

PROF. DR. HUGUES LANTUIT

Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research

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Birth date: 03.12.1977

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RESEARCH INTERESTS

My research focuses on the impacts of climate change on Arctic permafrost coasts, particularly the coupled risks associated with coastal erosion, flooding, permafrost thaw, and ecosystem disruption. I use an integrated combination of geospatial, geophysical, numerical modelling, and analytical approaches—including remote sensing, UAVs, geophysics, hydrodynamic modelling, and in situ sampling—to quantify and characterize rapidly changing Arctic coastal systems. My work investigates the geochemical, microbiological, sedimentological, ecological, and geotechnical dynamics of permafrost landscapes and nearshore waters, with particular emphasis on understanding risks to Inuit communities, infrastructure, cultural and harvesting sites, ecosystem integrity, and human well-being. A central objective of my research is to integrate hazard science within broader One Health and transdisciplinary frameworks linking environmental change, food security, health, cultural continuity, and adaptation. I am strongly committed to co-design, co-production, and participatory research grounded in long-term partnerships in the Inuvialuit Settlement Region. I currently lead several major international transdisciplinary initiatives on Arctic permafrost change, including the EU-funded projects Nunataryuk and ILLUQ – Permafrost, Pollution, Health.

EDUCATION

UNIVERSITY OF POTSDAM, POTSDAM, GERMANY

ALFRED WEGENER INSTITUTE HELMHOLTZ CENTRE FOR POLAR AND MARINE RESEARCH

2005-2008, PhD, Geosciences

MCGILL UNIVERSITY, MONTRÉAL, CANADA

2002-2004, M.Sc., Geography

UNIVERSITE PARIS7 DENIS DIDEROT, PARIS, FRANCE

1998-2002

Maîtrise, Physical Geography

Très bien distinction

PROFESSIONAL EXPERIENCE

PROFESSOR - UNIVERSITY OF POTSDAM, INSTITUTE FOR EARTH AND ENVIRONMENTAL SCIENCE

Since 01.10.2013

DEPUTY LEAD - PERMAFROST RESEARCH SECTION, ALFRED WEGENER INSTITUTE HELMHOLTZ CENTRE FOR POLAR AND MARINE RESEARCH

2024-present

GROUP LEADER - HELMHOLTZ YOUNG INVESTIGATOR GROUP „COPER“, ALFRED WEGENER INSTITUTE HELMHOLTZ CENTRE FOR POLAR AND MARINE RESEARCH

2012-2018

EXECUTIVE DIRECTOR - INTERNATIONAL PERMAFROST ASSOCIATION

2008-2012

AWARDS

KARL WEYPRECHT MEDAL OF THE GERMAN SOCIETY FOR POLAR RESEARCH

2022

APECS INTERNATIONAL MENTORSHIP AWARD

2017

BEST PHD STUDENT SUPERVISOR AT THE ALFRED WEGENER INSTITUTE HELMHOLTZ CENTRE FOR POLAR AND MARINE RESEARCH

2013

SCIENCE MANAGEMENT

MEMBER - EXECUTIVE COUNCIL PANEL OF EXPERTS, WMO POLAR AND HIGH MOUNTAIN OBSERVATIONS, RESEARCH AND SERVICES (EC-PHORS)

2016-present

EC-PHORS coordinates international polar and high-mountain weather, climate, and observing activities to improve forecasting, research integration, operational services, and climate-risk preparedness worldwide.

MEMBER - CRYOSPHERE WORKING GROUP OF THE INTERNATIONAL ARCTIC SCIENCE COMMITTEE (IASC)

2014-2024

The working group advances international collaboration on Arctic snow, ice, glaciers, and permafrost research, coordinating scientific priorities, assessments, field activities, and knowledge exchange across disciplines.

MEMBER - GERMAN NATIONAL COMMITTEE FOR POLAR RESEARCH (NK SCAR/IASC)

2014-2019

NK SCAR/IASC coordinates German polar research activities, represents Germany within international Arctic and Antarctic science organizations, and promotes collaboration, strategy development, and scientific exchange.

MEMBER - STEERING GROUP, WMO GLOBAL CRYOSPHERE WATCH

2016-2020

GCW coordinates international monitoring of snow, ice, glaciers, permafrost, and sea ice to improve climate observations, forecasting, data standards, and cryosphere services worldwide.

MEMBER - STEERING GROUP, INTERNATIONAL CONFERENCE ON ARCTIC RESEARCH PLANNING III (ICARPIII)

2013-2015

International Arctic Science Committee initiative for science planning in the Arctic. Representative for the International Permafrost Association

MEMBER - ADVISORY BOARD, GLOBAL TERRESTRIAL NETWORK FOR PERMAFROST (GTN-P)

2012-present

GTN-P coordinates international permafrost monitoring through standardized observations of ground temperature and active-layer thickness to support climate research, modelling, and environmental assessments globally

MEMBER - EXECUTIVE COMMITTEE, INTERNATIONAL PERMAFROST ASSOCIATION (IPA)

2012-2016

The IPA promotes international collaboration in permafrost research, education, monitoring, and outreach, advancing scientific understanding of frozen ground and its environmental, engineering, and climate implications.

MEMBER - TRANSNATIONAL BOARD, INTERACT

2012-2016

EU FP7 project on terrestrial infrastructure in the Arctic. The board reviewed projects submitted for funding.

MEMBER - INITIATING GROUP, SUSTAINING ARCTIC OBSERVING NETWORKS (SAON)

2008-2009

SAON coordinates international Arctic observing activities to improve long-term environmental monitoring, data accessibility, Indigenous engagement, and sustained observing systems supporting science and decision-making

MEMBER - STEERING COMMITTEE SEDIBUD (IAG WORKING GROUP)

2007-2008

SEDIBUD coordinated international research on erosion, sediment transport, and sediment budgets in cold-region environments to improve understanding of landscape change under climate forcing.

EXECUTIVE COORDINATOR AND FOUNDER - PERMAFROST YOUNG RESEARCHERS NETWORK (PYRN)

2005–2009

PYRN supports early-career permafrost scientists through international networking, mentoring, training, collaboration, and interdisciplinary exchange, strengthening the next generation of polar researchers and leaders

COORDINATOR AND CO-FOUNDER - ASSOCIATION OF POLAR EARLY CAREER SCIENTISTS (APECS)

2006-2008

APECS supports early-career polar researchers through international networking, mentoring, education, leadership development, and interdisciplinary collaboration, strengthening global capacity in Arctic and Antarctic science

STEERING COMMITTEE MEMBER - EUROPEAN SCIENCE FOUNDATION SEDIFLUX (SEDIMENTARY SOURCE-TO-SINK-FLUXES IN COLD ENVIRONMENTS)

SEDIFLUX coordinated international research on sediment transport and source-to-sink processes in cold environments, advancing understanding of Arctic landscape change and climate-driven sediment fluxes.

2005-2007

CONFERENCES

CONFERENCE ORGANIZER

International Conference on Permafrost 2016 (ICOP 2016), IMPETUS Training workshops 2007 & 2008, Arctic Coastal Dynamics workshop 2004.

ORGANIZING COMMITTEE: ICOP 2012, IPY 2012, IPY 2010, IPY 2008, ASSW 2009, Arctic Change 2014, IMPETUS Training workshops 2007 & 2008.

SESSION CHAIR: ArcticNet Annual Science Meeting (10x), EGU, IAG Congress, ASSW 2011, ASSW 2009, IPY 2008, IPY 2012, ICOP 2012.

PANELIST: ArcticNet Science Meeting 2024, One Planet - Polar Summit 2023, ICARP 2015, Arctic Circle 2015. Helmholtz Horizonts

INVITED PRESENTATIONS: EUCOP 2023, ArcticNet Annual Science Meeting 2008, Polar Forum 2007.

FUNDING

Main grants out of a total of 28 500 000 € as a Principal Investigator

ILLUQ – PERMAFROST, POLLUTION, HEALTH

EUROPEAN UNION HORIZON EUROPE

PI: **HUGUES LANTUIT** – 6,000,000 €, 2024-2027

ILLUQ investigates how thawing permafrost mobilizes contaminants and affects ecosystems, food security, and human health through transdisciplinary Arctic research and Indigenous partnership.

NUNATARYUK - PERMAFROST THAW AND THE CHANGING ARCTIC COAST, SCIENCE FOR SOCIOECONOMIC ADAPTATION

EUROPEAN UNION HORIZON 2020

PI: **HUGUES LANTUIT**– 11,500,000 €, 2017-2022

Nunataryuk investigated the impacts of thawing Arctic permafrost on coastal systems, infrastructure, ecosystems, and communities through interdisciplinary research, Indigenous engagement, and adaptation planning.

PAGE21 - CHANGING PERMAFROST IN THE ARCTIC AND ITS GLOBAL EFFECTS IN THE 21ST CENTURY

EUROPEAN UNION FP7

PIs: HANS-WOLFGANG HUBBERTEN, JULIA BOIKE & **HUGUES LANTUIT**– 9,269,927 €, 2011-2015

PAGE21 investigated how Arctic permafrost thaw influences climate, ecosystems, hydrology, and greenhouse-gas emissions, improving predictions of global environmental change and permafrost feedbacks.

COPER (COASTAL PERMAFROST EROSION, ORGANIC CARBON AND NUTRIENT RELEASE IN THE ARCTIC NEARSHORE ZONE)

HELMHOLTZ SOCIETY YOUNG INVESTIGATOR GROUP

PI: **HUGUES LANTUIT** – 1,500,000 €, 2012-2018

COPER investigated how Arctic coastal erosion releases organic carbon, nutrients, and sediments into nearshore waters, affecting biogeochemical cycles, ecosystems, and coastal environmental change.

IMPACTS OF PERMAFROST DEGRADATION ON SMALL SCALE CATCHMENT DYNAMICS

BMBF: FEDERAL MINISTRY OF EDUCATION AND RESEARCH.

PIs: **HUGUES LANTUIT**, SAMUEL STETTNER & CAROLINE COCH – 80,000 €, 2016-2018

This project investigated how permafrost thaw alters hydrology, sediment transport, biogeochemical processes, and landscape dynamics within Arctic catchments under accelerating climate change.

CARBON RELEASE FROM DEGRADING PERMAFROST IN THE WESTERN CANADIAN ARCTIC

BMBF: FEDERAL MINISTRY OF EDUCATION AND RESEARCH.

PIs: **HUGUES LANTUIT** & MICHAEL FRITZ– 73,000 €, 2011-2013

This project investigated greenhouse-gas and carbon release from thawing permafrost in the western Canadian Arctic, improving understanding of permafrost–climate feedbacks and ecosystem change.

HIGH RESOLUTION QUATERNARY RECORDS FROM EASTERN BERINGIA (WESTERN CANADIAN ARCTIC)

BMBF: FEDERAL MINISTRY OF EDUCATION AND RESEARCH

PIs: **HUGUES LANTUIT** & MICHAEL FRITZ– 32,348 €, 2009-2011

This project reconstructed past environmental and climate changes in the western Canadian Arctic using high-resolution Quaternary records to improve understanding of Arctic landscape evolution and permafrost history.

THE ENVIRONMENTAL DYNAMICS OF THE WESTERN CANADIAN ARCTIC DURING THE NATURAL CLIMATE OSCILLATIONS OF THE LATE QUATERNARY

GERMAN SCIENCE FOUNDATION (DFG)

PIs: **HUGUES LANTUIT** & MICHAEL FRITZ– 25,432 €, 2009

This project investigated past climate variability, permafrost dynamics, and environmental change in the western Canadian Arctic during Late Quaternary natural climate oscillations.

PAST, PRESENT AND FUTURE CLIMATE CHANGE EFFECTS ON PERMAFROST LANDSCAPES FROM THE WESTERN CANADIAN ARCTIC

BMBF: FEDERAL MINISTRY OF EDUCATION AND RESEARCH

PIs: **HUGUES LANTUIT** & MICHAEL FRITZ– 6,632 €, 2008

This project investigated how climate change influences permafrost landscapes in the western Canadian Arctic across past, present, and future conditions using interdisciplinary environmental research.

PEER REVIEW

JOURNALS: Nature, Nature Climate change, Nature Geoscience, Geophysical research Letters, Environmental Research Letters, Permafrost and Periglacial Processes, Polar Research, Remote Sensing of Environment.

GRANT PROGRAMS: Agence Nationale de la Recherche, National Science Foundation, European Science Foundation, Academia Europaea, Italian Polar Program.

PIA PETZOLD, PHD SUPERVISOR

“Arctic Coastal Ecosystem Services”

University of Potsdam, Institute for Earth and Environmental Science

2025-present

VERENA BISCHOFF, PHD SUPERVISOR

“Contaminants in legacy oil sites located on permafrost”

University of Aachen

2025-present

JIAQUAN ZHUANG, PHD SUPERVISOR

“Multi-scale multispectral properties of nearshore coastal waters in the Arctic”

University of Potsdam, Institute for Earth and Environmental Science

2025-present

YIYANG FAN, PHD SUPERVISOR

“Coastal currents and erosion resolved using nearshore Acoustic Doppler Current Profilers”

University of Potsdam, Institute for Earth and Environmental Science

2024-present

JUSTUS GIMSA, PHD SUPERVISOR

“Deciphering processes driving the erosion of permafrost coasts: A unique new approach based on field studies and novel laboratory experiments”

University of Potsdam, Institute for Earth and Environmental Science

2021-present

NELE LEHMANN, PHD SUPERVISOR

together with Helmuth Thomas

“Alkalinity and the Arctic Ocean”

University of Oldenburg

2019-2024

KONSTANTIN KLEIN, PHD SUPERVISOR

“Analysis of sediment dispersal in nearshore coastal waters in the Arctic using optical remote sensing imagery”

University of Potsdam, Institute for Earth and Environmental Science

2018-2022

CAROLINE COCH, PHD SUPERVISOR

“Small catchment hydrology and geochemistry in the Canadian Arctic”

University of Potsdam, Institute for Earth and Environmental Science

2015-2019

SAMUEL STETTNER, PHD SUPERVISOR

“Exploring the seasonality of rapid Arctic changes from space”

University of Potsdam, Institute for Earth and Environmental Science

2015-2018

ALISON BEAMISH, PHD SUPERVISOR

“Hyperspectral Remote Sensing of the Spatial and Temporal Heterogeneity of low Arctic Vegetation”

University of Potsdam, Institute for Earth and Environmental Science

2015-2018

JUSTINE RAMAGE, PHD SUPERVISOR

“Impact of hillslope thermokarst on the nearshore carbon budget along the Yukon Coast, Canada”

University of Potsdam, Institute for Earth and Environmental Science

2014-2018

ANNA IRRGANG (NÉE KONOPCZAK), PHD SUPERVISOR

“past, present and future coastal erosion rates on the Yukon Coastal Plain, Canada”

University of Potsdam, Institute for Earth and Environmental Science

2014-2018

GEORGE TANSKI, PHD SUPERVISOR

“Geochemical fluxes due to the coastal erosion of organic carbon-rich permafrost sediments”

University of Potsdam, Institute for Earth and Environmental Science

2014-2018

JAROSLAV OBU, PHD SUPERVISOR

“Using LIDAR and multispectral datasets to map coastal erosion and soil organic carbon contents along the Yukon coastal Plain”

University of Potsdam, Institute for Earth and Environmental Science

2012-2016

BORIS RADOSAVLJEVIC, PHD SUPERVISOR

“Underwater shoreface erosion and longshore current patterns around Herschel Island, Yukon Territory”

University of Potsdam, Institute for Earth and Environmental Science

2012-present

STEFANIE WEEGE, PHD SUPERVISOR

“Retrogressive thaw slump induced sediment and nutrient discharge along the Yukon Coastal Plain”

University of Potsdam, Institute for Earth and Environmental Science

2012-2017

JULIANE WOLTER, PHD SUPERVISOR

“Late Holocene climate variability on the Yukon Coastal Plain”

University of Potsdam, Institute for Earth and Environmental Science

2012-2017

MAXIMILIAN ROMETSCH, MASTER THESIS SUPERVISOR

“High-resolution satellite imagery-derived planimetric erosion and LiDAR-derived volumetric coastal changes on Herschel Island Qikiqtaruk, Yukon, Canada”

University of Potsdam

2023-2025

PIA PETZOLD, MASTER THESIS SUPERVISOR

“Exploring the impact of wind forcing on organic carbon pathways in the nearshore zone of Herschel Island-Qikiqtaruk, Canada”

University of Potsdam

2022-2024

KERSTIN BREMBACH, MASTER THESIS SUPERVISOR

“Investigating high-resolution spatial wave pattern on the Canadian Beaufort shelf using SAR imagery at Herschel Island, Qikiqtaruk, Yukon, Canada”

Kiel University

2020-2022

HENRIKE WALTHER, MASTER THESIS SUPERVISOR

“Temporal volumetric analysis of digital elevation models (DEM) of a retrogressive thaw slump on Herschel Island, Yukon”

University of Potsdam

2021-2022

NIKLAAS SCHMIDT, MASTER THESIS SUPERVISOR

“The influence of environmental parameters on the distribution of Dolly Varden in the Beaufort Sea”

University of Potsdam

2021-2022

NADJA KUHL, MASTER THESIS SUPERVISOR

“Impacts of thermo-erosion on Organic Matter Stocks”,

University of Potsdam

2017-2018

JUSTUS GIMSA, MASTER THESIS SUPERVISOR

“Arctic nearshore current dynamics and wave climate under declining sea ice conditions – Potential impacts on sediment pathways”,

University of Potsdam

2019-2020

PAUL NÖRENBERG, MASTER THESIS SUPERVISOR

“The consequences of global climate change on the fictitious city of Los Santos from the game „Grand Theft Auto V”,

University of Potsdam

2019-2020

KONSTANTIN KLEIN, MASTER THESIS SUPERVISOR

“How sensitive are sediment dispersal and sea surface temperature to changing wind conditions? A mapping approach in the coastal waters of Herschel Island, Yukon Territory, Canada, using Landsat (TM, ETM+ and OLI/TIRS) satellite image data from 1986 to 2016”,

University of Potsdam

2017-2018

JULIAN SCHNEIDER, MASTER THESIS SUPERVISOR

“Seismic facies and structure interpretation from 2D profiles in the vicinity of Herschel Island, Yukon, Canada”,

University of Potsdam

2016-2017

SASKIA RUTTOR, MASTER THESIS SUPERVISOR

“Mobilization of organic carbon and nitrogen in a retrogressive thaw slump on Herschel Island, Yukon Territory, Western Canadian Arctic”,

University of Potsdam

2014-2015

ISABELL EISCHEID, MASTER THESIS SUPERVISOR

“Mapping of soil organic carbon and nitrogen in two small adjacent Arctic watersheds on Herschel Island, Yukon Territory”,

Universität Hohenheim

2014-2015

GEORGE TANSKI, MASTER THESIS SUPERVISOR

“Dissolved organic carbon in ground ice of the Yukon Coastal Plain”,

Free University Berlin

2012-2013

LUKA DURSTEWITZ, BACHELOR THESIS SUPERVISOR

“Carbon availability in soils of thermos-erosional valleys – a case study from a valley on Herschel Island, West Canadian Arctic

Free University Berlin

2017-2018

BÉATRICE FRANK-FAHLE (NÉE BARBIER), ADVISOR

“Microbiological investigations on the Yukon Coast”

PhD thesis, University of Potsdam

2010-2013

MICHAEL FRITZ, ADVISOR

“High resolution records from eastern Beringia“

PhD thesis, University of Potsdam, 2008-2012.

JOSEFINE LENZ, ADVISOR

“Late Quaternary landscape dynamics in the Western Canadian Arctic derived from lake sediments on Herschel Island (Southern Beaufort Sea).”

MSc thesis, University of Greifswald, Nov. 2011

FABIAN SCHMITZ, ADVISOR

“Analyse hyperspektraler Chris-Proba-Fernerkundungsdaten zur Bestimmung der Morphometrie von Thermokarst-Seen im westlichen Lenadelta (Sibirien) – Hyperspectral analysis of Chris-Proba data for the investigation of thermokarst lakes bathymetry in the western Lena Delta (Siberia)“.

Masters thesis, University of Potsdam, June 2007

TEACHING

COURSE LECTURER, “COASTAL DYNAMICS”

Master course (Lecture + seminar; 4 SWS)

University of Potsdam, Institute for Earth and Environmental Science

Course evaluation: 1.08/5.0 (“sehr gut”)

COURSE LECTURER, “GELÄNDEKURS PHYSISCHE GEOGRAPHIE”

Bachelor course (Geländepraktikum, 2x 2 SWS)

University of Potsdam, Institute for Earth and Environmental Science

Course evaluation: 1.17/5.0 (“sehr gut”)

COURSE LECTURER, "SOCIOECONOMIC ASPECTS OF GEOGRAPHICAL INFORMATION SYSTEMS"

Bachelor course (Übung, 3 credits)

McGill University, GEOG 307, 2004 (Main lecturer: Prof. R. Sengupta)

This course was awarded the best grade in the geography department for the spring semester 2004.

GUEST LECTURER, “EARTH’S POLAR REGIONS: SCIENCE, SOCIETY, AND DISCOVERY ”

“Permafrost and Climate Change”

Texas A&M University. GEOS401, 2012

(Lecturer: M. C. Kennicutt)

LECTURER, WORKSHOPS OF THE ASSOCIATION OF POLAR EARLY CAREER SCIENTISTS AND THE PERMAFROST YOUNG RESEARCHERS NETWORK

More than 20 lectures and web seminars for early career scientists (2007-2012).

Selected titles:

“An introduction to polar organisations”

“Polar acronyms: Everything you do not want to know on polar science”

“Tips for networking at conferences”

“How to hold a bad presentation”

“Managing different cultures and languages”

TEACHING ASSISTANT, MCGILL UNIVERSITY

2002-2004

GEOG 201 "Geographic Information Science"

GEOG 205 "Global Climate Change”

GEOG 308 "Principles of remote sensing"

GEOG 307 “Socioeconomic aspects of GIS”

Student support, mentoring, and grading of assignments and examinations

FIELD EXPERIENCE

EXPEDITION LEADER

Joint German-Canadian expedition «Yukon Coast 2025».

Joint German-Canadian expedition «Yukon Coast 2024».

Joint German-Canadian expedition «Yukon Coast 2023».

Joint German-Canadian expedition «Yukon Coast 2022».
Joint German-Canadian expedition «Yukon Coast 2019».
Joint German-Canadian expedition «Yukon Coast 2017».
Joint German-Canadian-Polish expedition «Yukon Coast 2016».
Joint German-Canadian-Swedish-Finnish expedition «Yukon Coast 2015».
Joint German-Canadian-Scottish-American expedition «Yukon Coast 2014».
Joint German-Canadian-Scottish expedition «Yukon Coast 2013».
Joint German-Canadian expedition «Yukon Coast 2012».
Joint German-Canadian expedition «Yukon Coast 2011».
Joint German-Canadian expedition «Yukon Coast 2010».
Joint German-Canadian expedition «Yukon Coast 2009».
Joint German-Canadian expedition «Yukon Lakes 2009 ».
Joint German-Canadian expedition «Yukon Coast 2008 ».
Joint German-Canadian expedition «Yukon Coast 2006 ».

FIELD INVESTIGATOR

Lena Delta, Siberia, Russia, August-September 2005
Herschel Island, Yukon Territory, Canada, September 2003

FIELD ASSISTANT

Herschel Island and Yukon Coast, Inuvialuit land, Canada, August 2004

OUTREACH

Several documentaries on TV (Arte, ZDF, Deutsche Welle), TV and Radio interviews (CBC Radio Canada, Deutschland Radio Kultur, Hessischer Rundfunk, Radio France International, Radio Classique, Radio Bremen, UN Radio), press articles (Die Welt, Der Spiegel, National Geographic, New Scientist, La Recherche, The Gazette, The Edmonton Journal) and Outreach events in Germany, France, Norway, Canada, the USA and Russia.

LANGUAGES

French (mother tongue), English, German

PUBLICATIONS

Publication list extracted from SCOPUS

Wagner, J., Wolter, J., Ramage, J., Martin, V., Richter, A., Speetjens, N. J., Vonk, J. E., Lodi, R., Bartsch, A., Fritz, M., **Lantuit, H.**, & Hugelius, G. (2026). Challenges in the use of local data for regional scale mapping of C and N stocks in the continuous permafrost zone at the Yukon Coastal Plain. *SOIL*, 12, 113–132. <https://doi.org/10.5194/soil-12-113-2026>

Vonk, J., Fritz, M., Speetjens, N., Babin, M., Bartsch, A., Basso, L., Bröder, L., Göckede, M., Gustafsson, Ö., Hugelius, G., Irrgang, A., Juhls, B., Kuhn, M., **Lantuit, H.**, Manizza, M., Martens, J., O'Regan, M., Suslova, A., Tank, S., Terhaar, J., Zolkos, S. (2025). The land–ocean Arctic carbon cycle. *Nature Reviews Earth and Environment*, 6(2), 4650. <https://doi.org/10.1038/s43017-024-00627-w>

Cordier, M., Vasilevskaya, A., Jungsberg, L., Vanderlinden, J. P., Ramage, J., **Lantuit, H.** (2025). Uncovering the economic impact of thawing arctic permafrost: Exploring GDP production in a changing landscape. *Polar Science*, 44, 101203. <https://doi.org/10.1016/j.polar.2025.101203>

Gartler, S., Scheer, J., Meyer, A., Abass, K., Bartsch, A., Doloio, N., Falardeau, J., Hugelius, G., Irrgang, A., Haukur Ingimundarson, J., Jungsberg, L., **Lantuit, H.**, Nymand Larsen, J., Lodi, R., Martin, V., Mercer, L., Nielsen, D., Overduin, P., Povoroznyuk, O., Rautio, A., Schweitzer, P., Speetjens, N., Tomaškovičová, S., Timlin, U., Vanderlinden, J. P., Vonk, J., Westerveld, L., Ingeman-Nielsen, T. (2025). A transdisciplinary, comparative analysis

- reveals key risks from Arctic permafrost thaw. *Communications Earth and Environment*, 6(1), 21. <https://doi.org/10.1038/s43247-024-01883-w>
- Juma, G., Meunier, C., Herstoff, E., Irrgang, A., Fritz, M., Weber, C., **Lantuit, H.**, Kirstein, I., Boersma, M. (2025). Future Arctic: how will increasing coastal erosion shape nearshore planktonic food webs?. *Limnology and Oceanography Letters*, 10(1). <https://doi.org/10.1002/lo2.10446>
- Gimsa, J., Fritz, M., **Lantuit, H.** (2025). Nearshore Hydrodynamics and Sediment Dispersal Along Eroding Permafrost Coasts—Insights From Acoustic Doppler Current Profiler Measurements Around Herschel Island—Qikiqtaruk (Yukon, Canada). *Permafrost and Periglacial Processes*, 36(2). <https://doi.org/10.1002/ppp.2258>
- Gartler, S., Scheer, J., Meyer, A., Abass, K., Bartsch, A., Doloisio, N., Falardeau, J., Hugelius, G., Irrgang, A., Haukur Ingimundarson, J., Jungsberg, L., **Lantuit, H.**, Nymand Larsen, J., Lodi, R., Martin, V., Mercer, L., Nielsen, D., Overduin, P., Povoroznyuk, O., Rautio, A., Schweitzer, P., Speetjens, N., Tomaškovičová, S., Timlin, U., Vanderlinden, J. P., Vonk, J., Westerveld, L., Ingeman-Nielsen, T. (2025). Correction to: A transdisciplinary, comparative analysis reveals key risks from Arctic permafrost thaw (*Communications Earth & Environment*, (2025), 6, 1, (21), 10.1038/s43247-024-01883-w). *Communications Earth and Environment*, 6(1), 234. <https://doi.org/10.1038/s43247-025-02204-5>
- Krautblatter, M., Angelopoulos, M., Pollard, W., **Lantuit, H.**, Lenz, J., Fritz, M., Couture, N., Eppinger, S. (2024). Life Cycles and Polycyclicality of Mega Retrogressive Thaw Slumps in Arctic Permafrost Revealed by 2D/3D Geophysics and Long-Term Retreat Monitoring. *Journal of Geophysical Research: Earth Surface*, 129(10), e2023JF007556. <https://doi.org/10.1029/2023JF007556>
- Nesterova, N., Leibman, M., Kizyakov, A., **Lantuit, H.**, Tarasevich, I., Nitze, I., Veremeeva, A., Grosse, G. (2024). Review article: Retrogressive thaw slump characteristics and terminology. *Cryosphere*, 18(10). <https://doi.org/10.5194/tc-18-4787-2024>
- Jong, D., Bröder, L., Tesi, T., Tanski, G., Oudenhuisen, M., Fritz, M., **Lantuit, H.**, Haghipour, N., Eglinton, T., Vonk, J. (2024). Selective Sorting and Degradation of Permafrost Organic Matter in the Nearshore Zone of Herschel Island (Yukon, Canada). *Journal of Geophysical Research: Biogeosciences*, 129(1), e2023JG007479. <https://doi.org/10.1029/2023JG007479>
- Lehmann, N., **Lantuit, H.**, Böttcher, M., Hartmann, J., Eulenburg, A., Thomas, H. (2023). Alkalinity generation from carbonate weathering in a silicate-dominated headwater catchment at Iskorasfjellet, northern Norway. *Biogeosciences*, 20(16). <https://doi.org/10.5194/bg-20-3459-2023>
- Lizotte, M., Juhls, B., Matsuoka, A., Massicotte, P., Mével, G., Anikina, D., Antonova, S., Bécu, G., Béguin, M., Bélanger, S., Bossé-Demers, T., Bröder, L., Bruyant, F., Chaillou, G., Comte, J., Couture, R. M., Devred, E., Deslongchamps, G., Dezutter, T., Dillon, M., Doxaran, D., Flamand, A., Fell, F., Ferland, J., Forget, M. H., Fritz, M., Gordon, T., Guilmette, C., Hilborn, A., Hussherr, R., Irish, C., Joux, F., Kipp, L., Laberge-Carignan, A., **Lantuit, H.**, Leymarie, E., Mannino, A., Maury, J., Overduin, P., Oziel, L., Stedmon, C., Thomas, C., Tisserand, L., Tremblay, J. E., Vonk, J., Whalen, D., Babin, M. (2023). Nunataryuk field campaigns: understanding the origin and fate of terrestrial organic matter in the coastal waters of the Mackenzie Delta region. *Earth System Science Data*, 15(4). <https://doi.org/10.5194/essd-15-1617-2023>
- Brembach, K., Pleskachevsky, A., **Lantuit, H.** (2023). Investigating High-Resolution Spatial Wave Patterns on the Canadian Beaufort Shelf Using Synthetic Aperture Radar Imagery at Herschel Island, Qikiqtaruk, Yukon, Canada. *Remote Sensing*, 15(19), 4753. <https://doi.org/10.3390/rs15194753>
- Speetjens, N., Hugelius, G., Gumbricht, T., **Lantuit, H.**, Berghuijs, W., Pika, P., Poste, A., Vonk, J. (2023). The pan-Arctic catchment database (ARCADE). *Earth System Science Data*, 15(2). <https://doi.org/10.5194/essd-15-541-2023>
- Lehmann, N., Stacke, T., Lehmann, S., **Lantuit, H.**, Gosse, J., Mears, C., Hartmann, J., Thomas, H. (2023). Alkalinity responses to climate warming destabilise the Earth's thermostat. *Nature Communications*, 14(1), 1648. <https://doi.org/10.1038/s41467-023-37165-w>
- Wagner, J., Martin, V., Speetjens, N., A'Campo, W., Durstewitz, L., Lodi, R., Fritz, M., Tanski, G., Vonk, J., Richter, A., Bartsch, A., **Lantuit, H.**, Hugelius, G. (2023). High resolution mapping shows differences in soil carbon and nitrogen stocks in areas of varying landscape history in Canadian lowland tundra. *Geoderma*, 438, 116652. <https://doi.org/10.1016/j.geoderma.2023.116652>
- Radosavljevic, B., **Lantuit, H.**, Knoblauch, C., Couture, N., Herzsuh, U., Fritz, M. (2022). Arctic Nearshore Sediment Dynamics—An Example from Herschel Island—Qikiqtaruk, Canada. *Journal of Marine Science and Engineering*, 10(11), 1589. <https://doi.org/10.3390/jmse10111589>

Speetjens, N., Tanski, G., Martin, V., Wagner, J., Richter, A., Hugelius, G., Boucher, C., Lodi, R., Knoblauch, C., Koch, B., Wünsch, U., **Lantuit, H.**, Vonk, J. (2022). Dissolved organic matter characterization in soils and streams in a small coastal low-Arctic catchment. *Biogeosciences*, 19(12). <https://doi.org/10.5194/bg-19-3073-2022>

Klein, K., **Lantuit, H.**, Rolph, R. (2022). Drivers of Turbidity and Its Seasonal Variability at Herschel Island Qikiqtaruk (Western Canadian Arctic). *Water (Switzerland)*, 14(11), 1751. <https://doi.org/10.3390/w14111751>

Rolph, R., Overduin, P., Ravens, T., **Lantuit, H.**, Langer, M. (2022). ArcticBeach v1.0: A physics-based parameterization of pan-Arctic coastline erosion. *Frontiers in Earth Science*, 10, 962208. <https://doi.org/10.3389/feart.2022.962208>

Irrgang, A., Bendixen, M., Farquharson, L., Baranskaya, A., Erikson, L., Gibbs, A., Ogorodov, S., Overduin, P., **Lantuit, H.**, Grigoriev, M., Jones, B. (2022). Drivers, dynamics and impacts of changing Arctic coasts. *Nature Reviews Earth and Environment*, 3(1). <https://doi.org/10.1038/s43017-021-00232-1>

Walch, D., Singh, R., Søreide, J., **Lantuit, H.**, Poste, A. (2022). Spatio-Temporal Variability of Suspended Particulate Matter in a High-Arctic Estuary (Adventfjorden, Svalbard) Using Sentinel-2 Time-Series. *Remote Sensing*, 14(13), 3123. <https://doi.org/10.3390/rs14133123>

Vogliacci-Stephanopoli, J., Wendleder, A., **Lantuit, H.**, Langlois, A., Stettner, S., Schmitt, A., Dedieu, J. P., Roth, A., Royer, A. (2022). Potential of X-band polarimetric synthetic aperture radar co-polar phase difference for arctic snow depth estimation. *Cryosphere*, 16(6). <https://doi.org/10.5194/tc-16-2163-2022>

Klein, K., **Lantuit, H.**, Heim, B., Doxaran, D., Juhls, B., Nitze, I., Walch, D., Poste, A., Søreide, J. (2021). The Arctic Nearshore Turbidity Algorithm (ANTA) - A multi sensor turbidity algorithm for Arctic nearshore environments. *Science of Remote Sensing*, 4, 100036. <https://doi.org/10.1016/j.srs.2021.100036>

Ramage, J., Jungsberg, L., Wang, S., Westermann, S., **Lantuit, H.**, Heleniak, T. (2021). Population living on permafrost in the Arctic. *Population and Environment*, 43(1). <https://doi.org/10.1007/s11111-020-00370-6>

Tanski, G., Bröder, L., Wagner, D., Knoblauch, C., **Lantuit, H.**, Beer, C., Sachs, T., Fritz, M., Tesi, T., Koch, B., Haghypour, N., Eglinton, T., Strauss, J., Vonk, J. (2021). Permafrost Carbon and CO₂ Pathways Differ at Contrasting Coastal Erosion Sites in the Canadian Arctic. *Frontiers in Earth Science*, 9, 630493. <https://doi.org/10.3389/feart.2021.630493>

Siewert, M., **Lantuit, H.**, Richter, A., Hugelius, G. (2021). Permafrost Causes Unique Fine-Scale Spatial Variability Across Tundra Soils. *Global Biogeochemical Cycles*, 35(3), e2020GB006659. <https://doi.org/10.1029/2020GB006659>

Rutkowski, C., Lenz, J., Lang, A., Wolter, J., Mothes, S., Reemtsma, T., Grosse, G., Ulrich, M., Fuchs, M., Schirrmeyer, L., Fedorov, A., Grigoriev, M., **Lantuit, H.**, Strauss, J. (2021). Mercury in Sediment Core Samples From Deep Siberian Ice-Rich Permafrost. *Frontiers in Earth Science*, 9, 718153. <https://doi.org/10.3389/feart.2021.718153>

Jong, D., Bröder, L., Tanski, G., Fritz, M., **Lantuit, H.**, Tesi, T., Haghypour, N., Eglinton, T., Vonk, J. (2020). Nearshore Zone Dynamics Determine Pathway of Organic Carbon From Eroding Permafrost Coasts. *Geophysical Research Letters*, 47(15), e2020GL088561. <https://doi.org/10.1029/2020GL088561>

Coch, C., Ramage, J., Lamoureux, S., Meyer, H., Knoblauch, C., **Lantuit, H.** (2020). Spatial Variability of Dissolved Organic Carbon, Solutes, and Suspended Sediment in Disturbed Low Arctic Coastal Watersheds. *Journal of Geophysical Research: Biogeosciences*, 125(2), e2019JG005505. <https://doi.org/10.1029/2019JG005505>

Grotheer, H., Meyer, V., Riedel, T., Pfalz, G., Mathieu, L., Hefter, J., Gentz, T., **Lantuit, H.**, Mollenhauer, G., Fritz, M. (2020). Burial and Origin of Permafrost-Derived Carbon in the Nearshore Zone of the Southern Canadian Beaufort Sea. *Geophysical Research Letters*, 47(3), e2019GL085897. <https://doi.org/10.1029/2019GL085897>

Biskaborn, B., Smith, S., Noetzli, J., Matthes, H., Vieira, G., Streletskiy, D., Schoeneich, P., Romanovsky, V., Lewkowicz, A., Abramov, A., Allard, M., Boike, J., Cable, W., Christiansen, H., Delaloye, R., Diekmann, B., Drozdov, D., Etzelmüller, B., Grosse, G., Guglielmin, M., Ingeman-Nielsen, T., Isaksen, K., Ishikawa, M., Johansson, M., Johansson, H., Joo, A., Kaverin, D., Kholodov, A., Konstantinov, P., Kröger, T., Lambiel, C., Lanckman, J. P., Luo, D., Malkova, G., Meiklejohn, I., Moskalenko, N., Oliva, M., Phillips, M., Ramos, M., Sannel, A., Sergeev, D., Seybold, C., Skryabin, P., Vasiliev, A., Wu, Q., Yoshikawa, K., Zheleznyak, M., **Lantuit, H.** (2019). Permafrost is warming at a global scale. *Nature Communications*, 10(1), 264. <https://doi.org/10.1038/s41467-018-08240-4>

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.** (2019). The Permafrost Young Researchers Network (PYRN) is getting older: The

past, present, and future of our evolving community. *Polar Record*, 55(4).
<https://doi.org/10.1017/S0032247418000645>

Overduin, P., Schneider von Deimling, T., Miesner, F., Grigoriev, M., Ruppel, C., Vasiliev, A., **Lantuit, H.**, Juhls, B., Westermann, S. (2019). Submarine Permafrost Map in the Arctic Modeled Using 1-D Transient Heat Flux (SuPerMAP). *Journal of Geophysical Research: Oceans*, 124(6). <https://doi.org/10.1029/2018JC014675>

Cunliffe, A., Tanski, G., Radosavljevic, B., Palmer, W., Sachs, T., **Lantuit, H.**, Kerby, J., Myers-Smith, I. (2019). Rapid retreat of permafrost coastline observed with aerial drone photogrammetry. *Cryosphere*, 13(5).
<https://doi.org/10.5194/tc-13-1513-2019>

Irrgang, A., **Lantuit, H.**, Gordon, R., Piskor, A., Manson, G. (2019). Impacts of past and future coastal changes on the Yukon coast — threats for cultural sites, infrastructure, and travel routes. *Arctic Science*, 5(2).
<https://doi.org/10.1139/as-2017-0041>

Ramage, J., Fortier, D., Hugelius, G., **Lantuit, H.**, Morgenstern, A. (2019). Distribution of carbon and nitrogen along hillslopes in three valleys on Herschel Island, Yukon Territory, Canada. *Catena*, 178.
<https://doi.org/10.1016/j.catena.2019.02.029>

Klein, K., **Lantuit, H.**, Heim, B., Fell, F., Doxaran, D., Irrgang, A. (2019). Long-term high-resolution sediment and sea surface temperature spatial patterns in Arctic nearshore waters retrieved using 30-year Landsat archive imagery. *Remote Sensing*, 11(23), 2791. <https://doi.org/10.3390/rs11232791>

Coch, C., Juhls, B., Lamoureux, S., Lafrenière, M., Fritz, M., Heim, B., **Lantuit, H.** (2019). Comparisons of dissolved organic matter and its optical characteristics in small low and high Arctic catchments. *Biogeosciences*, 16(23).
<https://doi.org/10.5194/bg-16-4535-2019>

Tanski, G., Wagner, D., Knoblauch, C., Fritz, M., Sachs, T., **Lantuit, H.** (2019). Rapid CO₂ Release From Eroding Permafrost in Seawater. *Geophysical Research Letters*, 46(20). <https://doi.org/10.1029/2019GL084303>

Wolter, J., **Lantuit, H.**, Wetterich, S., Rethemeyer, J., Fritz, M. (2018). Climatic, geomorphologic and hydrologic perturbations as drivers for mid- to late Holocene development of ice-wedge polygons in the western Canadian Arctic. *Permafrost and Periglacial Processes*, 29(3). <https://doi.org/10.1002/ppp.1977>

Ramage, J., Irrgang, A., Morgenstern, A., **Lantuit, H.** (2018). Increasing coastal slump activity impacts the release of sediment and organic carbon into the Arctic Ocean. *Biogeosciences*, 15(5). <https://doi.org/10.5194/bg-15-1483-2018>

Couture, N., Irrgang, A., Pollard, W., **Lantuit, H.**, Fritz, M. (2018). Coastal Erosion of Permafrost Soils Along the Yukon Coastal Plain and Fluxes of Organic Carbon to the Canadian Beaufort Sea. *Journal of Geophysical Research: Biogeosciences*, 123(2). <https://doi.org/10.1002/2017JG004166>

Stettner, S., Beamish, A., Bartsch, A., Heim, B., Grosse, G., Roth, A., **Lantuit, H.** (2018). Monitoring inter- and intra-seasonal dynamics of rapidly degrading ice-rich permafrost riverbanks in the Lena Delta with TerraSAR-X time series. *Remote Sensing*, 10(1), 51. <https://doi.org/10.3390/rs10010051>

Fritz, M., Unkel, I., Lenz, J., Gajewski, K., Frenzel, P., Paquette, N., **Lantuit, H.**, Körte, L., Wetterich, S. (2018). Regional environmental change versus local signal preservation in Holocene thermokarst lake sediments: A case study from Herschel Island, Yukon (Canada). *Journal of Paleolimnology*, 60(1). <https://doi.org/10.1007/s10933-018-0025-0>

Irrgang, A., **Lantuit, H.**, Manson, G., Günther, F., Grosse, G., Overduin, P. (2018). Variability in Rates of Coastal Change Along the Yukon Coast, 1951 to 2015. *Journal of Geophysical Research: Earth Surface*, 123(4).
<https://doi.org/10.1002/2017JF004326>

Stettner, S., **Lantuit, H.**, Heim, B., Eppler, J., Roth, A., Bartsch, A., Rabus, B. (2018). TerraSAR-X time series fill a gap in spaceborne Snowmelt Monitoring of small Arctic Catchments—A case study on Qikiqtaruk (Herschel Island), Canada. *Remote Sensing*, 10(7), 1155. <https://doi.org/10.3390/rs10071155>

Fritz, M., Vonk, J., **Lantuit, H.** (2017). Collapsing Arctic coastlines. *Nature Climate Change*, 7(1).
<https://doi.org/10.1038/nclimate3188>

Tanski, G., **Lantuit, H.**, Ruttor, S., Knoblauch, C., Radosavljevic, B., Strauss, J., Wolter, J., Irrgang, A., Ramage, J., Fritz, M. (2017). Transformation of terrestrial organic matter along thermokarst-affected permafrost coasts in the Arctic. *Science of the Total Environment*, 581-582. <https://doi.org/10.1016/j.scitotenv.2016.12.152>

Stark, N., Radosavljevic, B., Quinn, B., **Lantuit, H.** (2017). Application of portable free-fall penetrometer for geotechnical investigation of arctic nearshore zone. *Canadian Geotechnical Journal*, 54(1).
<https://doi.org/10.1139/cgj-2016-0087>

Ramage, J., Irrgang, A., Herzsuh, U., Morgenstern, A., Couture, N., **Lantuit, H.** (2017). Terrain controls on the occurrence of coastal retrogressive thaw slumps along the Yukon Coast, Canada. *Journal of Geophysical Research: Earth Surface*, 122(9). <https://doi.org/10.1002/2017JF004231>

- Obu, J., **Lantuit, H.**, Grosse, G., Günther, F., Sachs, T., Helm, V., Fritz, M. (2017). Coastal erosion and mass wasting along the Canadian Beaufort Sea based on annual airborne LiDAR elevation data. *Geomorphology*, 293. <https://doi.org/10.1016/j.geomorph.2016.02.014>
- Obu, J., **Lantuit, H.**, Myers-Smith, I., Heim, B., Wolter, J., Fritz, M. (2017). Effect of Terrain Characteristics on Soil Organic Carbon and Total Nitrogen Stocks in Soils of Herschel Island, Western Canadian Arctic. *Permafrost and Periglacial Processes*, 28(1). <https://doi.org/10.1002/ppp.1881>
- Wolter, J., **Lantuit, H.**, Herzsuh, U., Stettner, S., Fritz, M. (2017). Tundra vegetation stability versus lake-basin variability on the Yukon coastal plain (NW Canada) during the past three centuries. *Holocene*, 27(12). <https://doi.org/10.1177/0959683617708441>
- Tanski, G., Couture, N., **Lantuit, H.**, Eulenburg, A., Fritz, M. (2016). Eroding permafrost coasts release low amounts of dissolved organic carbon (DOC) from ground ice into the nearshore zone of the Arctic Ocean. *Global Biogeochemical Cycles*, 30(7). <https://doi.org/10.1002/2015GB005337>
- Wolter, J., **Lantuit, H.**, Fritz, M., Macias-Fauria, M., Myers-Smith, I., Herzsuh, U. (2016). Vegetation composition and shrub extent on the Yukon coast, Canada, are strongly linked to ice-wedge polygon degradation. *Polar Research*, 35(2016), 27489. <https://doi.org/10.3402/polar.v35.27489>
- Fritz, M., Wolter, J., Rudaya, N., Palagushkina, O., Nazarova, L., Obu, J., Rethemeyer, J., **Lantuit, H.**, Wetterich, S. (2016). Holocene ice-wedge polygon development in northern Yukon permafrost peatlands (Canada). *Quaternary Science Reviews*, 147. <https://doi.org/10.1016/j.quascirev.2016.02.008>
- Radosavljevic, B., **Lantuit, H.**, Pollard, W., Overduin, P., Couture, N., Sachs, T., Helm, V., Fritz, M. (2016). Erosion and Flooding—Threats to Coastal Infrastructure in the Arctic: A Case Study from Herschel Island, Yukon Territory, Canada. *Estuaries and Coasts*, 39(4). <https://doi.org/10.1007/s12237-015-0046-0>
- Obu, J., **Lantuit, H.**, Fritz, M., Pollard, W., Sachs, T., Günther, F. (2016). Relation between planimetric and volumetric measurements of permafrost coast erosion: A case study from Herschel Island, western Canadian Arctic. *Polar Research*, 35(2016), 30313. <https://doi.org/10.3402/polar.v35.30313>
- Fritz, M., Opel, T., Tanski, G., Herzsuh, U., Meyer, H., Eulenburg, A., **Lantuit, H.** (2015). Dissolved organic carbon (DOC) in Arctic ground ice. *Cryosphere*, 9(2). <https://doi.org/10.5194/tc-9-737-2015>
- Biskaborn, B., Lanckman, J. P., **Lantuit, H.**, Elger, K., Streletskiy, D., Cable, W., Romanovsky, V. (2015). The new database of the Global Terrestrial Network for Permafrost (GTN-P). *Earth System Science Data*, 7(2). <https://doi.org/10.5194/essd-7-245-2015>
- Wegner, C., Bennett, K., de Vernal, A., Forwick, M., Fritz, M., Heikkilä, M., Łacka, M., **Lantuit, H.**, Laska, M., Moskalik, M., O'Regan, M., Pawłowska, J., Promińska, A., Rachold, V., Vonk, J., Werner, K. (2015). Variability in transport of terrigenous material on the shelves and the deep Arctic Ocean during the Holocene. *Polar Research*, 34(1), 24964. <https://doi.org/10.3402/polar.v34.24964>
- Frank-Fahle, B., Yergeau, É., Greer, C., **Lantuit, H.**, Wagner, D. (2014). Microbial functional potential and community composition in permafrost-affected soils of the NW Canadian Arctic. *PLoS ONE*, 9(1), e84761. <https://doi.org/10.1371/journal.pone.0084761>
- Overduin, P., Strzelecki, M., Grigoriev, M., Couture, N., **Lantuit, H.**, St-Hilaire-Gravel, D., Günther, F., Wetterich, S. (2014). Coastal changes in the arctic. *Geological Society Special Publication*, 388(1). <https://doi.org/10.1144/SP388.13>
- Heim, B., Abramova, E., Doerffer, R., Günther, F., Hölemann, J., Kraberg, A., **Lantuit, H.**, Loginova, A., Martynov, F., Overduin, P., Wegner, C. (2014). Ocean colour remote sensing in the southern laptev sea: Evaluation and applications. *Biogeosciences*, 11(15). <https://doi.org/10.5194/bg-11-4191-2014>
- Schaefer, K., **Lantuit, H.**, Romanovsky, V., Schuur, E., Witt, R. (2014). The impact of the permafrost carbon feedback on global climate. *Environmental Research Letters*, 9(8), 085003. <https://doi.org/10.1088/1748-9326/9/8/085003>
- Lenz, J., Fritz, M., Schirrmeister, L., **Lantuit, H.**, Wooller, M., Pollard, W., Wetterich, S. (2013). Periglacial landscape dynamics in the western canadian arctic: Results from a thermokarst lake record on a push moraine (Herschel Island, Yukon Territory). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 381-382. <https://doi.org/10.1016/j.palaeo.2013.04.009>
- Lantuit, H.**, Overduin, P., Wetterich, S. (2013). Recent progress regarding permafrost coasts. *Permafrost and Periglacial Processes*, 24(2). <https://doi.org/10.1002/ppp.1777>
- Fritz, M., Herzsuh, U., Wetterich, S., **Lantuit, H.**, De Pascale, G., Pollard, W., Schirrmeister, L. (2012). Late glacial and Holocene sedimentation, vegetation, and climate history from easternmost Beringia (northern Yukon Territory, Canada). *Quaternary Research (United States)*, 78(3). <https://doi.org/10.1016/j.yqres.2012.07.007>

- Fritz, M., Wetterich, S., Schirrmeister, L., Meyer, H., **Lantuit, H.**, Preusser, F., Pollard, W. (2012). Eastern Beringia and beyond: Late Wisconsinan and Holocene landscape dynamics along the Yukon Coastal Plain, Canada. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 319-320. <https://doi.org/10.1016/j.palaeo.2011.12.015>
- Lantuit, H.**, Overduin, P., Couture, N., Wetterich, S., Aré, F., Atkinson, D., Brown, J., Cherkashov, G., Drozdov, D., Donald Forbes, L., Graves-Gaylord, A., Grigoriev, M., Hubberten, H. W., Jordan, J., Jorgenson, T., Ødegård, R., Ogorodov, S., Pollard, W., Rachold, V., Sedenko, S., Solomon, S., Steenhuisen, F., Streletskaia, I., Vasiliev, A. (2012). The Arctic Coastal Dynamics Database: A New Classification Scheme and Statistics on Arctic Permafrost Coastlines. *Estuaries and Coasts*, 35(2). <https://doi.org/10.1007/s12237-010-9362-6>
- Barbier, B., Dziduch, I., Liebner, S., Ganzert, L., **Lantuit, H.**, Pollard, W., Wagner, D. (2012). Methane-cycling communities in a permafrost-affected soil on Herschel Island, Western Canadian Arctic: Active layer profiling of *mcrA* and *pmoA* genes. *FEMS Microbiology Ecology*, 82(2). <https://doi.org/10.1111/j.1574-6941.2012.01332.x>
- Lantuit, H.**, Pollard, W., Couture, N., Fritz, M., Schirrmeister, L., Meyer, H., Hubberten, H. W. (2012). Modern and Late Holocene Retrogressive Thaw Slump Activity on the Yukon Coastal Plain and Herschel Island, Yukon Territory, Canada. *Permafrost and Periglacial Processes*, 23(1). <https://doi.org/10.1002/ppp.1731>
- Boike, J., Langer, M., **Lantuit, H.**, Muster, S., Roth, K., Sachs, T., Overduin, P., Westermann, S., McGuire, A. (2012). Permafrost – physical aspects, carbon cycling, databases and uncertainties. *Recarbonization of the Biosphere: Ecosystems and the Global Carbon Cycle*. https://doi.org/10.1007/978-94-007-4159-1_8
- Lantuit, H.**, Atkinson, D., Overduin, P., Grigoriev, M., Rachold, V., Grosse, G., Hubberten, H. W. (2011). Coastal erosion dynamics on the permafrost-dominated Bykovsky Peninsula, north Siberia, 1951-2006. *Polar Research*, 30(SUPPL.1), 7341. <https://doi.org/10.3402/polar.v30i0.7341>
- Wetterich, S., Overduin, P., **Lantuit, H.** (2011). Arctic permafrost coasts and changing subsea permafrost. *Polarforschung*, 81(1).
- Lantuit, H.**, Schirrmeister, L. (2011). Permafrost and man. *Polarforschung*, 81(1).
- Achberger, C., Ackerman, S., Ahlstrøm, A., Alfaro, E., Allan, R., Alves, L., Amador, J., Amelie, V., Andrianjafinirina, S., Antonov, J., Arndt, D., Ashik, I., Atheru, Z., Attaher, S., Baez, J., Banzon, V., Baringer, M., Barreira, S., Barriopedro, D., Barthia, P., Beal, L., Becker, A., Behrenfeld, M., Bell, G., Belward, A., Benedetti, A., Berrisford, P., Berry, D., Beszczynska-Moeller, A., Bhatt, U., Bidegain, M., Bindoff, N., Bissolli, P., Blake, E., Blunden, J., Booneeady, P., Bosilovich, M., Boudet, D., Box, J., Boyer, T., Bromwich, D., Brown, R., Bryden, H., Bulygina, O., Burrows, J., Butler, J., Cais, P., Calderon, B., Callaghan, T., Camargo, S., Cappelen, J., Carmack, E., Chambers, D., Chelliah, M., Chidichimo, M., Christiansen, H., Christy, J., Coelho, C., Colwell, S., Comiso, J., Compo, G., Crouch, J., Cunningham, S., Cutié, V., Dai, A., Davydova-Belitskaya, V., De Jeu, R., Decker, D., Dee, D., Demircan, M., Derksen, C., Diamond, H., Dlugokencky, E., Dohan, K., Dolman, A., Dorigo, W., Drozdov, D., Durack, P., Dutton, G., Easterling, D., Ebita, A., Eischeid, J., Elkins, J., Epstein, H., Euscátegui, C., Faijka-Williams, E., Famiglietti, J., Faniriantsoa, R., Feely, R., Fekete, B., Fenimore, C., Fettweis, X., Fields, E., Fioletov, V., Fogarty, C., Fogt, R., Forbes, B., Foster, M., Frajka-Williams, E., Free, M., Frolov, I., Ganesan, A., Ganter, C., Gibney, E., Gill, S., Gill, M., Gitau, W., Gleason, K., Gobron, N., Goldenberg, S., Goni, G., González, I., Good, S., Gottschalck, J., Gould, W., Gouveia, C., Griffiths, G., Guard, C., Guevara, V., Haas, C., Hall, B., Halpert, M., Heidinger, A., Heil, A., Heim Jr., R., Hennon, P., Henry, G., Hidalgo, H., Hilburn, K., Hirschi, J. M., Ho, S. P., Hobgood, J., Hoerling, M., Holgate, S., Hook, S., Hugony, S., Hurst, D., Ishihara, H., Itoh, M., Jaimes, E., Jeffries, M., Jia, G., Jin, X., Johns, W., Johnson, B., Johnson, G., Jones, P., Jumaux, G., Kabidi, K., Kaiser, J., Kanzow, T., Kaplan, A., Kearns, E., Keller, L., Kennedy, J., Khatiwala, S., Kholodov, A., Khoshkam, M., Kikuchi, T., Kimberlain, T., Knaff, J., Kobayashi, S., Kokelj, S., Korshunova, N., Kratz, D., Krishfield, R., Kruger, A., Kruk, M., Kumar, A., Lammers, R., Lander, M., Landsea, C., **Lantuit, H.**, Lantz, T., Lapinel, B., Lareef, Z., Lazzara, M., León, A., León, G., Leuliette, E., Levitus, S., Levy, J., L'Heureux, M., Lin, I. I., Liu, H., Liu, Y., Liu, Y., Loeb, N., Long, C., Lorrey, A., Lumpkin, R., Luo, J. J., Lyman, J., MacDonald, A., Maddux, B., Maier, F., Malkova, G., Marchenko, S., Marengo, J., Maritorea, S., Marotzke, J., Martínez Güingla, R., Maslanik, J., Masson, R., McBride, C., McGree, S., McLaughlin, F., McPeters, R., McVicar, T., Mears, C., Medany, M., Meier, W., Meinen, C., Merrifield, M., Miller, L., Mitchum, G., Montzka, S., Morcrette, J. J., Mote, T., Mühle, J., Mullan, A., Murray, D., Nash, E., Nerem, S., Newman, P., Nishino, S., Njau, L., Noetzli, J., Oberbauer, S., Oberman, N., Obregón, A., Ogallo, L., Oludhe, C., O'Malley, R., Overland, J., Park, G. H., Parker, D., Pasch, R., Pegion, P., Peltier, A., Pelto, M., Penalba, O., Pérez, R., Perlwitz, J., Perovich, D., Peterson, T., Pezza, A., Phillips, D., Pinzon, J., Pitts, M., Proshutinsky, A., Quegan, S., Quintana, J., Quintero, A., Rabe, B., Rahimzadeh, F., Rajeevan, M., Rayner, D., Rayner, N., Reynolds, M., Razuvaev, V., Reagan, J., Reid, P., Renwick, J., Revadekar, J., Reynolds, R., Richter-Menge, J., Rignot, E., Robinson, D., Rodell, M., Rogers, M., Romanovsky, V., Romero-Cruz, F., Ronchail, J., Rosenlof, K., Rossi, S., Rutledge, G., Saatchi, S., Sabine, C., Saha, S., Sánchez-Lugo, A., Santee, M., Sato, H., Sawaengphokhai, P., Sayouri, A., Scambos, T., Schauer, U., Schemm, J., Schmid, C., Schneider, P., Schueller, D., Sensoy, S., Sharp, M., Shaver, G., Shiklomanov, A., Shiklomanov, N., Shimada, K., Siegel, D., Simmons, A., Skansi, M., Smith, A., Smith, C., Smith, S., Smith, T., Sokolov, V., Spence, J., Srivastava, A., Stackhouse Jr., P., Stammerjohn, S., Steele,

- M., Steinbrecht, W., Stephenson, T., Stolarski, R., Tahani, L., Takahashi, T., Taylor, M., Thépaut, J. N., Thiaw, W., Thorne, P., Timmermans, M. L., Tobin, S., Toole, J., Trewin, B., Trigo, R., Tucker, C., Tweedie, C., Van As, D., Van De Wal, R., Van Der A, R., Van Der Werf, G., Vautard, R., Vieira, G., Vincent, L., Vinther, B., Vose, R., Wagner, W., Wahr, J., Walker, D., Walsh, J., Wang, C., Wang, J., Wang, L., Wang, M., Wang, S. H., Wanninkhof, R., Weaver, S., Webber, P., Weber, M., Weller, R., Weyman, J., Whitewood, R., Wijffels, S., Wilber, A., Willett, K., Williams, W., Willis, J., Wolken, G., Wong, T., Woodgate, R., Woodworth, P., Wovrosh, A., Xue, Y., Yamamoto-Kawai, M., Yin, X., Yu, L., Zhang, L., Zhang, P., Zhao, L., Zhou, X., Zimmermann, S. (2011). State of the climate in 2010. *Bulletin of the American Meteorological Society*, 92(6). <https://doi.org/10.1175/1520-0477-92.6.S1>
- Fritz, M., Wetterich, S., Meyer, H., Schirrmeyer, L., **Lantuit, H.**, Pollard, W. (2011). Origin and characteristics of massive ground ice on Herschel Island (western Canadian Arctic) as revealed by stable water isotope and Hydrochemical signatures. *Permafrost and Periglacial Processes*, 22(1). <https://doi.org/10.1002/ppp.714>
- Johansson, M., Åkerman, J., Keuper, F., Christensen, T., **Lantuit, H.**, Callaghan, T. (2011). Past and present permafrost temperatures in the Abisko area: Redrilling of boreholes. *Ambio*, 40(6). <https://doi.org/10.1007/s13280-011-0163-3>
- Lantuit, H.**, Overduin, P., Solomon, S., Mercier, D. (2011). Coastline dynamics in polar systems using remote sensing. *Geomatic Solutions for Coastal Environments*.
- Callaghan, T., Tweedie, C., Åkerman, J., Andrews, C., Bergstedt, J., Butler, M., Christensen, T., Cooley, D., Dahlberg, U., Danby, R., Daniëls, F., De Molenaar, J., Dick, J., Mortensen, C., Ebert-May, D., Emanuelsson, U., Eriksson, H., Hedenås, H., Henry, G., Hik, D., Hobbie, J., Jantze, E., Jaspers, C., Johansson, C., Johansson, M., Johnson, D., Johnstone, J., Jonasson, C., Kennedy, C., Kenney, A., Keuper, F., Koh, S., Krebs, C., **Lantuit, H.**, Lara, M., Lin, D., Loughheed, V., Madsen, J., Matveyeva, N., McEwen, D., Myers-Smith, I., Narozhniy, Y., Olsson, H., Pohjola, V., Price, L., Rigét, F., Rundqvist, S., Sandström, A., Tamstorf, M., Bogaert, R., Villarreal, S., Webber, P., Zemtsov, V. (2011). Multi-decadal changes in tundra environments and ecosystems: Synthesis of the international Polar year-back to the future project (IPY-BTF). *Ambio*, 40(6). <https://doi.org/10.1007/s13280-011-0179-8>
- Fritz, M., Krautblatter, M., Sanders, T., **Lantuit, H.** (2010). The "Permafrost Young Researchers Network" (PYRN) - A German perspective. *Polarforschung*, 80(3).
- Lantuit, H.**, Rachold, V., Pollard, W., Steenhuisen, F., Ødegård, R., Hubberten, H. W. (2009). Towards a calculation of organic carbon release from erosion of Arctic coasts using non-fractal coastline datasets. *Marine Geology*, 257(1-4). <https://doi.org/10.1016/j.margeo.2008.10.004>
- Hubberten, H. W., Boike, J., **Lantuit, H.**, Overduin, P., Schirrmeyer, L., Wagner, D., Huch, M. (2009). The International Polar Year 2007/08 - Series 22: Permafrost and the global climate change. *Polarforschung*, 78(3).
- Lantuit, H.**, Pollard, W. (2008). Fifty years of coastal erosion and retrogressive thaw slump activity on Herschel Island, southern Beaufort Sea, Yukon Territory, Canada. *Geomorphology*, 95(1-2). <https://doi.org/10.1016/j.geomorph.2006.07.040>
- Christiansen, H., Prick, A., **Lantuit, H.** (2007). Report from the International Permafrost Association: Education and outreach for the International Polar Year. *Permafrost and Periglacial Processes*, 18(2). <https://doi.org/10.1002/ppp.590>
- Warburton, J., Beylich, A., Etienne, S., Etzelmüller, B., Gordeev, V., Käyhkö, J., **Lantuit, H.**, Russell, A., Sæmundsson, P., Schmidt, K. H., Tweed, F. (2007). Sediment budgets and rates of sediment transfer across cold environments in Europe: Introduction and background to the European Science Foundation Network 'sedimentary source-to-sink fluxes in cold environments' (sediflux). *Geografiska Annaler, Series A: Physical Geography*, 89(1). <https://doi.org/10.1111/j.1468-0459.2007.00303.x>
- Lantuit, H.**, Pollard, W. (2005). Temporal stereophotogrammetric analysis of retrogressive thaw slumps on Herschel Island, Yukon Territory. *Natural Hazards and Earth System Science*, 5(3). <https://doi.org/10.5194/nhess-5-413-2005>