

JAMES A. BRADLEY

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Professional Appointments

2024-Present	CNRS Researcher (Chaire de Professeur Junior, CPJ), Mediterranean Institute of Oceanography, Marseille, France.
2024-Present	Honorary Reader in Arctic Biogeochemistry, Queen Mary University of London, UK.
2023	Reader in Environmental Science, Queen Mary University of London, UK.
2022-2023	Visiting Researcher, GFZ German Research Centre for Geosciences, Potsdam, Germany.
2021-2023	Senior Lecturer in Environmental Science, Queen Mary University of London, UK.
2021	Visiting Fellow, Center for Advanced Studies, Ludwig Maximilian University of Munich, Germany.
2019-2021	Lecturer in Environmental Science, Queen Mary University of London, UK.
2018-2021	Humboldt Fellow, GFZ German Research Centre for Geosciences, Potsdam, Germany.
2018-2019	DCO Postdoctoral Fellow, University of Southern California, Los Angeles, USA.
2016-2018	C-DEBI Postdoctoral Fellow, University of Southern California, Los Angeles, USA.
2013-2016	PhD student, University of Bristol, UK.

Academic Preparation

2019-2022	Postgraduate Certificate in Academic Practice, Queen Mary University of London.
2013-2016	PhD, Geographical Sciences, University of Bristol, UK. Thesis: Microbial dynamics in High-Arctic proglacial soils: an integrated modelling, field and laboratory approach.
2008-2011	BSc, 1 st Class with Honours, Physical Geography, University of Bristol, UK Thesis: Geoengineering the climate with forestation: the albedo effect.

Research Grants & Funding

Total: €7.8 million (as PI, Co-PI or Co-I)

External

2024-2029	European Research Council. ERC Starting Grant: SIESTA. €2,089,972. Role: PI.
2023-2025	National Research Agency (ANR), Italy. Winter CZ: Winter Critical Zone dynamics in the High Arctic: measuring carbon fluxes and geo-biological processes at the Bayelva Critical Zone Observatory during winter. €143,700. Role: Co-I.
2023-2025	UKRI Fund for International Collaboration. Signals in the Soil. £100,000. Role: PI.
2023-2024	Natural Environmental Research Council (NERC), Arctic Access Scheme: ARCTIC-AIR. Role: PI. £6,970.
2022-2025	Human Frontier Science Program (HFSP). The Atmosphere: A living, breathing ecosystem? RGY0058/2022. \$1.5 million. Role: Co-PI.
2022-2024	Natural Environmental Research Council (NERC). Exploring antimicrobial resistance in Arctic glacier forefields. £24,983. Role: Co-I.
2022-2025	*Natural Environmental Research Council (NERC). Subglacial Lake Exploration: Diversity, Geochemistry, Ecology (SLEDGE). NE/V009214/1. £717,500. Role: Co-I. <i>*RO withdrawn due to COVID-19.</i>
2022-2023	Natural Environmental Research Council (NERC), Environmental Omics Facility (NEOF). Role of trace-gas oxidising microorganisms in newly exposed glacier forefield soils. £11,025. Role: Co-I.
2021-2024	Natural Environmental Research Council (NERC). Cryo365: Are There Perennial and Light-Independent Microbial Processes on Supraglacial Ecosystems? NE/V012991/1. £768,329. Role: Co-PI.
2023	INTERACT (EU Horizon-2020). WAVES 2. €9,600.
2023	ARICE-PONANT: Antarctic call, 2023-2024; Ships and Platforms of Opportunity Programme. Air-Bio. Award: two berths on two legs (CC291123, CC131223). Role: PI.
2022	Natural Environmental Research Council (NERC), Arctic Access Scheme. Impact of permafrost thaw on ecosystem functioning and biogeochemical fluxes. £10,250. Role: PI.
2022	INTERACT (EU Horizon-2020). GHOST. €15,200. Role: Co-PI.
2022	INTERACT (EU Horizon-2020). WAVES. €9,665. Role: Co-PI.
2022	NERC London DTP Studentship, 2022-2025, Traces of microbial life and activity in Arctic endolithic habitats, Sonia Papadaki.
2020	Research Council of Norway, Svalbard Science Forum. Spatial and temporal dynamics of biogeochemical cycling in Svalbard snowpacks. £8,500. Role: Co-PI.
2020	SITS ECR Placement. £4,920. Role: PI.
2020	INTERACT (EU Horizon-2020). AMBER ICE. €17,694. Role: PI.
2020	Svalbard Integrated Arctic Earth Observing System (SIOS). IN-SPACE: An Integrated Network to measure Seasonal Processes in Arctic habitats via novel Experiments. £20,247. Role: Co-PI.
2020	Svalbard Integrated Arctic Earth Observing System (SIOS). CAP-BIO: Capturing Biogeochemical Processes in Proglacial Soil During the Freezing Period. £12,463. Role: PI.
2020-2025	Natural Environmental Research Council (NERC) and National Science Foundation (NSF). Signals in the Soil. 'SUN SPEARS: Sensors Under Snow - Seasonal Processes in the Evolution of Arctic Soils'. NE/T010967/1. £1.62 million, £511,023 to JB. Role: PI.

2019-2022	Department of Energy. 'Using culture-independent methods to link active compound-specific carbon degradation to greenhouse gas production and recycling in natural populations of permafrost microbes.' \$3,320,280. Lead PI: Karen Lloyd, University of Tennessee, Knoxville. Role: Project Partner.
2018-2021	Alexander von Humboldt Foundation. Humboldt Research Fellowship for Postdoctoral Researchers. €85,680. Role: PI.
2018-2019	Deep Carbon Observatory (DCO). DLMV Postdoctoral Fellowship. Modelling the role of dormancy and maintenance of microorganisms on carbon transformations in marine sediments. \$33,375. Role: PI.
2016-2018	Centre for Dark Energy Biosphere Investigations (C-DEBI). Postdoctoral Fellowship. Develop a 1D biogeochemical-evolutionary model for deep marine sediments. \$215,429. Role: PI.
2015	Scott Polar Research Institute. Gino Watkins Memorial Fund. £500. Role: PI
2014	John Muir Trust. Bill Wallace Grant. £500. Role: PI.

Project Partner

2023-2024	CASP-ICE. Lead: C. Williamson, University of Bristol.
2020-2023	SaltGiant ETN. Lead: Giovani Aloisi, Institut de Physique du Globe de Paris (IPGP), France.

Internal

2022	IHSS Seed-corn Fund, QMUL. Rock-Hosted-Life: Revealing the microbial communities inhabiting Antarctic rocks. £4,655. Role: PI.
2022	Student Research Project, QMUL. 'An assessment of carbon fluxes in recently deglaciated Arctic soils'. £1,000. Role: PI.
2021	IHSS Seed-corn Fund, QMUL. DEEP-LIFE: Dispersal of life from the deep biosphere to the cryosphere. £3,581. Role: PI
2021	Student Research Project, QMUL. 'Geochemical analyses of soil development following glacier retreat'. £1,000. Role: PI.
2021	Queen Mary University of London Principal's Studentship, 2021-2024, Microbial Community Assembly on Arctic Glaciers. PhD Position, Amy Solman.
2021	Queen Mary University of London Studentship, 2021-2024, Geomicrobiology of Arctic Permafrost Thaw. PhD Position, Margaret Cramm.
2020	IHSS Seed-corn Fund, QMUL. Micro-AP: Microbial activity in frozen Arctic Permafrost. £2,000. Role: PI.
2020	Global Engagement, QMUL. Research Initiation. 'Developing a modelling framework for sub-seafloor processes'. £1,000. Role: PI.

Prizes and Awards

2023	Outstanding article, ASLO journal portfolio 2020-2021.
2021	Center for Advanced Studies Fellow, Ludwig Maximilian University of Munich, Germany.
2021	Deep Life Paper of 2020 (<i>Lead-author</i>), International Center for Deep Life Investigation.
2019	European Association of Geochemistry Ambassador Award.
2019	Humboldt Fellow, Alexander Humboldt Foundation.
2019	Fellow, Deep Carbon Observatory.
2018	NASA Travel Award. 12 th International Congress of Extremophiles, 2018, Ischia, Italy. \$2,000.
2018	USC Postdoctoral Research Symposium: Oral Presentation Prize. University of Southern California, Los Angeles, USA. \$250.
2018	Antarctic Service Medal, United States Congress.
2017	University of Southern California, Postdoctoral Scholar Training & Travel Award. International workshop on Marine Geomicrobiology, 2017, Sandbjerg, Denmark. \$500.
2016	Fellow, C-DEBI.
2016	ABTA Doctoral Research Award: Honourable Mention.
2016	European Association of Geochemistry, Student Sponsorship Award. European Geosciences Union General Assembly 2016, Vienna, Austria. €500.
2016	European Geosciences Union, Early Career Scientist's Travel Award. €275.
2015	University of Bristol, Alumni Foundation Travel Award. Polar & Alpine Microbiology Conference 2015, České Budějovice, Czech Republic. £500.
2015	Agouron Institute, International Geobiology Course. \$4,000.
2013-2016	Natural Environmental Research Council, PhD Studentship.
2011	University of Bristol Faculty of Science, Outstanding Academic Success Award.
2011	Royal Geographical Society 'Climate Change Research Group' dissertation award, nomination.

Publications

2024	Trejos-Espeleta JC, Marin-Jaramillo J P, Schmidt S K, Sommers P, Bradley J A [°] , Orsi W D [°] . Principal role of fungi in soil carbon stabilization during early pedogenesis in the high Arctic. <i>Proceedings of the National Academy of Sciences (PNAS)</i> . doi: 10.1073/pnas.2402689121 (°co-corresponding authors)
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- 2024 Lappan R, Thakar J, Molares Moncayo L, Besser A, [Bradley J A](#)[°], Goordial J[°], Trembath-Reichert E[°], Greening C[°]. The atmosphere: a transport medium or an active microbial ecosystem? *The ISME Journal*, wrae092, doi: 10.1093/ismejo/wrae092 (°co-corresponding authors)
- 2024 Lyu Z, Sommers P, Schmidt S K, Magnani M, Cimpoiasu M, Kuras O, Zhuang Q, Oh Y, De La Fuente M, Cramm M, [Bradley J A](#). Seasonal dynamics of Arctic soils: Capturing year-round processes in measurements and soil biogeochemical models. *Earth-Science Reviews*, 254, 104820, doi: 10.1016/j.earscirev.2024.104820
- 2024 Makowska-Zawierucha N, Trzebny A, Zawierucha K, Manthapuri V, [Bradley J A](#), Pruden A. Arctic plasmidome analysis reveals distinct relationships among associated antimicrobial resistance genes and virulence genes along anthropogenic gradients. *Global Change Biology*. doi: 10.1111/gcb.17293
- 2024 Cimpoiasu M, Kuras O, Harrison H, Wilkinson, P, Meldrum P, Chambers J, Liljestrand D, Oroza C, Schmidt S, Sommers P, Irons T, [Bradley J A](#). Characterization of a Deglaciated Sediment Chronosequence in the High Arctic Using Near-Surface Geoelectrical Monitoring Methods. *Permafrost and Periglacial Processes*. doi: 10.1002/ppp.2220
- 2023 Moore O, Curti L, Woulds C, [Bradley J A](#), Mills B, Homoky W, Xiao K, Babakhani P, Bray A, Fisher B, Kazemian M, Kaulich B, Dale A, Peacock C. Long-term organic carbon preservation enhanced by iron and manganese. *Nature*. doi:10.1038/s41586-023-06325-9
- 2023 [Bradley J A](#), Trivedi C, Winkel M, Mourot R, Lutz S, Larose C, Keuschnig C, Doting E, Halbach L, Zervas A, Anesio A, Benning L. Active and dormant microorganisms on glacier surfaces. *Geobiology*. doi: 10.1111/gbi.12535
- 2023 Soares A R, Edwards A, An D, Bagnoud A, [Bradley J A](#), Barnhart E, Bomberg M, Budwill K, Caffrey S, Fields M, Gralnick J, Kadnikov V, Momper L, Osburn M, Mu A, Moreau J, Moser D, Purkamo L, Rassner S, Sheik C, Sherwood Lollar B, Toner B, Voordouw G, Wouters K, Mitchell A. A global perspective on bacterial diversity in the terrestrial deep subsurface. *Microbiology*. doi: 10.1099/mic.0.001172
- 2022 [Bradley J A](#)[°] Hülse D[°], LaRowe D, Arndt S. Transfer Efficiency of Organic Carbon in Marine Sediments. *Nature Communications*. doi: 10.1038/s41467-022-35112-9 (°co-first authors)
- 2022 Halbach L, Chevrollier L, Doting E, Cook J, Jensen M, Benning L, [Bradley J A](#), Hansen M, Lund-Hansen L, Markager S, Sorrell B, Tranter M, Trivedi T, Winkel M, Anesio A. Pigment signatures of algal communities and their implications for glacier surface darkening. *Scientific Reports*. doi: 10.1038/s41598-022-22271-4
- 2022 Yu K, Hoogen J, Wang Z, Averill C, Routh D, Smith G, Drenovsky R, Scow K, Mo F, Waldrop M, Yang Y, Vries F, Bardgett R, Manning P, Bastida F, Baer S, Bach E, García C, Wang Q, Ma L, Chen B, Ye J, Teurlincx S, Heijboer A, [Bradley J A](#), Crowther T. The biogeography of relative abundance of soil fungi versus bacteria in surface topsoil. *Earth System Science Data*. doi: 10.5194/essd-14-4339-2022
- 2022 [Bradley J A](#), Arndt S, Amend J, Burwicz-Galerie E, LaRowe D. Sources and fluxes of organic carbon and energy to microorganisms in global marine sediments. *Frontiers in Microbiology*, 13:910694. doi:10.3389/fmicb.2022.910694
- 2022 Trivedi C B, Keuschnig C, Larose C, Rissi D V, Mourot R, [Bradley J A](#), Winkel M, Benning L G. DNA/RNA Preservation in Glacial Snow and Ice Samples, *Frontiers in Microbiology*, 13:894893. doi:10.3389/fmicb.2022.894893
- 2022 Winkel M, Trivedi C B, Mourot R, [Bradley J A](#), Vieth-Hillebrand A, Benning L G. Seasonality of Glacial Snow and Ice Microbial Communities, *Frontiers in Microbiology*, 13:876848. doi:10.3389/fmicb.2022.876848
- 2021 Wojcik R, Eichel J, [Bradley J A](#), Benning LG. How allogenic environmental factors affect successions in glacier forefields. *Earth Science Reviews*. doi:10.1016/j.earscirev.2021.103642
- 2021 Bay S, Dong X, [Bradley J A](#), Leung P M, Grinter R, Jirapanjawan T, Arndt S, Cook P, LaRowe D, Nauer P, Chiri E, Greening C. Trace gas oxidizers are widespread and active members of soil microbial communities. *Nature Microbiology*. doi: 10.1038/s41564-020-00811-w
Commentary in Nature Reviews Microbiology (DOI:10.1038/s41579-021-00522-x).
Perspective in Nature Microbiology (DOI:10.1038/s41564-020-00855-y).
Nomination Faculty1000.
- 2020 Li M, Sutfin N A, Christie M, Neelam M, [Bradley J A](#). Making a Place for the Next Generation of Geoscientists. *Eos*, 101, doi: 10.1029/2020EO151355

- 2020 [Bradley J A](#), Arndt S, Amend J, Burwicz E, Dale A, Egger M, LaRowe D. Widespread energy limitation to life in global seafloor sediments. **Science Advances**. doi: 10.1126/sciadv.aba0697
*Winner of International Center for Deep Life Investigation for 2020 "Deep Life Paper".
Commentary in Nature Reviews Earth & Environment (DOI:10.1038/s43017-020-0094-2)
News in Science (DOI: 10.1126/science.369.6504.639-h)*
- 2020 LaRowe D, Arndt S, [Bradley J A](#), Burwicz E, Dale A, Amend J. Organic carbon and microbial activity in marine sediments on a global scale throughout the Quaternary. **Geochimica et Cosmochimica Acta**. doi: 10.1016/j.gca.2020.07.017
- 2020 Stibal M, [Bradley J A](#), Edwards A, Hotaling S, Zawierucha K, Rosvold J, Lutz S, Cameron K, Mikucki J, Kohler T, Šabacká M, Anesio A. Glacial ecosystems are essential to understanding biodiversity responses to glacier retreat. **Nature Ecology and Evolution**. doi: 10.1038/s41559-020-1163-0
- 2020 LaRowe D, Arndt S, [Bradley J A](#), Estes E, Hoarfrost A, Lang S, Lloyd K, Mahmoudi N, Orsi W, Shah Walter S, Steen A, Zhao R. The fate of organic carbon in marine sediments - New insights from recent data and analysis. **Earth Science Reviews**. doi: 10.1016/j.earscirev.2020.103146
- 2020 Orcutt B, [Bradley J A](#), Brazelton W, Estes E, Goordial J, Huber J, Jones R, Mahmoudi N, Marlow J, Murdock S, Pachiadaki M. Impacts of Deep-Sea Mining on Microbial Ecosystem Services. **Limnology & Oceanography**. doi: 10.1002/lno.11403
Outstanding article, ASLO journal portfolio, 2020-2021
- 2019 [Bradley J A](#), Amend J, LaRowe D. Survival of the fewest: Microbial dormancy and maintenance in marine sediments through deep time. **Geobiology**. doi: 10.1111/gbi.12313
- 2018 [Bradley J A](#), Amend J, LaRowe D. Bioenergetic controls on microbial ecophysiology in marine sediments. **Frontiers in Microbiology – Extreme Microbiology**. doi: 10.3389/fmicb.2018.00180
- 2017 [Bradley J A](#)[°], Daille L[°], Trivedi C[°], Bojanowski C, Stamps B, Stevenson B, Nunn H, Johnson H, Loyd S, Berelson W, Corsetti F, Spear J. Carbonate-Rich Dendrolitic Cones: Insights into a Modern Analogue for Incipient Microbialite Formation, Little Hot Creek, Long Valley Caldera, California. **npj Biofilms and Microbiomes**. doi:10.1038/s41522-017-0041-2 (°co-first authors)
- 2017 Stibal M, [Bradley J A](#), Box J. Ecological modelling of the supraglacial ecosystem: a process-based perspective. **Frontiers in Earth Science**. doi: 10.3389/feart.2017.00052
- 2017 [Bradley J A](#), Anesio, A, Arndt S. Microbial and biogeochemical dynamics in glacier forefields are sensitive to century-scale climate and anthropogenic change. **Frontiers in Earth Science**. doi: 10.3389/feart.2017.00026
- 2016 [Bradley J A](#), Arndt S, Šabacká M, Benning L, Barker G, Blacker J, Yallop M, Wright K, Bellas C, Telling J, Tranter M, Anesio A. Microbial dynamics in a High-Arctic glacier forefield: a combined field, laboratory, and modelling approach. **Biogeosciences**. doi: 10.5194/bg-13-5677-2016
- 2016 [Bradley J A](#), Anesio A, Arndt S. Bridging the divide: A model-data approach to Polar & Alpine Microbiology. **FEMS Microbiology Ecology**. doi: 10.1093/femsec/fiw015
- 2016 Pearce D, Irina A, Terauds A, Wilmotte A, Quesada A, Edwards A, Dommergue A, Sattler B, Adams B, Magalhães C, Wan Loy C, Yim M. Lau C, Cary C, Smith D, Wall D, Eguren G, Matcher G, [Bradley J A](#), Devera J, Elster J, Hughes K, Benning L, Gunde-Cimerman N, Convey P, Gyu Hong S, Pointing S, Pellizari V, Vincent W. Aerobiology over Antarctica – a new initiative for atmospheric ecology. **Frontiers in Microbiology**. 7. doi: 10.3389/fmicb.2016.00016
- 2015 [Bradley J A](#), Anesio A, Singarayer J, Heath M, Arndt S. SHIMMER (1.0): A novel mathematical model for microbial and biogeochemical dynamics in glacier forefield ecosystems. **Geoscientific Model Development**. 8, 3441-3470. doi: 10.5194/gmd-8-3441-2015
- 2014 [Bradley J A](#), Singarayer J, Anesio A. Microbial community dynamics in the forefield of glaciers. **Proceedings of the Royal Society B**. 281: 20140882. doi: 10.1098/rspb.2014.0882
- White Papers*
- 2021 Hand, K., Phillips, C. B., Chyba, C. F., Toner, B., Katija, K., Orphan, V., [Bradley, J A](#), et al. On the Past, Present, and Future Role of Biology in NASA's Exploration of our Solar System. **Bulletin of the AAS**, 53(4). doi: 10.3847/25c2feb.1f3849db
- 2020 Orcutt B, [Bradley J A](#), Huber J, Jones R, Mahmoudi N, Marlow J, Wheat J. Liliuokalani Ridge Seamounts: Mineral Crusts, Benthic Habitat, and Ecosystem Services in an Un-mapped and Unexplored Region of the US EEZ and International Waters. **National Ocean Exploration Priorities in the Pacific, Consortium for Ocean Leadership and NOAA Office of Ocean Exploration and Research**. <https://oceanleadership.org/discovery/ocean-exploration>
- 2020 Orcutt B, [Bradley J A](#), Goordial J, Huber J, Jones R, Mahmoudi N, Marlow J, Wheat J. The Pacific-Antarctic Rise: An Uncharacterized Mid-Ocean Ridge. **National Ocean Exploration Priorities in the**

Book Chapters

- 2022 [Bradley J A](#) (2022) In: Kelman I (Ed.) *Antarcticness: Inspirations and imaginaries*, UCL Press, London, United Kingdom. doi: 10.14324/111.9781800081444
- 2021 [Bradley J A](#) (2021) Microbial dynamics in forefield soils following glacier retreat. In: Liebner S, Ganzert L (Ed.) *Microbial Life In the Cryosphere and its Feedback on Global Change*. de Gruyter, Berlin, Germany. doi: 10.1515/9783110497083-013
- 2021 Lutz S, [Bradley J A](#) (2021) Glacial surfaces: functions and biogeography. In: Liebner S, Ganzert L (Ed.) *Microbial Life In the Cryosphere and its Feedback on Global Change*. de Gruyter, Berlin, Germany. doi: 10.1515/9783110497083-012

Advisement

Postdoctoral Researchers

- 2024-Present Rey Mourot (MIO)
2024-Present Eloy Martínez-Rabert (MIO)
2023-Present Adam Solon (QMUL)
2021-Present Zhou Lyu (QMUL)

PhD Students

- 2024-Present Sibylle Lebert (*Primary supervisor, MIO*)
2023-Present Laura Molares Moncayo (*Primary supervisor, QMUL & MIO*)
2023-Present Jessica Caughtry (*Co-supervisor, UCL*)
2023-Present Will Tallon (*Co-supervisor, UEA*)
2022-Present Sonia Papadaki (*Primary supervisor, QMUL*)
2021-Present Pascaline Francelle (*Co-supervisor, QMUL*)
2020-Present Margaret Cramm (*Primary supervisor, QMUL*)
2020-Present Amy Solman (*Primary supervisor, QMUL*)
2020-2024 Rey Mourot (*Co-supervisor, GFZ*)

Masters Students

- 2021-2023 Zoonii Kayler (*Co-supervisor, University of Bristol*)

Student Research Assistants

- 2022-2023 Anastasia Hambi (*Primary advisor*)
Awards: Best Dissertation, Excellence in Environmental Change

PhD Examiner/Opponent

- 2022 Angelique Ray, PhD, University of New South Wales, Australia.
2021 Peter Higgins, PhD, University of Edinburgh, UK.
2021 Ingeborg Klarenberg, PhD, External Examiner, University of Iceland, Iceland.
2020 Melanie Hay, PhD, Aberystwyth University.

PhD Committees

- 2022-Present Alejandro Huerta Hurtado, QMUL. Committee Member.
2022-Present Stefan Baternay, QMUL. Committee Chair.
2021-Present Susan Hawthorne, QMUL. Committee Member.
2019-Present Dorothee Kinkel, QMUL. Committee Member.

Masters Examiner

- 2023 Archie Crosskey, Newcastle University
2023 Jovan Leigh Josh Vincent, Newcastle University

Bachelor Thesis

Primary supervisor to 24 Bachelor theses (to completion), including awards for *Best Dissertation* (A. Hambi) and *Excellence in Environmental Change* (A. Hambi).

Teaching

Aix-Marseille University

- 2024 Postgraduate: Cycles du Carbone, Carbonates et Climate (CEREGE); Ecologie microbienne & fonctionnement des écosystèmes (MIO).

Queen Mary University of London

- 2023/24 Undergraduate: Environmental Research in the Field.
2022/23 Postgraduate: MSc Environmental Science by Research (*Convenor*).

	Undergraduate: Earth Surface Science (<i>Convenor</i>); Environmental Research Methods; Advanced Environmental Research Methods; Research Design; Independent Geographical Study; Ideas and Practice in Geography and Environmental Science
2021/22	Postgraduate: MSc Environmental Science by Research (<i>Convenor</i>). Undergraduate: Earth Surface Science (<i>Convenor</i>); Environmental Research Methods; Advanced Environmental Research Methods; Research Design; Independent Geographical Study/Project in Environmental Science; Ideas and Practice in Geography and Environmental Science; Ecosystem Sciences.
2020/21	Postgraduate: MSc Environmental Science by Research (<i>Convenor</i>). Undergraduate: Earth Surface Science (<i>Convenor</i>); Environmental Research Methods; Advanced Environmental Research Methods; Research Design; Independent Geographical Study/Project in Environmental Science; Ideas and Practice in Geography and Environmental Science; Ecosystem Sciences.
2019/20	Undergraduate: Earth Surface Science (<i>Convenor</i>); Environmental Research Methods; Advanced Environmental Research Methods; Research Design; Independent Geographical Study/Project in Environmental Science; Progress in Physical Geography and Environmental Science; Ideas and Practice in Geography and Environmental Science.

University of Bristol

2015/16	Undergraduate: Environmental Change; Earth System Modelling; Cryosphere; Research Methods in Physical Geography; Ice & Oceans; Big Ideas in Science.
2014/15	Undergraduate: Environmental Change; Earth System Modelling; Cryosphere; Research Methods in Physical Geography; Ice & Oceans; Big Ideas in Science.
2013/14	Undergraduate: Environmental Change; Earth System Modelling; Big Ideas in Science.

Guest teaching

2022	Expanding Dimensions, MA Biodesign, Central Saint Martins - University of the Arts London.
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Mentor for students with disabilities, Disability service

University of Bristol

2013-2016	Working with disabled students (5 students over 3 years) for one-to-one support meetings, support and academic assistance.
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Fieldwork

***Lead/Chief Scientist or Principal Investigator**

2024	*South Georgia & West Antarctica. Oceanographic mission, 22 days at sea onboard MS Fram.
2024	*Gran Paradiso National Park. HFSP aerobiology field campaign.
2024	*Svalbard. Summer glacier, terrestrial & marine field campaign, Brøggerhalvøyafor, QCarbon project.
2024	*Svalbard. Brøggerhalvøya winter glacier field campaign, Brøggerhalvøya, ARCTIC-AIR project
2024	Volcano flanks, southern Chile. Antuco, Calbuco and Llaima volcanos.
2023	*West Antarctica. Oceanographic mission, 29 days at sea onboard Le Commandant Charcot, Antarctic Peninsula & Bellingshausen Sea.
2023	Svalbard. Fall glacier field campaign, Brøggerhalvøya, WAVES2 project.
2023	*Svalbard. Summer glacier, terrestrial & marine field campaign, Brøggerhalvøyafor, QCarbon project.
2023	Flagstaff, Arizona. Aerobiology sampling campaign, funded by HFSP, with AIR team.
2023	*Svalbard. Spring field campaign on Midtre Lovénbreen glacier for SUN SPEARS project.
2022	*Svalbard. Fall permafrost campaign, Brøggerhalvøyafor, IMPACT project.
2022	*Svalbard. Summer field campaign on Midtre Lovénbreen glacier for SUN SPEARS project.
2022	*West Greenland. Geothermal spring sampling on Disko Island for GHOST project.
2022	*Svalbard. Late spring field campaign on Midtre Lovénbreen glacier for WAVES project.
2022	*Svalbard. Early spring (Feb) field campaign on Midtre Lovénbreen glacier for SUN SPEARS project.
2021	*Svalbard. Fall (Oct/Nov) field campaign on Midtre Lovénbreen glacier for SUN SPEARS project.
2021	*Svalbard. Summer field campaigns on Feiringbreen and Midtre Lovénbreen glaciers for AWIPEV-supported HOMAGE project
2021	*Svalbard. Summer field campaign on Foxfonna for INTERACT-funded AMBER-ICE project.
2021	*Svalbard. Summer sensor installations for SUN SPEARS project, Midtre Lovénbreen.
2021	*Svalbard. Spring field campaigns on Feiringbreen and Midtre Lovénbreen glaciers for SIOS-funded IN-SPACE project.
2021	*Svalbard. Spring field campaign on Foxfonna glacier for INTERACT-funded AMBER-ICE project.
2021	Svalbard. Permafrost drilling on Brøggerhalvøy, early Spring.
2020	*Svalbard. Mid-winter fieldwork on glaciers during polar night.
2019	Iceland. Biological and chemical sampling of Langjökul and Snaefellsjökull glaciers.
2019	East Greenland. Biological and chemical sampling of Mittivakkat glacier and the Greenland Ice Sheet. Based out of Sermilik Research Station, eastern Greenland. INTERACT-funded project: AirMiMic.
2018	McMurdo Sound, Antarctica. Sea-ice based fieldwork investigating biological adaptation of Polar organisms to environmental change.
2015	Long Valley Caldera, USA. Fieldwork in California and Nevada on modern (hot springs, lakes) and ancient outcrop settings.
2015	Svalbard. SNOW WAKE winter/spring sampling campaign. Geochemical and biological sampling of snow, lake ice, cryoconite, soils.

2014	Russel Glacier, West Greenland. Arctic Soils summer campaign. Geochemical and biological sampling of soils and cryoconite.
2013	Svalbard. Arctic soils summer sampling campaign. Geochemical and biological sampling of soils and cryoconite.
2010	Haut d'Arolla, Switzerland. Field training in geochemical, biological and hydrological analyses.

Invited Presentations

*Oral, °Poster

12.2024	*Microbiology congress - Bacteria in its environment. Institute of Microbiology of the Mediterranean (IMM), CNRS Joseph Aiguier campus, Marseille, France.
11.2024	*Department of Earth Sciences, Durham University, UK.
10.2024	*1 st International Workshop on Biodiversity in Svalbard Archipelago, Messina, Italy.
06.2024	*Grands Séminaires, CERGE, Aix-en-Provence, France.
06.2024	*Frontiers in Earth Science, LMU Munich, Germany.
04.2024	*Keynote, Séminaires de Microbiologie de Strasbourg, France.
07.2023	*Laboratoire de Chimie Bactérienne, France.
01.2023	*Monitoring seasonal processes in an Arctic glacier forefield. Arctic Critical Zone Observation Network, Pisa, Italy.
05.2022	*Bradley J et al. Closing the Biological Carbon Pump: Transfer Efficiency of Organic Carbon in Marine Sediments. ETN SaltGiant, IPGP, Paris.
04.2022	*Department of Environmental Science, Policy, and Management, University of California Berkeley, USA.
04.2022	*Microbiology Society Annual Conference, Belfast, Northern Ireland (withdrawn due to Covid-19).
02.2022	*Expanding Dimensions, MA Biodesign, Central Saint Martins - University of the Arts London.
02.2022	*Department of Earth Sciences, University of Oxford, UK.
02.2022	*Center for Advanced Studies, Ludwig Maximilian University of Munich, Germany.
12.2021	*Mineralogical Society Meeting: The mineral-microbe interface through time and space. London, UK.
11.2021	*C-DEBI Annual Meeting, Marina, California, USA.
10.2021	*International Center for Deep Life Investigations, Shanghai Jiao Tong University, China.
06.2021	*Department of Earth Sciences, Utrecht University, The Netherlands.
04.2021	*Alexander von Humboldt Virtual Network Meeting.
04.2021	*AstrobiologyOU, The Open University, UK.
04.2021	*Geomicrobiology Network Seminar Series, University of Glasgow, UK.
04.2021	*German Centre for Integrative Biodiversity Research, University of Jena, Germany.
11.2020	*Glaciers and Ice Sheets as Climate Regulators and Biogeochemical Reactors. East London Geographical Association, London, UK.
10.2020	*Department of Molecular Biology, University of Wyoming, USA.
09.2020	*SUN SPEARS: Sensors under snow – Seasonal processes in the evolution of Arctic soils. Signals in the Soil International Workshop, UK.
06.2020	*SaltGiant Workshop. Paris, France.
03.2020	*Department of Geological Sciences, Université Libre de Bruxelles, Belgium.
02.2020	*Arctic Station Day. British Antarctic Survey, Cambridge, UK.
01.2020	*School of Earth and Environment, Leeds University, Leeds, UK.
01.2020	*Department of Environmental Science, Aarhus University, Denmark.
01.2020	*Polar Night Week 2020. Svalbard Science Centre, Longyearbyen.
12.2020	*UKRI Signals in the Soil. Birmingham, UK.
11.2019	*C-DEBI Network Speaker Series. Online webinar.
06.2019	*Bio-energetics of life in marine sediments on a global scale. 2 nd Geobiology Society Conference, Banff, Canada.
05.2019	*Bio-energetics of life in marine sediments. GFZ Helmholtz Centre, Potsdam, Germany.
02.2019	*Widespread energy limitation in global marine sediments, Department of Earth and Planetary Sciences, McGill University, Montreal, Canada.
11.2018	*Bioenergetics of life in the marine subsurface. Inaugural Symposium for the International Center for Deep Life Investigation (ICDLI) and Deep Life Community Meeting, Shanghai, China.
10.2018	*Survival of the fewest: Microbial energetics in marine sediments. Department of Earth Sciences, University of Southern California, USA.
04.2018	*Microbial energetics, dormancy, and maintenance in marine sediments through deep time. California Institute of Technology, USA.
03.2018	*Modelling the role of dormancy and maintenance of microorganisms on carbon transformations in marine sediments. Deep Carbon Observatory DLMV workshop, Arizona State University, USA.
03.2018	*Quantifying microbial processes and their role as drivers of biogeochemical cycles, using integrated model-data approaches. Woods Hole Oceanographic Institution
12.2017	*Necromass as a source of energy for microorganisms in marine sediments. American Geophysical Union Fall Meeting, New Orleans, USA
11.2017	*Necromass as a limited source of energy for microorganisms in marine sediments. C-DEBI Annual Meeting, Marina, California, USA
09.2017	*Necromass as a limited source of energy for microorganisms in marine sediments. University of Bristol, Bristol, UK
10.2016	*Develop a 1D biogeochemical-evolutionary model for deep marine sediments. C-DEBI Annual Meeting, Marina, California, USA

06.2016	*Modelling microbial processes during soil formation in a High-Arctic glacier forefield. Goldschmidt Conference, Yokohama, Japan
05.2016	*Characterisation of Arctic Soil Development Using the New Biogeochemical Model: SHIMMER. 22 nd International Symposium on Polar Sciences, Korea Polar Research Institute, Incheon, Republic of Korea
01.2014	*Characterising the initial stages of soil formation in the High Arctic. NERC GW4 & DTP Launch Event, Natural History Museum, London, UK

External Meetings and Workshops

*Invited Participant

10.2024	1 st International Workshop on Biodiversity in Svalbard Archipelago, Messina, Italy.
01.2023	*Arctic Critical Zone Observation Network, Pisa, Italy.
09.2022	Arctic Horizon Scan 2022 Workshop, University of Oxford, UK.
05.2022	*ETN SaltGiant Final Event, IPGP, Paris.
11.2021	*C-DEBI Annual Meeting, Marina, California, USA.
11.2021	*SaltGiant Field course, Dead Sea, Israel.
10.2021	*SaltGiant Workshop, Banja Luca, Bosnia and Herzegovina.
04.2021	*Alexander von Humboldt Virtual Network Meeting.
03.2021	*SaltGiant Workshop, Online.
02.2021	Multidisciplinary workshop on snow in Svalbard, SIOS.
11.2020	*C-DEBI Annual Meeting, Marina, California, USA.
09.2020	*Signals in the Soil International Workshop, UK
06.2020	*SaltGiant Workshop. Paris, France.
12.2020	*UKRI Signals in the Soil. Birmingham, UK.
11.2019	*C-DEBI Annual Meeting, Marina, California, USA.
11.2019	*C-DEBI NextGen, Monterrey, California, USA.
10.2019	*DeepCarbon 2019: Launching the Next Decade of Deep Carbon Science. Washington, DC, USA.
09.2019	*The Biotic Fringe: A Deep Life Modeling and Visualization Workshop, LUMCON, Louisiana, USA.
09.2019	The Origin and Rise of Complex Life, The Royal Society, London, UK.
11.2018	*C-DEBI Annual Meeting, Marina, California, USA.
11.2018	*Inaugural Symposium for the International Center for Deep Life Investigation (ICDLI) and Deep Life Community Meeting, Shanghai, China.
04.2018	Deep Sea Mining Impacts on Microbial Ecosystem Services, Bigelow Laboratory for Ocean Sciences, Maine, USA.
03.2018	*Deep life modelling and visualization. Deep Carbon Observatory sponsored workshop, Arizona State University, USA
03.2018	*Microorganisms and organic carbon in the marine subsurface. C-DEBI sponsored workshop, University of Tennessee, Knoxville, USA
11.2017	*C-DEBI Annual Meeting, Marina, California, USA.
09.2017	International workshop on Marine Geomicrobiology – A matter of energy. Sandbjerg, Denmark.
10.2018	*C-DEBI Annual Meeting, Marina, California, USA.
11.2014	Marine Science and Technology, British Council Researcher Links and Newton Fund sponsored workshop, Santa Marta, Colombia.
09.2014	Quantifying albedo feedbacks and their role in mass balance of the Arctic terrestrial cryosphere, IASC/ICARP III workshop, University of Bristol, UK.
01.2014	Understanding uncertainty in environmental modelling, NERC sponsored workshop. London School of Economics, UK.
11.2013	Life in the cold workshop, University of Leeds, UK.
03.2013	Glacial Biogeochemistry workshop, University of Bristol, UK.

Academic and Professional Service

Reviewing service

Research grants	French National Research Agency (ANR), National Science Foundation (NSF), AWIPEV Research Base.
Journal articles	Nature Communications, ISME Journal, Environmental Microbiology, Geobiology, FEMS Microbiology Ecology, Geoderma, Environmental Research Letters, Astrobiology, Frontiers in Ecology & Evolution.

External

2023-Present	Co-opted committee member, Earth System Science group, Geological Society.
2023-Present	Member of Editorial Board, Soil Ecology Letters.
2023-Present	Research Topic Editor, Deep Subsurface Microbiology and Energetics, Frontiers in Microbiology.
2023-Present	External Examiner, MRes in Environmental Geoscience, Faculty of Humanities and Social Sciences, Newcastle University.
2023	Organizing committee, Advancing modelling carbon sequestration in the Arctic (ECOTIP and EU4OceanObs).
2023	Review committee: 'Biocalibrated: Tools and Practices of Biodesign Practices' Central Saint Martins, University of the Arts London.
2022-Present	UK Arctic and Antarctic Partnership (UKAAP) Steering Committee.

2022-Present	Editor, mLife. Special Issue on Deep Biosphere.
2022-Present	Member of Editorial Board & Review Editor, Frontiers in Geochemistry - Biogeochemistry
2021-2023	Co-Founder and Organizer of C-DEBI Virtual Meeting Series.
2023	Member of Scientific Committee: 'BIO-CALIBRATED: Tools and Techniques of Biodesign Practices' Symposium, hosted by MA Biodesign Central Saint Martins UAL, London, UK.
2022	Conference session chair. Microbial communities and global change. Polar and Alpine Microbiology Conference, Potsdam, Germany.
2022	International Center for Deep Life Investigation: Awards committee.
2022	Conference session chair. T4-1: Deep Biosphere: roles of subsurface life in elemental cycles and life-environment co-evolution. The 21st International Sedimentological Congress, Beijing.
2022	Conference session convener: Geomicrobiology of the Deep Biosphere, AGU, New Orleans, USA.
2021	Mentor, Goldschmidt Mentor Program (x3 students), Goldschmidt, Lyon, France.
2021	Conference session convener: Modeling microbial-biogeochemical processes, from organism to planetary scales. Goldschmidt, Lyon, France (Online).
2019	Conference session convener and chair: Microbial Metabolisms and Biogeochemical Processes in Earth's Subsurface. AGU, San Francisco, USA.
2019	Conference session chair: DCO Field Studies. DeepCarbon 2019: Launching the Next Decade of Deep Carbon Science. Washington, DC, USA.
2019	Mentor, AGU Mentoring Program, AGU Fall Meeting.
2019	Liaison & Judge. Outstanding Student Presentation Award, AGU Fall Meeting.
2017-2023	Communications Committee, European Association of Geochemistry
2014	Conference organizing committee, International Glaciological Society British Branch Meeting, Bristol, UK
2014	Conference organizing committee, UK Antarctic Research Symposium, Bristol, UK
<i>Internal</i>	
2022-2023	Program Director: Physical Geography, Environmental Science. Leadership in the development, delivery, monitoring and review of Bachelors & Masters degree programs.
2022-2023	Devolved School Research Ethics Committee (DSREC).
2022-2023	Review of PG/ES dissertation project ethics applications.
2021-2023	School of Geography Education Committee (Ed-C).
2020-2023	Outstanding Potential Award Scheme, Interviewer (x5 occasions)
2021	Interview panel for Laboratory Technician (Panel x1)
2020-2023	Interview panel for PDRA (Chair x2)
2020-2023	Interview panel for PhD Students (Chair x2, Panel x3)
2020-2023	Confirmation & Clearing Working Group (QMUL)
2019-2023	Academic lead, Sustainability Committee (QMUL)
2019-2022	Masters Program Scoping Committee (QMUL)
2019-2022	Academic Lead for Marketing and Communications (QMUL). 2021: Helped launch and market two new programs (BA Global Development, MA Global Development).
2019-2022	Taught Programs Recruitment and Admissions Committee (QMUL)
2014-2016	Chair, Glaciology Centre Seminar Seminars (Bristol)

Community Engagement and Outreach

2024-Present	What is Life? Design of exhibition, Palais de la Découverte project, Paris, France
2023-2025	International Polar Foundation, Design a flag for Antarctica.
2024-2025	Science communication onboard MS Fram during Antarctic oceanographic mission, 22 days at sea.
2024	New Scientist Podcast. Report from the Arctic. Guest interviewee.
2024	La Marseillaise. En Arctique, le retrait glaciaire est rapide mais la colonisation plus lente. Guest interviewee.
2023-2024	Science communication onboard Le Commandant Charcot during Antarctic oceanographic mission, 29 days at sea.
2023	Build a new world. Science Museum: Great Exhibition Road Festival. London, UK.
2022	Arc'teryx Bird Blog: Content writing and science communication. 'Our Arctic: A Wake-Up Call to the Imminent Thaw'. https://blog.arcteryx.com/our-arctic-a-wake-up-call-to-the-imminent-thaw/
2022	AXA Arctic Live 2022, Encounter Edu, with NERC-NSF-funded SUN SPEARS project.
2021	Polar Pen Pals, Education and Outreach, UK Polar Network.
2021	BBC Earth Podcast: 'What the deep ocean can teach us about life', Guest interviewee.
2021	Wasafiri: International Contemporary Writing/Global Dispatches.
2021	Photography from Research Council of Norway funded 'Spatial and temporal dynamics of biogeochemical cycling in Svalbard snowpacks' project selected as 1854 Media/British Journal of Photography Decade of Change winner. Photo credit: Dagmara Wojtanowicz.
2021	French magazine Epsilon feature about Deep Biosphere, 'Rencontre Avec les Intraterrestres'
2020	Ny-Ålesund Popular Science Talk.
2020	Public Lecture, 'Glaciers and Ice Sheets as Climate Regulators and Biogeochemical Reactors', East London Geographical Association, London, UK.
2020	Antarctic Expert at Going South, Antarctic Science Day. Caldecott Primary School, UK.
2020	Public Lecture, 'People and Pandemics – A Better World?' QMUL Public Lecture Series.
2020	The Impossible Network Podcast, Guest interviewee.
2020	London Borough of Tower Hamlets Annual Conference. Keynote Speaker on climate change (Cancelled due to COVID-19).

2020	QMUL Climate Action Group, Speaker.
2020	Newham Citizen's Assembly on Climate Change. Expert witness, Speaker & Panellist.
2019-Present	Skype a Scientist. Regularly participating in 'Skype a Scientist' program: Q&A sessions with school classrooms across the world, covering topics including research, experiences from the field, citizen science, career information and guidance, what it's like to be a scientist.
2019	Tower Hamlets Climate Strike group: Global Warming: a climate crisis. Panellist and Speaker, London Muslim Centre/East London Mosque.
2019	NDR 90.3 German national radio broadcast and podcast. Matthias Steiner talks with Liane Benning, Mattias Winkel and Laura Halbach about our INTERACT-funded AirMiMic project, live from Sermilik Research Station in E. Greenland.
2018	International Polar Foundation, Design a flag for Antarctica
2018	Antarctica Expedition: Student Questions & Answers, https://antarcticatrainees2018.weebly.com/
2015	Life in Extremes. Exhibit at the Science Museum, London, UK, with the Royal Society
2015	Digital Explorer "Arctic Live" event. Direct classroom interaction (via Skype interviews) with schools worldwide from the UK Arctic Research Station, Svalbard.
2015	Sircome collaboration: photographs and motivational written piece, integrating Arctic soils research.
2013-2014	Sutton Trust Summer School
2014	Bristol Ice Explorers: Room 13 Hareclive Academy. Polar science education and exploration day and ongoing art project with 8-11 year olds.
2013	Access To Bristol.

Selected Courses and Training

2018	NSF Advanced Training Program in Antarctica. Biological Adaptations to Environmental Change, McMurdo Station, Antarctica.
2015	International Geobiology Course, University of Southern California.
2015	Nonlinear Dynamics: Mathematical and Computational Approaches. Online Complexity Explorer course, Santa Fe Institute and Portland State University.
2015	Earth System Modelling with GENIE. University of Bristol, UK
2015	Freshwater Taxonomic and Field Technique Course. Natural History Museum, UK.
2015	Introduction to Mathematical Modelling for the Environmental and Biological Sciences. University of Stirling, UK.
2014	Introduction to Ecological Modelling. UCL, UK
2014	Building your own ODE ecological models in R. University of Strathclyde, UK.
2014	Molecular Techniques for Taxonomy. Introduction to molecular ecology, laboratory training including DNA extraction, PCR and gene sequencing. Natural History Museum, UK.
2014	Understanding Uncertainty in environmental modelling. London School of Economics, UK

Software

MicroLow 1.0: Microbial model for growth and maintenance of active and dormant microorganisms in low-energy environments. Open source, executed in R.

https://github.com/jbradley8365/MICROLOW_1.0_SOURCE

SHIMMER 1.0: Microbial-biogeochemical model for Arctic soils. Open source, executed in R.

https://github.com/jbradley8365/2016_17_SHIMMER_demo

Conference Presentations

*Oral, °Poster

12.2024	*Microbiology congress - Bacteria in its environment. Institute of Microbiology of the Mediterranean (IMM), CNRS Joseph Aiguier campus, Marseille, France.
10.2024	*1 st International Workshop on Biodiversity in Svalbard Archipelago, Messina, Italy.
08.2024	Ruff E, Bradley J, et al. A global atlas of subsurface microbiomes reveals phylogenetic novelty, large scale biodiversity gradients, and a marine-terrestrial divide. ISME19, Cape Town, South Africa.
08.2024	Rubin R, Bradley J, et al. Biogeochemistry of soil development and microbial community succession along a Svalbard chronosequence after glacial retreat. ISME19, Cape Town, South Africa.
08.2024	Abuah F, Bradley J et al. Subsurface microbes may drive climate feedbacks in thawing Arctic permafrost. ISME19, Cape Town, South Africa.
06.2024	Ruff E, Bradley J, et al. A global atlas of subsurface microbiomes reveals phylogenetic novelty, large scale biodiversity gradients, and a marine-terrestrial divide. VAAM conference, Germany.
01.2024	*Cramm M, ... Bradley J. Greenland's dormant thermophilic endospores may experience subsurface-to-surface dispersal. Geobiology Conference GRC, Galveston, Texas, USA.
12.2023	*Irons T, Bradley J et al. Simultaneous Geophysical and Microbiological Monitoring of Soil Formation Processes in a Deglaciated Arctic Forefield Chronosequence. American Geophysical Union Fall Meeting, San Francisco, USA.
09.2023	*Solman A, ... Bradley J. UK Arctic Science Conference, Cambridge, UK.
09.2023	°Bradley J, et al. Monitoring seasonal processes in Arctic soils. UK Arctic Science Conference, Cambridge, UK.
09.2023	°Cramm M, ... Bradley J. UK Arctic Science Conference, Cambridge, UK.
09.2023	°Papadaki S, ... Bradley J. UK Arctic Science Conference, Cambridge, UK.
09.2023	°Molares Moncayo L, ... Bradley J. UK Arctic Science Conference, Cambridge, UK.
09.2023	°Lyu Z, ... Bradley J. UK Arctic Science Conference, Cambridge, UK.

- 07.2023 *Cramm M, Bradley J et al., Dormant Arctic thermophiles point to cellular life histories operating over geologic timescales. Life and Planet, Earth System Science Group of the Geological Society of London, London, UK.
- 07.2023 °Trejos-Espeleta JC, Bradley J et al., Fungal organic nitrogen assimilation and community assembly across a 100-year Arctic proglacial soil chronosequence. Goldschmidt Conference 2023, Lyon, France.
- 05.2023 °Molares Moncayo L, Bradley J et al., The Role Of The Atmosphere In Shaping And Sustaining Microbial Communities On Glaciers, AbGradCon, San Diego, USA.
- 05.2023 °Mourot R, Bradley J et al., Biogeographical drivers of supraglacial microbial communities. European Geosciences Union General Assembly, Vienna, Austria.
- 04.2023 *Irons T, Bradley J et al., Geophysical Monitoring of an Arctic Glacial Forefield. SAGEEP. New Orleans, USA.
- 02.2023 *Lyu Z, Bradley J. Arctic Station Day. British Antarctic Survey, Cambridge, UK.
- 01.2023 *Bradley J et al. Monitoring seasonal processes in an Arctic glacier forefield. Arctic Critical Zone Observation Network, Pisa, Italy.
- 12.2022 *Francelle P, Bradley J et al., Interactions between plastics and microbial communities in rivers and estuaries. MMEG, Glasgow, UK.
Winner of ISME award for Best Presentation.
- 12.2022 *Papadaki S, Bradley J et al. Traces of microbial life and activity in Arctic endolithic habitats. MMEG. Glasgow, UK.
- 12.2022 °Chukwufumnanya Y, Bradley J et al. Investigating Microbial Communities in Svalbard Permafrost. American Geophysical Union Fall Meeting, Chicago, USA.
- 12.2022 °Vishnivetskaya T, Bradley J et al, Thermal sites in polar and alpine regions – hot spots for biodiversity. American Geophysical Union Fall Meeting, Chicago, USA.
- 12.2022 °Liljestrand D, Bradley J, et al. Continuous, year-round monitoring of snow-pack and soil properties of an emerging glacial forefield in the Arctic. American Geophysical Union Fall Meeting, Chicago, USA.
- 12.2022 °Cimpoiasu M, Bradley J, et al. Year-round electrical resistivity imaging to study the development of deglaciated soils in the High Arctic. American Geophysical Union Fall Meeting, Chicago, USA.
- 11.2022 *Lappan R, Bradley J et al. There's a bear in there, and a chair as well: reducing, removing and understanding contamination in low-biomass metagenomics applications. AusME, Melbourne, Australia.
- 10.2022 *Bradley J et al, Active and dormant microorganisms on glacier surfaces. Polar and Alpine Microbiology Conference, Potsdam, Germany.
- 10.2022 *Mourot R, Bradley J, et al, Biogeography of glacier microbial communities. Polar and Alpine Microbiology Conference, Potsdam, Germany.
- 10.2022 *Stevens I, Bradley J, et al. Where do they come from, where do they go? Viability of Microbes in the Melting Spring Snowpack of Midtre Lovénbreen, Svalbard. Polar and Alpine Microbiology Conference, Potsdam, Germany.
- 08.2022 °Solman A, Millar J, Heppell C, Jungblut A, Bagshaw E, Bradley J. Divergent assembly mechanisms of rare and abundant microbial communities in cryoconite holes on Arctic and Antarctic glaciers. ISME18, Lausanne, Switzerland.
- 08.2022 °Cramm M, ... Bradley J. Thermophiles in Svalbard permafrost. ISME18, Lausanne, Switzerland.
- 08.2022 °Francelle P, Bradley J et al. Interactions between microbial communities and plastics in freshwater and estuarine environments. ISME18, Lausanne, Switzerland.
- 07.2022 *Moore O, Bradley J, et al. Iron & manganese catalysis of reactive organic carbon molecules into stable forms within marine sediments. Goldschmidt Conference 2022, Honolulu, USA.
- 06.2022 °Bal A, Bradley J, et al. Characterizing the phylogenetic diversity and formation processes of a carbon-rich microbial mat, Little Hot Creek, Long Valley Caldera, California. ASM Microbe, Washington D.C., USA.
- 05.2022 *Bradley J et al. Closing the Biological Carbon Pump: Transfer Efficiency of Organic Carbon in Marine Sediments. ETN SaltGiant Final Event, IPGP, Paris.
- 05.2022 *Mourot R, Bradley J et al. Geographic and habitat influences on the ecology of glacier snow and ice microbial communities, Symposium on polar microbes and viruses, Finland.
- 05.2022 *Toubes-Rodrigo, M., Bradley J et al. GIMMICC: Geochemistry Integrative Model for Microbiology In Cosmochemical Contexts. AbSciCon, Atlanta, USA.
- 04.2022 *Cimpoiasu M, Bradley J et al. Year-round high-resolution geoelectrical monitoring to improve the understanding of deglaciated soil evolution in the High Arctic. EGU General Assembly, Vienna, Austria
- 04.2022 *Solman A, Millar J, Heppell C, Jungblut A, Bagshaw E, Bradley J. Divergent assembly mechanisms of rare and abundant microbial communities in cryoconite holes on Arctic and Antarctic glaciers. UK Arctic Science Conference, Durham, UK.
- 04.2022 *Bradley, J. Microbiology Society Annual Conference, Belfast, Northern Ireland.
- 02.2022 *Trivedi C, Bradley J, et al, Efficacy of three DNA/RNA preservation methods in glacial snow and ice habitats. Annual conference of the association for general and applied microbiology (VAAM), Düsseldorf, Germany.
- 12.2021 *Francelle P, Bradley J, et al. Interactions between microbial communities and bioplastics in freshwater ecosystems. Molecular Microbial Ecology Group Meeting (MMEG), Norwich, UK.
- 12.2021 *Cimpoiasu, M, Bradley, J. et al. SUN-SPEARS Sensors UNder snow - Seasonal Processes in the Evolution of ARctic Soils. American Geophysical Union Fall Meeting, New Orleans, USA.

- 12.2021 *Mullis M, Bradley J, et al. Exploring functional diversity and metabolic capabilities of microbial communities across the continental and marine subsurface. American Geophysical Union Fall Meeting, New Orleans, USA.
- 12.2021 *Bradley, J. Mineralogical Society Meeting: The mineral–microbe interface through time and space. London, UK.
- 11.2021 *Bradley, J. C-DEBI Annual Meeting, Marina, California, USA.
- 07.2021 *Hülse, D, Bradley, J. et al. Global budgets of organic carbon degradation pathways in marine sediments. Goldschmidt, Lyon, France.
- 04.2021 *Bradley, J. Alexander von Humboldt Virtual Network Meeting.
- 09.2020 *Bradley, J. SUN SPEARS: Sensors under snow – Seasonal processes in the evolution of Arctic soils. Signals in the Soil International Workshop, UK.
- 06.2020 *Bradley, J. SaltGiant Workshop. Paris, France.
- 05.2020 *Winkel, M, Bradley, J. et al. Seasonal Variation In Microbial Community Compositions And Functions On Icelandic Glacier. APECS International Online Conference 2020.
1st prize for Best Arctic Presentation.
- 02.2020 *Bradley, J. Arctic Station Day. British Antarctic Survey, Cambridge, UK.
- 02.2020 °Lloyd, K, Bradley, J et al. 2020 Genomic Sciences Program (GSP) Annual Principal Investigator Meeting, Washington DC, USA.
- 01.2020 *Bradley, J. Polar Night Week 2020. Svalbard Science Centre, Longyearbyen.
- 01.2020 °Larose C, Bradley, J, et al. Polar Night Week 2020. Svalbard Science Centre, Longyearbyen.
- 12.2019 *Bradley, J. et al. The power of life in marine sediments. American Geophysical Union Fall Meeting, San Francisco, USA.
- 12.2020 *Bradley, J. et al. UKRI Signals in the Soil. Birmingham, UK.
- 11.2019 °Bradley, J. et al. C-DEBI Annual Meeting, Marina, California, USA.
- 11.2019 *Bradley, J. et al. C-DEBI Network Speaker Series. Online webinar.
- 10.2019 °Bradley, J. et al. DeepCarbon 2019: Launching the Next Decade of Deep Carbon Science. Washington, DC, USA.
- 09.2019 *Bradley, J. et al. Bio-energetics and the power of microbial life in marine sediments. Shackleton: Marine Geoscience and Carbon – from ancient storage to future challenges. Geological Society of London, UK.
- 08.2019 *Bradley, J. et al. Bio-energetics of microbial life in marine sediments. Goldschmidt, Barcelona, Spain.
- 06.2019 *Bradley, J. et al. Bioenergetics of life in marine sediments on a global scale. 2nd Geobiology Society Conference, Banff, Canada.
- 11.2018 °Bradley, J. et al. Bioenergetics of life in marine sediments on a global scale. C-DEBI Annual Meeting, Marina, California, USA.
- 11.2018 °Bradley, J. et al. Survival of the fewest: Microbial energetics in oligotrophic marine sediments. C-DEBI Annual Meeting, Marina, California, USA.
- 11.2018 *Bradley, J. et al. Bioenergetics of life in the marine subsurface. Inaugural Symposium for the International Center for Deep Life Investigation (ICDLI) and Deep Life Community Meeting, Shanghai, China.
- 09.2018 °Bradley, J. et al. Microbial energetics in oligotrophic marine sediments. 12th International Congress of Extremophiles, Ischia, Italy.
- 05.2018 *Bradley, J. et al. Energetics of life in the deep biosphere. 3rd Annual Postdoctoral Research Symposium, University of Southern California, Los Angeles, USA.
- 04.2018 °Stibal M, Bradley J, Box J. Insights into the supraglacial ecosystem of the Greenland ice sheet using process-based ecosystem modelling. European Geosciences Union General Assembly, Vienna, Austria.
- 12.2017 °Bradley, J. et al. Necromass as a source of energy for microorganisms in marine sediments. American Geophysical Union Fall Meeting, New Orleans, USA.
- 11.2017 *Bradley, J. et al. Necromass as a limited source of energy for microorganisms in marine sediments. C-DEBI Annual Meeting, Marina, California, USA.
- 09.2017 *Stibal M, Bradley J, Box J. Ecological modelling of the Greenland ice sheet surface ecosystem. 7th International Conference on Polar and Alpine Microbiology, Nuuk, Greenland
- 08.2017 °Bradley, J. et al. Necromass as a source of energy for microorganisms in marine sediments. International workshop on Marine Geomicrobiology – A Matter of Energy, Sandbjerg, Denmark
- 04.2017 *Bradley, J. et al. Utilization of microbial necromass in marine sediments. 14th Annual Southern California Geobiology Symposium, Los Angeles, USA
- 03.2017 °Magnabosco, C. Bradley, J. Onstott, T. Subsurface biological models. Third DCO International Science Meeting, St. Andrews, Scotland
- 06.2016 *Bradley, J. et al. Modelling microbial processes during soil formation in a High-Arctic glacier forefield. Goldschmidt, Yokohama, Japan
- 06.2016 *Blacker, J. Bottrell, S. Anesio, A. Šabacká, M. Barker, G. Bradley, J. Tranter, M. Benning, L. (2016) Are high-Arctic Glacial Forefields CO₂ Sinks or Sources? Goldschmidt, Yokohama, Japan
- 04.2016 °Bradley, J. et al. Investigating the initial stages of soil formation in glacier forefields using the new biogeochemical model: SHIMMER. European Geosciences Union General Assembly, Vienna, Austria
- 04.2016 °Bradley, J. et al. Vertical Microbial Community Variability Of Carbonate-based Cones May Provide Insight Into Ancient Conical Stromatolite Formation. European Geosciences Union General Assembly, Vienna, Austria

- 12.2015 °Bojanowski, C. Trivedi, C. Daille, L. Bradley, J. Stamps, B. Nunn, H. Johnson, H. Stevenson, B. Berelson, W. Corsetti, F. Spear, J. Vertical Microbial Community Variability of Carbonate-based Cones may Provide Insight into Formation in the Rock Record. American Geophysical Union Fall Meeting, San Francisco, USA
- 11.2015 °Daille, L. Trivedi, C. Bojanowski, C. Bradley, J. Nunn, H. Stamps, B. Johnson, H. Stevenson, B. Berelson, W. Corsetti, F. Spear, J. Carbonate-rich Cones: A New Modern Analogue of Ancient Conical Stromatolite Formation? Geological Society of America, Baltimore, Maryland, USA
- 09.2015 *Bradley, J. et al. Microbial community dynamics in the forefield of glaciers – a modelling perspective. UK Arctic Science Conference, Sheffield
- 09.2015 *Bradley, J. et al. Microbial community dynamics in the forefield of glaciers – a modelling perspective. 6th International Conference on Polar and Alpine Microbiology, České Budějovice, Czech Republic
- 11.2014 *Bradley, J. et al. Polar Ecosystems and Marine Implications. Marine Science and Technology, British Council Researcher Links Workshop, Santa Marta, Colombia
- 09.2014 °Bradley, J. et al. Microbial community dynamics in the forefield of glaciers. International Glaciological Society British Branch Meeting, Bristol
- 09.2014 °Blacker, J. Anesio, A. Bradley, J. Barker, G. Tranter, M. Benning, L. How does Arctic soil form in response to Arctic deglaciation? Linking bulk and molecular scale mineralogical and geochemical processes. International Glaciological Society British Branch Meeting, Bristol, UK
- 09.2014 *Anesio, A. Wright, K. Blacker, J. Bradley, J. Arndt, S. Barker, G. Yallop, M. Tranter, M. Benning, L. Microbial succession from ice to vegetated soils in response to glacial retreat in the Arctic. International Glaciological Society British Branch Meeting, Bristol, UK
- 09.2014 °Bradley, J. et al. Microbial community dynamics in the forefield of glaciers. UK Antarctic Research Symposium, Bristol, UK
- 08.2014 °Wright, K. Blacker, J. Bradley, J. Barker, G. Benning, L. Tranter, M. Yallop, M. Anesio, M. Microbial diversity moving from ice to vegetated soils in response to arctic deglaciation. 15th International Symposium on Microbial Ecology (ISME), Seoul, South Korea
- 06.2014 *Anesio, A. Wright, K. Blacker, J. Bradley, J. Barker, G. Yallop, M. Tranter, M. Benning, L. Microbial succession from ice to vegetated soils in response to glacial retreat in the Arctic, Goldschmidt, Sacramento, USA
- 03.2014 °Bradley, J. et al. Modelling microbial community development in deglaciated forefield soils. Natural Systems and Processes, Bristol, UK
- 01.2014 °Bradley, J. et al. Characterising the initial stages of soil formation in the High Arctic. Understanding Uncertainty in Environmental Modelling, CATS/LSE, London, UK
- 11.2013 °Bradley, J. et al. Characterising the initial stages of soil formation in the High Arctic. Life In The Cold, Leeds, UK

Professional Affiliations

2019-Present	Fellow, Alexander von Humboldt Foundation
2020-Present	ARCUS
2018-Present	The Geobiology Society
2016-Present	Astrobiology Society of Britain
2016-Present	The Mineralogical Society
2016-Present	British Society of Soil Science
2013-Present	American Geophysical Union
2013-Present	European Geosciences Union
2013-Present	European Association of Geochemistry

Selected Press and Media

- 2024 **New Scientist Podcast.** Report from the Arctic. <https://www.newscientist.com/podcasts/weekly-world-s-oldest-ritual-quantum-wi-fi-report-from-the-arctic/>
- 2024 **La Marseillaise.** En Arctique, le retrait glaciaire est rapide mais la colonisation plus lente. <https://www.lamarseillaise.fr/environnement/en-arctique-le-retrait-glaciaire-est-rapide-mais-la-colonisation-plus-lente-JL16487493>
- 2024 **Carbon Brief.** Ny-Ålesund: How UK scientists are studying climate change in the Arctic. <https://www.carbonbrief.org/ny-alesund-how-uk-scientists-are-studying-climate-change-in-the-arctic/>
- 2023 **New Scientist.** Chemical reaction used in cooking may have helped complex life evolve. <https://www.newscientist.com/article/2385855-chemical-reaction-used-in-cooking-may-have-helped-complex-life-evolve/>
- 2023 **The Independent.** Chemical reaction used by cooks may have helped create life on Earth. <https://www.independent.co.uk/news/science/earth-university-of-leeds-french-environment-school-b2386450.html>
- 2023 **The Times.** Chemistry behind crispy roast potatoes could be key to life on Earth. <https://www.thetimes.co.uk/article/chemistry-behind-crispy-roast-potatoes-could-be-key-to-life-on-earth-8pr8x28dd>
- 2023 **The Daily Mail.** Chemical reaction used by cooks may have helped create life on Earth. <https://www.dailymail.co.uk/wires/pa/article-12365657/Chemical-reaction-used-cooks-helped-create-life-Earth--study.html>
- 2023 **ScienceDaily.** Nature's kitchen: how a chemical reaction used by cooks helped create life on Earth. <https://www.sciencedaily.com/releases/2023/08/230802132018.htm>

- 2023 Earth.com. A chemical reaction used by cooks helped spark the first life on Earth.
<https://www.earth.com/news/a-chemical-reaction-used-by-cooks-helped-spark-the-first-life-on-earth/>
- 2023 Phys.Org. Nature's kitchen: How a chemical reaction used by cooks helped create life on Earth.
https://phys.org/news/2023-08-nature-kitchen-chemical-reaction-cooks_amp
- 2022 SVT Swedish National Television Broadcaster: See how Greenland's Ice Blooms.
<https://www.svt.se/nyheter/vetenskap/gronlands-isar-blir-allt-morkare>
- 2022 **Arcteryx Bird Blog**: Content writing and science communication. 'Our Arctic: A Wake-Up Call to the Imminent Thaw'. <https://blog.arcteryx.com/our-arctic-a-wake-up-call-to-the-imminent-thaw/>
- 2021 Epsilon: 'Rencontre Avec les Intraterrestres'
- 2020 **BBC Earth Podcast**: 'What the deep ocean can teach us about life'.
<https://play.acast.com/s/bbcearthpodcast/whattthedeeppoceancanteachusaboutlife>
- 2020 Vice. Scientists Found Creatures So Inactive They Expanded Our Idea of Life Itself.
<https://www.vice.com/en/article/jgxavb/scientists-found-creatures-so-inactive-they-expanded-our-idea-of-life-itself>
- 2020 The Daily Mail. Microbes living beneath the seafloor are found to survive on 'fifty-billion-billion times less energy than a human' - setting a new lower energy limit for life on Earth.
<https://www.dailymail.co.uk/sciencetech/article-8596159/Microbes-beneath-seafloor-living-fifty-billion-billion-times-energy-human.html>
- 2020 **New Scientist**. Deep-sea microbes survive on less energy than we thought possible.
<https://www.newscientist.com/article/2251074-deep-sea-microbes-survive-on-less-energy-than-we-thought-possible/>
- 2020 Smithsonian Magazine. Deep-Sea Microbes Exert the Least Amount of Energy Possible to Survive.
<https://www.smithsonianmag.com/smart-news/these-microbes-exert-least-amount-energy-possible-survive-180975535/>
- 2020 **Quanta Magazine**. 'Zombie' Microbes Redefine Life's Energy Limits.
<https://www.quantamagazine.org/zombie-microbes-redefine-lifes-energy-limits-20200812/>
- 2020 Natural History. Power limit to life. Issue: 10/20.
- 2020 AOL. Researchers discover lower energy limit for life on Earth.
<https://www.aol.co.uk/news/2020/08/05/researchers-discover-lower-energy-limit-for-life-on-earth/>
- 2020 Earth. Organisms beneath the seafloor barely need energy for life.
<https://www.earth.com/news/organisms-beneath-the-seafloor-barely-need-energy-for-life/>
- 2020 **Science. This week in science**: Lower power limit to subseafloor life.
<https://science.sciencemag.org/content/369/6504/twis.full>
- 2020 **Nature Reviews Earth & Environment**. Microbial Munchies.
<https://www.nature.com/articles/s43017-020-0094-2>
- 2020 Mare (German national magazine): featured article.
- 2020 La Libre (Major daily newspaper in Belgium). Au fond des océans, la vie presque éternelle.
<https://www.lalibre.be/planete/sciences-espace/au-fond-des-occeans-la-vie-presque-eternelle-5f329cf99978e2322f0bd1a9>
- 2020 RTBF (Belgian public broadcasting). Un organisme n'a pas besoin d'autant d'énergie qu'on le pensait pour "être vivant". https://www.rtf.be/info/societe/detail_un-organisme-n-a-pas-besoin-d-autant-d-energie-qu-on-le-pensait-pour-etre-vivant?id=10557897
- 2020 **The Impossible Network Podcast**. <https://theimpossiblepodcast.com/podcast/dr-james-bradley/>
- 2020 **Forbes**. How Your Smartphone May Be Destroying The Deep Ocean - And Its Valuable Microbes.
<https://www.forbes.com/sites/allenelizabeth/2020/02/03/how-your-smartphone-may-be-destroying-the-deep-ocean-and-its-valuable-microbes/#225781814405>
- 2020 The Daily Mail. Mining the sea floor for precious metals needed for electric car batteries could lead to 'irreversible damage' to marine ecosystems, scientists warn.
<https://www.dailymail.co.uk/sciencetech/article-7885867/Mining-sea-floor-precious-metals-lead-irreversible-damage.html>
- 2020 Science&Vie. Voici le seul endroit sans vie sur Terre! <https://www.science-et-vie.com/nature-et-enviro/voici-le-seul-endroit-sans-vie-sur-terre-54905>
- 2020 Preventing the Inevitable: snowsports in a warming world.
- 2019 **The Guardian**. The age of extinction: The tiny algae at ground zero of Greenland's melting glaciers. The Guardian long-format article covering INTERACT-funded AirMiMic project, reporting from Sermilik Research Station in E. Greenland.
<https://www.theguardian.com/environment/2019/sep/18/tiny-algae-ground-zero-greenland-melting-glaciers>
- 2019 NDR 90.3. German national radio and podcast interview on INTERACT-funded project AirMiMic, live from Sermilik Research Station in E. Greenland.
https://www.ndr.de/903/sendungen/hamburger_hafenkonzert/Unterwegs-mit-Arved-Fuchs-auf-Groenland_sendung935784.html#
- 2019 SuperScience: 120 Recent Scientific Discoveries. Illustrated book documenting the most surprising or interesting studies in the world. Le Courier du Livre/Guy Tredaniel Publisher.
- 2018 **Scientific American**: Inside Earth, Microbes Approach Immortality: Mostly dead is slightly alive.
<https://blogs.scientificamerican.com/artful-amoeba/inside-earth-microbes-approach-immortality/>
- 2018 **New Scientist**: 75-million-year old ocean microbes live forever on almost zero energy.
<https://www.newscientist.com/article/2182271-75-million-year-old-ocean-microbes-live-forever-on-almost-zero-energy/>
- 2018 DCO Research News: How microbes survive when buried alive.
<https://deepcarbon.net/how-microbes-survive-when-buried-alive>

- 2018 Eos Research Spotlight: Life and Death in the Deepest Depths of the Seafloor.
<https://eos.org/research-spotlights/life-and-death-in-the-deepest-depths-of-the-seafloor>
DOI: 10.1002/2017JG004186
- 2018 Antarctic Sun: A World-Class Classroom At The Bottom Of The World.
<https://antarcticsun.usap.gov/science/contentHandler.cfm?id=4360>
- 2018 Mines Newsroom: Microbial hot spring structures offer clues into geological past.
<http://www.minesnewsroom.com/news/microbial-hot-spring-structures-offer-clues-geological-past>
- 2017 Frontiers Blog: Microbial colonisers of Arctic soils are sensitive to future climate change.
<https://blog.frontiersin.org/2017/04/04/microbial-colonisers-of-arctic-soils-are-sensitive-to-future-climate-change/>
- 2017 Science Daily: Microbial colonisers of Arctic soils are sensitive to future climate change.
<https://www.sciencedaily.com/releases/2017/04/170403091317.htm>
- 2016 Phys.Org: Simple forms of life are quick to colonise new 'desert' landscapes created by shrinking Arctic ice
<https://phys.org/news/2016-10-simple-life-quick-colonise-landscapes.html>