth Russian Conference on Geocryology, Moscow State University, June 7-9, 2011, Moscow, Russia

2010

Strauss, J., Schirrmeister, L. and Wetterich, S. (2010) Paleoenvironmental dynamics of Western Beringia - New studies from the Yedoma key site Duvanny Yar (Lower Kolyma River, Siberia), Sediment 2010, Meeting of the Society for Sedimentary Geology - Central European Section (SEPM-CES) and the Sedimentology Section of the Geologische Vereinigung (GV), 25. - 27 June 2010, Potsdam, Germany

Posters (selected on submitted abstract)

2018

Mauclet, E., Opfergelt, S., Monhonval, A., **Strauss, J.**, Grosse, G., Fuchs, M. and Schirrmeister, L. (2018) Distribution of mineral constituents in Yedoma permafrost: implications for Yedoma formation, 5th European Conference on Permafrost, Chamonix Mont-Blanc, France

2017

Jongejans, L., **Strauss, J.**, Lenz, J., Peterse, F. and Grosse, G. (2017) Palaeodynamics and organic characteristics in a thermokarst affected landscape on Baldwin Peninsula, West Alaska, Arbeitskreis Permafrost, Einsiedeln, Switzerland

2016

Fuchs, M., Grosse, G., Jones, B. M., Maximov, G. and **Strauss, J.** (2016) Soil organic carbon storage in five different arctic permafrost environments, AGU Fall Meeting 2016, San Francisco, USA

Neubauer, D., **Strauss, J.**, Mangelsdorf, K. and Grosse, G. (2016) Characterization of organic matter stored in Yedoma and thermokarst permafrost, Annual Meeting of the "Working Group Permafrost" of the German Society, Hamburg, Germany

Neubauer, D., **Strauss, J.**, Mangelsdorf, K. and Grosse, G. (2016) Characterization of organic matter stored in frozen Yedoma and thermokarst basin deposits on Sobo-Sise Island, Lena Delta, 11th International Conference on Permafrost, Potsdam, Germany

Strauss, J., Abbott, B., Biasi, C., Grosse, G., Horn, M., Liebner, S., Sanders, T., Schirrmeister, L., Schneider von Deimling, T., Wetterich, S., Winkel, M. and Zubrzycki, S. (2016) The Nitrogen Inventory of the Yedoma Permafrost Domain, AGU Fall Meeting, San Francisco, USA

Strauss, J., Fedorov, A. N., Fortier, D., Froese, D., Fuchs, M., Grosse, G., Günther, F., Harden, J. W., Hugelius, G., Kanevskiy, M., Kholodov, A. L., Kunitsky, V. V., Kraev, G., Laboor, S., Lapointe Elmrabti, L., Lozhkin, A. V., Rivkina, E., Robinson, J., Schirrmeister, L., Shmelev, D., Shur, Y., Siegert, C., Spektor, V. V., Ulrich, M., Vartanyan, S., Veremeeva, A., Walter Anthony, K. M. and Zimov, S. (2016) Ice-Rich

Yedoma Permafrost: A Synthesis of Northern Hemisphere Distribution and Thickness (IPA Action Group), 11th International Conference on Permafrost, Potsdam, Germany

Strauss, J., Fedorov, A. N., Fortier, D., Froese, D., Fuchs, M., Grosse, G., Günther, F., Harden, J., Hugelius, G., Kanevskiy, M., Kholodov, A. L., Kunitsky, V. V., Laboor, S., Lapointe-Elmrabti, L., Rivkina, E., Robinson, J., Schirrmeister, L., Shmelev, D., Shur, Y., Spektor, V. V., Ulrich, M., Veremeeva, A., Walter Anthony, K. M. and Zimov, S. (2016) Ice-Rich Yedoma Permafrost: Circum-Arctic Distribution and Thickness Synthesis, Annual Meeting of the "Working Group Permafrost", German Society for Polar Research, Hamburg, Germany

Treat, C. C., Broothaerts, N., Dalton, A., Dommain, R., Finkelstein, S., Grosse, G., Jones, M. C., Kleinen, T., Kuhry, P., Lacourse, T., Lähteenoja, O., Notebaert, B., Payne, R., Peteet, D. M., Sannel, B., Stelling, J., **Strauss, J.**, Swindles, G., Talbot, J., Tarnocai, C., Verstraeten, G., Williams, C., Xia, Z., Yu, Z. and Brovkin, V. (2016) Buried Peats: Past Peatland Distribution as an Indicator of Hydroclimate and Temperature, AGU Fall Meeting, San Francisco, USA

2015

Grosse, G., Jones, B., Schirrmeister, L., Meyer, H., Wetterich, S., **Strauss, J.**, Gaglioti, B., Mann, D. H. and Romanovsky, V. E. (2015) Late Pleistocene and Holocene ice-rich permafrost in the Colville River valley, northern Alaska, PAST Gateways 2015, Potsdam, Germany

Koven, C. D., Schuur, E. A. G., Schädel, C., Bohn, T., Burke, E., Chen, G., Chen, X., Ciais, P., Grosse, G., Harden, J., Hayes, D. J., Hugelius, G., Jafarov, E. E., Krinner, G., Kuhry, P., Lawrence, D. M., MacDougall, A. H., Marchenko, S. S., McGuire, A. D., Natali, S. M., Nicolsky, D. J., Olefeldt, D., Peng, S., Romanovsky, V., Schaefer, K., **Strauss, J.**, Treat, C. C. and Turetsky, M. (2015) A simplified, data-constrained approach to estimate the permafrost carbon-climate feedback: The PCN Incubation-Panarctic Thermal (PInc-PanTher) Scaling Approach, AGU Fall Meeting, San Francisco, USA

Lenz, J., Kuznetsova, E., Tanski, G., Bevington, A., Högström, E., Frolov, D., Harder, S., **Strauss, J.**, Maslakov, A., Schneider, A., Longo, W., Recio Blitz, C., Radosavljevic, B., Fritz, M., Morgenstern, A. and Nieuwendam, A. (2015) Permafrost Young Researchers Network (PYRN): Perspectives and Priorities of the next Generation on Permafrost Research, Arctic Science Summit Week 2015, Toyama, Japan

Strauss, J., Fedorov, A. N., Fortier, D., Froese, D., Fuchs, M., Grosse, G., Günther, F., Harden, J. W., Hugelius, G., Kanevskiy, M., Kholodov, A. L., Kunitsky, V. V., Laboor, S., Lapointe-Elmrabti, L., Rivkina, E., Robinson, J., Schirrmeister, L., Shmelev, D., Shur, Y., Spektor, V. V., Ulrich, M., Veremeeva, A., Walter Anthony, K. M. and Zimov, S. (2015) Ice-Rich Yedoma Permafrost: A Synthesis of Circum-Arctic Distribution and Thickness, AGU Fall Meeting, San Francisco, USA

Strauss, J., Schirrmeister, L. and Sanders, T. (2015) Nitrogen pools in permafrost deposits and soils of the Yedoma region, ENC2015 Conference: 20th European Nitrogen Cycle Meeting, Edinburgh, Scotland

2014

Hugelius, G., **Strauss, J.**, Zubrzycki, S., Harden, J. W., Schuur, E. A. G., Ping, C. L., Schirrmeister, L., Grosse, G., Michaelson, G. J., Koven, C. D., O'Donnel, J., Elberling, B., Mishra, U., Camill, P., Yu, Z., Palmtag, J. and Kuhry, P. (2014) Improved Estimates Show Large Circumpolar Stocks of Permafrost Carbon While Quantifying Substantial Uncertainty Ranges and Identifying Remaining Data Gaps, AGU Fall Meeting, San Francisco, USA

Kanevskiy, M., Shur, Y., Jorgenson, T., Stephani, E. and **Strauss, J.** (2013) Extreme rates of riverbank erosion of the high bluff formed by the ice-rich syngenetic permafrost (yedoma), Itkillik River, Northern Alaska, American Geophysical Union (AGU) Fall Meeting, San Francisco, USA

Lapointe Elmrabti, L., Talbot, J., Kanevskiy, M., **Strauss, J.**, Shur, Y. and Fortier, D. (2014) Late Pleistocene and Holocene Beringia vegetation dynamic reconstructions based on a yedoma exposure, Iktillik (Alaska), Arctic change 2014, Ottawa, Canada

Lapointe Elmrabti, L., Talbot, J., Kanevskiy, M., **Strauss, J.**, Shur, Y. and Fortier, D. (2013) Late Pleistocene and Holocene Beringia vegetation dynamic reconstructions based on a yedoma exposure, Itkillik (Alaska), AGU Fall Meeting 2013, San Francisco, USA

Schirrmeister, L., **Strauss, J.**, Wetterich, S., Grosse, G. and Overduin, P. (2013) Deep fossil carbon - spatial and temporal variability of organic matter pools in permafrost, International Conference "Earth Cryology: XXI Century", Pushchino, Russia

Strauss, J., Schirrmeister, L., Grosse, G., Ulrich, M. and Wetterich, S. (2013) The Deep Permafrost Carbon Pool of Siberia and Alaska, Arbeitskreis Permafrost der Deutschen Gesellschaft für Polarforschung, Salzburg, Austria

Tanski, G., Bevington, A., Kuznetsova, E., Harder, S., Frolov, D., Lenz, J., Högström, E., Strauss, J., Maslakov, A., Schneider, A., Longo, W., Recio Blitz, C. and Radosavljevic, B. (2014) The Permafrost Young Researchers Network (PYRN): From EUCOP 2014 to ICOP 2016, Arctic Change 2014, Ottawa, Canada

Tanski, G., Fritz, M., Lantuit, H., **Strauss, J.**, Rost, T. and Couture, N. (2014) Coastal erosion and fluxes of dissolved organic carbon from ground ice in the Canadian Arctic, 4th European Conference on Permafrost, Évora, Portugal

Ulrich, M., Grosse, G., **Strauss, J.** and Schirrmeister, L. (2014) Ice-wedge volume calculation in Yedoma and thermokarst deposits, 4th European Conference on Permafrost, Evora, Portugal

2013

Eichhorn, L., **Strauss, J.** and Schirrmeister, L. (2011) Late Quaternary paleoenvironmental reconstruction of the Buor Khaya peninsula using a multiproxy approach, Arbeitskreis Permafrost, Rolandseck near Bonn, Germany

Schirrmeister, L., **Strauss, J.**, Wetterich, S. and Overduin, P. (2013) Fossil Organic Matter in Arctic Permafrost, 25th International Congress on Polar Research, Changing Polar Regions, Hamburg, Germany

Schirrmeister, L., **Strauss, J.**, Wetterich, S., Grosse, G. and Overduin, P. (2013) Quality and Distribution of Frozen Organic Matter (Old, Deep, Fossil Carbon) in Siberian Permafrost, EGU General Assembly 2013, Vienna, Austria

Strauss, J., Schirrmeister, L. and Wetterich, S. (2010) Paleoenvironmental dynamics of Western Beringia - New studies from the Yedoma key site Duvanny Yar (Lower Kolyma River, Siberia), Geophysical Research Abstracts; Vol. 12, EGU2010-300-3, 2010; EGU General Assembly, Vienna, Austria

Strauss, J., Schirrmeister, L. and Wetterich, S. (2011) Carbon inventory of Siberian Yedoma and thermokarst deposits, Arbeitskreis Permafrost, Rolandseck near Bonn, Germany

Strauss, J., Schirrmeister, L., Wetterich, S. and Meyer, H. (2011) Fossil organic carbon in Siberian Yedoma and thermokarst deposits, American Geophysical Union Fall Meeting, San Francisco, USA

Strauss, J., Wetterich, S. and Schirrmeister, L. (2010) Permafrost properties of the Yedoma key site at Duvanny Yar (Kolyma lowland, East Siberia), IPY Oslo Science Conference, Oslo, Norway

Tanski, G., Lantuit, H., Fritz, M., **Strauss, J.**, Eulenburg, A. and Rost, T. (2012) Release of dissolved organic carbon by coastal erosion in the southern Canadian Beaufort Sea -

First results of a Master project, Arctic Net Conference - 8th Annual Scientific Meeting, Vancouver, Canada

Reports

Strauss, J. (2015) IPA Action Group Report: The Yedoma Region, Frozen Ground - the bulletin of the International Permafrost Association

Strauss, J. (2016) The Yedoma Region: A Synthesis of Circum-Arctic Distribution and Thickness (Action Group Report), Frozen Ground - the bulletin of the International Permafrost Association

Strauss, J. (2017) Deep ice-rich permafrost: Final report of the Yedoma Action Group, Frozen Ground - the bulletin of the International Permafrost Association

Strauss, J., Ulrich, M. and Buchhorn, M. (2012) Expeditions to permafrost 2012 : "Alaskan North Slope/Itkillik", "Thermokarst in Central Yakutia", "EyeSight-NAAT-Alaska", Berichte zur Polar- und Meeresforschung = Reports on polar and marine research, Bremerhaven, Alfred Wegener Institute for Polar and Marine Research, 655, 65 p.

Tanski, G., Lenz, J., Radosavljevic, B. and **Strauss, J.** (2016) Permafrost Young Researchers Network (PYRN) Report, Frozen Ground - the bulletin of the International Permafrost Association

Theses

Strauss, J. (2015) Organic carbon in ice-rich permafrost: Characteristics, quantity, and availability, PhD thesis, Alfred Wegener Institute Helmholtz Centre for Polar and Marine

Strauss, J. (2010) Late Quaternary environmental dynamics at the Duvanny Yar key section, Lower Kolyma, East Siberia, Diploma thesis, University of Potsdam.

Paper in preparation

Mishra, U., Hugelius, G., **Strauss, J.**, Harden, J., Koven, C., Schuur, E.A.G., Siewert, M., Ping, C.-L. Jastrow, J., Fuchs, M., Roser, P.M., Riley, W. Hoffman, F., Nave, L., Palmtag, J., Zubrzycki, S., Elberling, B. Johnson, K., Camill, P. Treat, C., Organic carbon in permafrost affected soils: Spatial heterogeneity and environmental controls

Perras, A., Wink, L., Duller, S., Schwendner, P., Cockell, C., Rettberg, P., Beblo-Vranesevic, K., Bohmeier, M., Rabbow, E., Gaboyer, F., Westall, F., Walter, N., Cabezas, P., Garcia-Descalzo, L., Gomez, F., Malki, M., Amils, R., Ehrenfreund, P., Monaghan, E., Vannier, P., Marteinsson, V., Erlacher, A., Tanski, G., **Strauss, J.**, Mahnert, A., Bashir, M., Riedo, A., Moissl-Eichinger, C., Extra-terrestrial exploration begins on Earth: Systematic comparison of the anaerobic, intact and cultivable microbiome of anoxic, extreme environments

Strauss, J., Abbott, B., Beermann, F., Biasi, C., Fuchs, M., Grosse, G., Horn, M., Liebner, S., Sanders, T., Schirrmeister, L., Schneider von Deimling, T., Voigt, C., Walter Anthony, K., Winkel, M. Yang, Y., Zubrzycki, S. Doubling the Arctic nitrogen stock: The frozen nitrogen of the ice-rich yedoma domain

Ulrich, M., Schmidt, J., Siegert, C., Schirrmeister, L., **Strauss, J.**, Matthes, H., Schneider, B., Zielhofer, C., Fedorov, A.N., Holocene thermokarst basin evolution in Central Yakutia – A multi-core and grain-size endmember modelling approach

3 Selection of the 5 most important publications

Citation numbers based on Scopus 2019/02

1. ***Strauss, J.**, Schirrmeister, L., Grosse, G., et al. (2017) Deep Yedoma permafrost: A synthesis of depositional characteristics and carbon vulnerability, Earth-Science Reviews, 172, pp. 75-86, doi:10.1016/j.earscirev.2017.07.007, **times cited: 17***

This paper is comprehensive review on yedoma permafrost formation, distribution, carbon content, and vulnerability. Yedoma permafrost landforms are a large and distinct component of remote northern landscapes, containing a lot of frozen organic carbon that could, upon thawing, generate a significant positive feedback to climate warming. For this reason, this study is an important contribution to the assessment of a potential for release of carbon with climate warming.

2. *Kanevskiy, M., Shur, Y., **Strauss, J.** et al. (2016) Patterns and rates of riverbank erosion involving ice-rich permafrost (yedoma) in northern Alaska, Geomorphology, doi:10.1016/j.geomorph.2015.10.023, **times cited: 12***

With this paper we showed a record erosion of inland permafrost. This underlines the importance of ice-rich permafrost (Yedoma), which is especially sensitive to riverbank and coastal erosion. In our study site we found erosion of yedoma at the 35-m-high bank of the Itkillik River. The average retreat rate of the riverbank since 1995 has been almost 19 meter per year. The study sparked a lot of interest in media and a press release was published by the AWI.

3. ***Strauss, J.**, Schirrmeister, L., Mangelsdorf, K. et al. (2015) Organic-matter quality of deep permafrost carbon – a study from Arctic Siberia, Biogeosciences, 12, pp. 2227-2245, doi:10.5194/bg-12-2227-2015, **times cited: 25***

This work presents the results of our research on organic matter and it composition in two contrasting but dominant sites of permafrost development in eastern Siberia: thermokarst and yedoma. It is a millstone on using quantitative data for the quality of organic matter and its availability for decomposition is limited. Here, we analysed the quality of organic matter in late Pleistocene (Yedoma) and Holocene (thermokarst) deposits. A lack of depth trends reveals a constant quality of organic matter showing that permafrost acts like a freezer, preserving organic matter quality. This organic matter will be susceptible to decomposition under climatic warming.

4. *Hugelius, G., **Strauss, J.**, Zubrzycki, S. et al. (2014) Estimated stocks of circumpolar permafrost carbon with quantified uncertainty ranges and identified data gaps, Biogeosciences, **times cited: 352***

This study provides an estimate of organic carbon stored in the northern permafrost region. The study includes estimates for carbon in soils (0 to 3 m depth) and deeper sediments in river deltas and the Yedoma region. Total estimated carbon storage is ~1300 Pg with an uncertainty range of between 1100 and 1500 Pg. Around 800 Pg carbon is perennially frozen, equivalent to all carbon dioxide currently in the Earth's atmosphere. This paper is one of the most cited papers on permafrost carbon.

5. ***Strauss, J**., Schirrmeister, L., Grosse, G., Wetterich, S., Ulrich, M., Herzschuh, U. and Hubberten, H. W. (2013) The Deep Permafrost Carbon Pool of the Yedoma Region in Siberia and Alaska, Geophysical Research Letters, **times cited: 81***

This paper is an important milestone on the quantification of the yedoma carbon inventory. It galvanize the permafrost carbon community to realize that the yedoma deposits itself are not as large as had been proposed earlier, but nonetheless still large enough to justify including them in estimates of the region's contribution to possible climate change feedbacks. Moreover, it introduces another major carbon reservoir of the region, the frozen thermokarst deposits.