

Curriculum Vitae (CV)

PERSONAL INFORMATION

Name: Willem Godert Maria van der Bilt
Date of birth: 15.01.1985
Sex: Male (♂)
Nationality: Dutch (NL)
ORCID iD: <https://orcid.org/0000-0003-3157-451X>
Personal web site: <https://www.uib.no/en/persons/Willem.G.M..van.der.Bilt>

EDUCATION

2013-2016 Doctor Philosophiae (PhD), **Disputation date:** 03.05.2016, Department of Earth Science, University of Bergen (UiB; NO) & Lamont-Doherty Earth Observatory (LDEO; USA)
2006-2009 Master (MSc), Biogeology, **Grade:** with distinction (A), Utrecht University (UU; NL) & The University Centre in Svalbard (UNIS; NO)

CURRENT AND PREVIOUS POSITIONS

2021 – *present* Researcher, department of Earth Science, University of Bergen (UiB; NO)
2016 – 2020 Postdoctoral fellow, department of Earth Science, University of Bergen (UiB; NO)
2009 – 2012 Environmental researcher, the Netherlands Environmental Assessment Agency (PBL; NL)

SUCCESSFUL GRANT APPLICATIONS (total ≈ 6 000 000 EUR)

2022 PI, NFR Svalbard Strategic Grant 337291/E40, EXPAL, 330 000 NOK
2021 Partner, Bjerknes (SKD) Strategic Project, DYNASOR, 10 000 000 NOK
2020 PI, Trond Mohn Foundation (TMS) Starting Grant, 20 000 000 NOK
2020 co-PI, OPUS Grant, National Science Centre (NCN) Poland, 5 000 000 NOK
2020 PI, Bjerknes (SKD) fast-track initiative grant (DISECT), 150 000 NOK
2020 co-PI, NFR Svalbard Strategic Grant (SSG) SVALHOLA, 250 000 NOK
2020 PI, CHESSE climate change research school funding, 150 000 NOK
2019 PI, POS positioning grant for ERC Starting Grant application, 50 000 NOK
2020 Partner, Norwegian Research Council (NFR), ES651575, PRISM, 4 500 000 NOK
2019 co-PI, Bjerknes (SKD) fast-track initiative grant (CAVEWAX), 240 000 NOK
2018 lead applicant, SPIRE international networking grant, 100 000 NOK
2018 PI, EU INTERACT transnational access grant (GLACTIC), 7000 EUR
2017 award, Momentum Career Development Program for Young Researchers, 100 000 NOK
2017 co-PI, EGU training school on “glaciers, moraines and climate”, 6000 EUR
2017 WP leader, NFR grant 267719/E10, SOUTSPHERE, 9 000 000 NOK
2016 PI, UiB Global scholarship, 50 000 NOK
2015 PI, Bjerknes (SKD) fast-track initiative grant (ECONORS), 120 000 NOK
2015 lead applicant, Norwegian Research School in Climate Dynamics grant, 15 000 NOK
2014 lead applicant, NFR/SFU Arctic Field Grant, 40 000 NOK
2014 co-PI, EU INTERACT transnational access grant (GLEESP), 10 000 GBP
2014 lead applicant, EU COST Action short stay grant (STSM), 3600 EUR
2012 WP leader, Dutch Science Council NWO grant, no. 360-60-110, 700 000 EUR
2008 lead applicant, Arctic field grant, 25 000 NOK

MOBILITY

2015 Lamont-Doherty Earth Observatory of Columbia University (LDEO;USA)
Research Council of Norway (NFR), SHIFTS project (grant nr. 21004)
2014 University of Oxford (UK), research laboratory for archaeology and the history of art
European Research Council (ERC), COST action ES0907-270114-039321

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

1. 2022-2025 Supervisor, PhD candidate – S. Kong, *A past window into a warmer wetter future Arctic climate*, University of Bergen (NO)
2. 2022-2025 Supervisor, PhD candidate – A. Auer, *Deepening our understanding of glacier change in a warmer and wetter Arctic climate*, University of Bergen (NO)
3. 2021-2024 Co-supervisor, PhD candidate – Z. Stachowska-Kamińska, *Arctic storm impacts recorded in lake sediment archives: scenarios for a less icy future*, University of Szczecin (PL)
4. 2018-2021 Co-supervisor, PhD candidate – M. Zwier, *Effects and responses to changing environments in the sub-Antarctic, a palaeoecological approach*, University of Bergen (NO)
5. 2021-2023 Co-supervisor, PhD candidate – M. Holthuis, *Keeping your feet dry in rising tides: recent relative sea level rise in coastal Norway*, Norwegian University of Science and Technology
6. 2018-2021 Co-supervisor, PhD candidate – J. Hardeng, *Holocene flooding in southern Norway: linking observations and lake sediment-based reconstructions*, University of Bergen
7. 2018-2019 Supervisor, MSc degree – J.M. Cederstrøm, *when medicine meets geology: using CT scanning for 3D visualization of volcanic ash horizons*, University of Bergen (Grade: B)

TEACHING

- 2022 Guest lecturer, *Arctic Quaternary Environments (AG-326)*, UNIS Svalbard
- 2019-present Organizer, *CHESS glacier-climate change Summer School*, international
- 2019 University-level pedagogics (*UPED-620*), basic module, University of Bergen (UiB)
- 2017-present Excursion co-leader, *MSc level, Fieldwork in Quaternary Geology (GEOV-322)*, UiB
- 2017-2021 Lecturer and Examiner, *BSc level, Introduction to Geology (GEOV-101)*, UiB
- 2018 Program committee member, *EGU Summer School: Glaciers, moraines and climate*

ORGANISATION OF SCIENTIFIC MEETINGS

- 2022 Co-convener, *Proglacial lakes*, IAL-IPA (AR)
- 2021 Convener, *ID:53 - processes in a warmer and wetter Arctic (ID:53)*, ASSW (PT)
- 2019 Convener, *Advances in Molecular Isotope Paleohydrology (08a)*, Goldschmidt (ES)
- 2018 Co-convener, *Climate-Carbon cycle interactions (CL 1.29)*, EGU assembly (AT)
- 2017 Convener, *Glacial-to-Holocene transition session (CL 1.28)*, EGU assembly (AT)

COMMISSIONS OF TRUST

- 2017-present Proposal reviewer, SONATA call, National Science Centre of Poland (PL)
- 2016-present Paper reviewer: *Quaternary Science Reviews, Global and Planetary Change, Boreas, Polar Research, Nature Communications Earth and Environment, the Holocene*
- 2020-present PhD Hiring committee, Department of Earth Science, University of Bergen (NO)
- 2019 PhD Hiring committee, Department of Biological Sciences, University of Bergen (NO)
- 2018-2019 Proposal reviewer, RANNIS, Icelandic Research Fund (IS)

MAJOR COLLABORATIONS

- Prof. Christine Lane, *tephrostratigraphy*, Department of Geography, University of Cambridge (UK)
- Prof. Anders Schomacker, *Arctic paleolimnology*, The Arctic University of Norway
- Dr. William J. D'Andrea, *alkenone paleothermometry*, Columbia University (USA)

PROFESSIONAL SKILLS

- Analytical** Physical, magnetic and chemical sediment analyses (e.g. ITRAX XRF scanner, Malvern Mastersizer 3000 laser granulometer, Bruker D8 Advance XRD system, Bartington MS 2E/3 sensors, 2G magnetometer), molecular paleoecology (alkenone paleothermometry, leaf-wax paleohydrology) - gas chromatography & mass spectrometry (GC-FID, GC-IRMS), ProCon X-Ray CT-ALPHA Computed Tomography (CT) scanner
- Geomatics** GIS (Esri ArcGIS), Photogrammetry (Agisoft Metashape), Geophysics (GPR)
- Numerical** geostatistics (R programming environment, Canoco ordination package, MATLAB)
- Linguistic** Dutch (native), English (fluent), *German (intermediate)*, Norwegian (intermediate), Swedish (basic), French (basic), Latin (written – basic)

MAJOR FIELD EXPEDITIONS (*as leader)

2021-2022	Northwest Spitsbergen*, Åsgardfonna (79°N,16°E)
2021	Southwest Spitsbergen, Sørkapp (76°N,16°E)
2020/2022	Azores, Flores Island (40°N,31°W)
2018	Northwest Iceland*, Skeiðsvatn (65°N,18°W)
2017	Northwest Spitsbergen, Ringgåsvatnet (80°N,22°E)
2014	East Greenland*, Ymer Lake (65°N,37°W)
2013	Bear Island, Ellasjøen (74°N,19°E)
2008/2009	Western Spitsbergen*, Kongressvatnet (78°N,13°E)

PUBLICATION LIST

1. 2022 van der Bilt, W.G.M., D'Andrea, W.J., Oppedal, L.T., Bakke, J., Bjune, A.E., Zwier, M. Stable Southern Hemisphere westerly winds throughout the Holocene until intensification in the last two millennia. *Nature Communications – Earth and Environment*
2. 2022 Hardeng, J., Bakke, J., Sabatier, P., Støren, E.W.N., van der Bilt, W.G.M. Lake sediments from southern Norway capture Holocene variations in flood seasonality. *Quaternary Science Reviews*, **as PhD supervisor**
3. 2021 Zwier, M., van der Bilt, W.G.M., de Stigter, H., Bjune, A.E., Pollen evidence of variations in Holocene climate and Southern Hemisphere Westerly Wind strength on sub-Antarctic South Georgia. *The Holocene*, **as PhD supervisor**
4. 2021 Cederstrøm, J.M., van der Bilt, W.G.M., Støren, E.W., Rutledal, S. Semi-automatic Ice Rafted Debris quantification with Computed Tomography. *Paleoceanography & Paleoclimatology*
5. 2021 van der Bilt, W.G.M., Barr, I., Berben, S.M.P., Hennekam, R., Lane, T., Adamson, K., Bakke, J. Slackwater sediments reveal moderate magnitude of canyon-carving outburst floods on Iceland. *Nature Communications – Earth and Environment*
6. 2021 van der Bilt, W.G.M., Cederstrøm, J.M., Støren, E.W.N., Berben, S.M.P., Rutledal, S. Rapid and non-destructive cryptotephra identification with Computed Tomography (CT). *Frontiers in Earth Science*, **without PhD supervisors**
7. 2020 Møller, T.E., van der Bilt, W.G.M., Roerdink, D.L., Jørgensen, S.L. Microbial community structure in Arctic lake sediments reflect variations in Holocene climate conditions. In press. *Frontiers in Microbiology*, **without PhD supervisors**
8. 2020 Alsos, I.G., Sjögren, P.J., Brown, A.G., Gjelly, L., Førleid Merkel, Paus, A., Lammers, Y., Edwards, M.E., Alm, T., Leng, M., Goslar, T., Langdon, C.T., Bakke, J., van der Bilt, W.G.M. Last Glacial Maximum environmental conditions at Andøya, northern Norway; evidence for a northern ice-edge ecological “hotspot”. In press. *Quaternary Science Reviews*
9. 2020 Rutledal S, Berben SM, Dokken TM, van der Bilt W.G.M., Cederstrøm JM, Jansen E. Tephra horizons identified in the western North Atlantic and Nordic Seas during the Last Glacial Period. *Quaternary Science Reviews*, **without PhD supervisors**
10. 2019 van der Bilt, W.G.M., D'Andrea, W.J., Bakke, J. Early Holocene temperature oscillations exceed amplitude of measured and modelled change in three Svalbard lakes. *Geophysical Research Letters (GRL)*, Volume 46, Issue 24
11. 2019 van der Bilt, W.G.M., Lane, C.S. Late glacial lake sediments with Azorean tephra reveal ice-free interval on coastal northwest Spitsbergen. *Science Advances*, vol. 5 no. 10, **without PhD supervisors**
12. 2019 van der Bilt, W.G.M., Born, A., Haaga, K.A. Was Common Era glacier expansion in the Arctic Atlantic region triggered by unforced atmospheric cooling? *Quaternary Science Reviews*, vol. 222, **without PhD supervisors**
13. 2019 Ólafsdóttir, S., Bakke, J., Stoner, J.S., Bradley, R.S, Gjerde, M., van der Bilt, W.G.M. Holocene paleomagnetic secular variation (PSV) near 80° N, Northwest Spitsbergen, Svalbard: Implications for evaluating High Arctic sediment chronologies. *Quaternary Science Reviews*. Volume 210, pp. 90-102
14. 2019 Beldring, S., van der Bilt, W.G.M., Bogen J. and 7 other lead authors. Climate in Svalbard 2100: a knowledge base for climate adaptation. *The Norwegian Centre for Climate Service*. NCCS report 01/2019, **without PhD supervisors**
15. 2018 Oppedal, L.T., van der Bilt, W.G.M., Balascio, N.L., Bakke, J. Patagonian ash on sub-Antarctic South Georgia: expanding the tephrostratigraphy of southern South America into the Southern Ocean. *Journal of Quaternary Science*. Volume 33, pp. 482-486

16. 2018 van der Bilt, W.G.M., Roerdink, D.L., Jørgensen, S.L., Spagnolo, M., Rea, B., Bakke, J. East Greenland lake sediments highlight geomorphological sensitivity to Holocene climate transitions. *Global and Planetary Change*.
17. 2018 Bakke, J., Balascio, N.L., van der Bilt, W.G.M., Bradley, R.S., D'Andrea W.J., Gjerde, M., Ólafsdóttir, S., Røthe, T., De Wet, G. The Island of Amsterdamøya: a key site for studying past climate in the Arctic. *Quaternary Science Reviews*. Volume 183, pp. 188-203
18. 2018 Oppedal, L.T., Bakke, J., Paasche, Ø., Werner, J., van der Bilt, W.G.M. Cirque glacier rejuvenation and retreat on South Georgia during last 10 ka. *Frontiers in Earth Science*.
19. 2017 van der Bilt, W.G.M., Lane, C.S., Bakke, J. Ultra-distal Kamchatkan ash on Arctic Svalbard: Towards hemispheric cryptotephra correlation. *Quaternary Science Reviews*. Volume 164
20. 2017 van der Bilt, W.G.M., Bakke, J., Werner, J.P., Paasche, Ø., Rosqvist, G., Vatle, S.S. Late Holocene glacier reconstruction reveals retreat behind present limits and two-stage Little Ice Age on sub-antarctic South Georgia. *Journal of Quaternary Science*. V.32, pp. 888–901
21. 2017 Sijtsma, F.J., van der Bilt, W.G.M., van Hinsberg, H., de Knecht, B., van der Heide, M., Leneman, H., Verburg, R. Planning nature in an urbanized country: an analysis of impacts of conservation policy scenarios in the Netherlands. *Heliyon*. V.3, **without PhD supervisors**
22. 2016 van der Bilt, W.G.M., Bakke, J., Vasskog, K., Røthe, T., Støren, E.N. Glacier-fed lakes as paleoenvironmental archives. *Geology Today*. Volume 32, pp. 188-203
23. 2016 van der Bilt, W.G.M., D'Andrea, W.J., Bakke, J., Balascio, N.L., Werner, J., Gjerde, M., Bradley, R.S. Alkenone-based reconstructions reveal four-phase Holocene temperature evolution for High Arctic Svalbard. *Quaternary Science Reviews*. Volume 183, pp. 204-213
24. 2016 van der Bilt, W.G.M. Towards a process-based understanding of Holocene polar climate change. *Doctoral thesis*, University of Bergen, ISBN 978-82-308-3337-7, pp. 1-133
25. 2015 van der Bilt, W.G.M., Bakke, J., Balascio, N.L. Mapping sediment–landform assemblages to constrain lacustrine sedimentation in a glacier-fed lake catchment in northwest Spitsbergen. *Journal of Maps*. Volume 12
26. 2015 van der Bilt, W.G.M., Bakke, J., Vasskog, K., D'Andrea, W.J., Bradley, R.S., Ólafsdóttir, S. Reconstruction of glacier variability from lake sediments reveals dynamic Holocene climate in Svalbard. *Quaternary Science Reviews*. Volume 126, pp. 201-218

Peer-reviewed conference contributions (oral presentations only)

- 2019 van der Bilt, W.G.M., Lane, C.S. Late Weichselian lake sediments with Azorean tephra reveal ice-free interval on coastal northwest Spitsbergen. *INQUA*, Dublin, **without PhD supervisors**
- 2018 van der Bilt, W.G.M., D'Andrea, W.J., Bakke, J. Early Holocene temperature oscillations exceed amplitude of measured and modelled change in three Svalbard lakes. *AGU fall meeting 2018*, Washington DC
- 2018 van der Bilt, W.G.M., Born, A., Werner, J. Evidence for a spontaneous onset of Little Ice Age change in the North Atlantic, *EGU General Assembly*, Vienna, **without PhD supervisors**
- 2017 van der Bilt, W.G.M., Lane, C.S., Bakke, J. Kamchatkan ash on Svalbard, Annual Bjerknæs Getaway, Geilo
- 2016 van der Bilt, W.G.M., Bakke, J., Werner, J., Paasche, Ø., Rosqvist, G. Rapid Late Holocene glacier fluctuations reconstructed from South Georgia lake sediments with new analytical techniques, *EGU General Assembly*, Vienna
- 2016 van der Bilt, W.G.M., Bakke, J., Werner, J., Paasche, Ø., Rosqvist, G. a continuous record of Late Holocene glacier fluctuations on South Georgia placed in a Southern Ocean climate perspective, *Southern Connections*, Punta Arenas
- 2015 van der Bilt, W.G.M., Bakke, J., Vasskog, K., Ólafsdóttir, S. Rapidly shifting Holocene Arctic climate conditions recorded in a distal glacier-fed lake in Svalbard Spitsbergen, *XIX INQUA conference*, Nagoya

Invited talks (most relevant)

- 2022 Willem G.M. van der Bilt, William J. D'Andrea, Lea T. Oppedal, Jostein Bakke, Anne E. Bjune, Maaïke Zwier. Isotope-based Southern Hemisphere westerly winds reconstruction reveals stable Holocene until Common Era intensification. *Geography seminar*, Durham
- 2020 van der Bilt, W.G.M., D'Andrea, W.J., Bakke, J. Early Holocene temperature oscillations exceeds measured and modeled warming on Svalbard. *Ocean Outlook 2020*, Woods Hole Oceanographic Institution (WHOI)

- 2020 van der Bilt, W.G.M., D'Andrea, W.J., Bakke, J. Common Era Arctic temperature change in a Holocene context. *Polar Climate and Environmental Change conference*, Torun
- 2019 van der Bilt, W.G.M., D'Andrea, W.J. Common Era temperature variability on Svalbard placed in a Holocene context. *Dark Ages in an inter-disciplinary light symposium*, Utrecht
- 2019 van der Bilt, W.G.M., Born, A., Werner, J., Haaga, K.A. Evidence for a spontaneous onset of Little Ice Age change in the North Atlantic Arctic. *Geological Research Seminar series, Ghent University*, Ghent
- 2019 van der Bilt, W.G.M., Lane, C.S. Late Weichselian lake sediments reveal ice-free Late Weichselian conditions on northwest Spitsbergen. *GFZ section seminar*, Potsdam

Recent outreach activities ('translated titles')

- 2022 Trouw (newspaper), '*Climate history on the bottom of a lake*'
- 2022 NOS (television), '*Seen climate change with my own eyes*'
- 2021 NRC (newspaper), '*How Europe's largest waterfall was formed in weeks*'
- 2021 Geoforskning (online), '*65 536 shades of grey can help us understand our geological past*'
- 2020 Pint of Science (festival), '*Fossil algae reveal climate extremes*'
- 2019 Forskning.no (news site; NO), '*Naturlig nedkjøling fikk isbreene til å vokse*'
- 2019 Radio interview (Radio 1; NL), '*Awaking scientist*'
- 2019 TV documentary (NRK; NO), '*Does the Earth go under?*'
- 2018 Arctic Research blog (online) for the EU-Interact transnational access program
- 2017 National Geographic (online), '*Expedition Braves Arctic Perils for Climate Science*'
- 2017 Harvest.no kronikk (NO), '*Ice adrift*'
- 2017 IB Times interview, '*Ash from ancient volcano halfway round the world*'
- 2016 Science Daily, '*Algal fat opens window on past Arctic temperatures*'

Other distinctions

- 2020 Top downloaded paper in Geophysical Research Letters (publication **10**)
- 2018 Top 20 most read paper in Journal of Quaternary Science (publication **20**)
- 2017 Momentum Career Development Program for Young Research Talents