

# Complete Curriculum Vitæ

---

Name and address            **Benjamin Amann, Postdoc. Fellow**  
2, rue Olympe de Gouges | La Rochelle  
benjamin.amann@univ-lr.fr

Date and place of birth      08.01.1988, Belfort (France)

Language                      French – Mother tongue  
English – C1  
German – A2.2  
Spanish – Basic knowledge

ORCID ID                        0000-0002-0101-0433






<https://benjaminamann.wixsite.com/amannb>

---

## Employment History

---

Today	<b>Postdoctoral Research Fellow</b> – CNRS / La Rochelle University, France ANR PAMPAS Research Fund_2yrs	
2018 – 2021	<b>Postdoctoral Research Fellow</b> – Ghent University, Belgium BOF Ghent University Research Fund_2yrs	
2017 – 2018	<b>Lecturer-Researcher (ATER) in Geosciences</b> – Pau University and Adour Countries Hydrogeology, Soil Sciences and Hydrology at M.Sc. & B.Sc. levels_1yr	
2016	<b>Instructor Climate Change course</b> – Queen’s University, Kingston, Canada Fall semester 1 <sup>st</sup> year M.Sc. level, 130 students	
2015 – 2017	<b>Postdoctoral Research Fellow</b> – Queen’s University, Kingston ON, Canada 2yr Funding Swiss NSF_Early PostdocMobility P2BEP2_162029	
2011 – 2014	<b>Ph.D. Candidate</b> – Oeschger Centre for Climate Change Research, Switzerland Funding Swiss NSF 200020-134945/1 (3yrs)	

---

## Academic qualifications and relevant training

---

2014, Dec. 19    **Ph.D. in Climate Sciences, Physical Geography** (*summa cum laude*)  
Oeschger Centre for Climate Change Research, Lake sediment & paleolimnology  
Research Group, Bern – Switzerland  
Ph.D. thesis: “Varved lake sediments as archives for high-resolution millennial-  
long climate reconstructions: from sedimentation processes to paleoclimatology”

2013            **12<sup>th</sup> International NCCR Climate Summer School**  
“From climate reconstructions to climate predictions”, Grindelwald - Switzerland

2012            **11<sup>th</sup> International NCCR Climate Summer School**  
“The Water Cycle in a Changing Climate. Observations, Scenarios, Impacts”  
Monte Verità, Ticino - Switzerland

2011            **Advanced level course - Analysis of Environmental Changes**  
Umeå University, Umeå - Sweden

2009 – 2011    **M.Sc. in Hydrology, Hydrochemistry, Soil, and Environment**  
Université Paul Sabatier III, Biogeochemistry Group at EcoLab, Toulouse – France  
Umeå University, Department of Ecology & Environmental Sciences – Sweden  
M.Sc. thesis: “Tracing early atmospheric metal pollution from mining in central  
Sweden: multi-element analysis of a peat record from Borrmossen”

2006 – 2009    **B.Sc. in Physics and Chemistry**  
Université des Sciences et Techniques, Besançon - France

- 2021 - 2023 **ANR PAMPAS (2-yr Postdoc position)\_France**  
*Evolution de l'identité Patrimoniale des Marais des Pertuis charentais en réponse à l'Aléa de Submersion marine*  
ANR founding, € 785,365  
PIs: Nicolas Bécu, Thomas Lacoue-Labarthe, Nathalie Long, Marie Vagner (LIENSs)
- Not funded **FWO postdoc project to integrate ICDP project DeepCHALLA\_Belgium**  
*Varved lake sediments from ICDP Lake Challa: from monthly monitoring of limnological and sedimentation processes to tropical African climate dynamics over the last 250,000 years*  
PI: Prof. Dr. Dirk Verschuren (Limnology Research Unit, Ghent University)
- 2018 - 2020 **HYDROPROX (2-yr Postdoc position)\_Belgium**  
*Developing inorganic geochemical proxies for accurate paleohydrological reconstructions from Chilean fjord sediments*  
UGent BOF Starting Grant, € 200,000  
PI: Sebastien Bertrand (RCMG, Ghent University - Belgium)
- 2017 - 2018 **PHYTOMET (1-yr lecturer-researcher position)\_France**  
*Phytoplankton metallomics: effect of Ocean acidification on iron sequestration*  
ANR, € 550,728  
PI: Marie-Pierre Isaure (IPREM - Pau, France)
- 2015 - 2017 **SEAL-ARC (18-month Postdoc position)\_Canada**  
*Sea-level history and past climate variability inferred from the varved sediments of a hypersaline coastal Arctic lake*  
SNSF Early Postdoc.Mobility Fellowship P2BEP2\_162029, CHF 73,600  
PI: Benjamin Amann (EVEX, Queen's University - Kingston ON, Canada)
- 2015 - 2017 **ArcticNet (Active member)\_Canada**  
*Water Security and Quality in a Changing Arctic\_NSERC Phase 4*
- 2011 - 2015 **CLIMPOL (Active member)\_Switzerland**  
*Climate of northern Poland during the last 1000 years: Constraining the future with the past*  
Swiss Contribution PSPB-086/2010, CHF 821,009  
PIs: Martin Grosjean (OCCR, UniBern - Suisse), and Wojciech Tylmann (University of Gdańsk - Gdańsk, Poland)
- 2011 - 2014 **LAKE VIS-RS (PhD Project)\_Switzerland**  
*Calibrating and validating scanning VIS Reflectance Spectroscopy data (380 - 730 nm) from minerogenic and biochemical varves: improving climate reconstructions from lake sediments*  
Swiss National Science Foundation SNSF Grant 200020-134945/1, CHF 197,849  
PI: Martin Grosjean (OCCR, UniBern - Switzerland)
- 2009 - 2011 **MSc Mobility Project\_Exchange Programme Sweden/France**  
*Tracing early atmospheric metal pollution from mining in Central Sweden: multi-element analysis of a peat record from Borrnessen*  
Bourse Mobilité - Région Midi Pyrénées (co-tutelle), € 500  
PIs: Richard Bindler (Dpt of Ecology & Environmental Sciences, Umeå University, Suède), and François de Vleeschouwer & Gaël Leroux (ECOLAB, Toulouse)

---

## Teaching experience

---

- Fall 2019 **Guest Professor Sedimentology** – Ghent University, Belgium  
Fall semester\_2<sup>nd</sup> year B.Sc. level
- 2019 **Invited speaker Advanced sedimentology** – Ghent University, Belgium  
“The power of natural rhythmic archives. Case studies for paleoenvironmental and paleoclimatic reconstructions”\_2<sup>nd</sup> year M.Sc. level
- 2018 **Invited speaker Advanced sedimentology** – Ghent University, Belgium  
“Natural rhythmic archive: Varved lake sediments. Case studies for paleoenvironmental and paleoclimatic reconstructions”\_2<sup>nd</sup> year M.Sc. level
- 2017 **Lecturer-Researcher (ATER) in Geosciences** – Pau University and Adour Countries  
Hydrogeology, Soil Sciences and Hydrology (M.Sc. & B.Sc. levels\_Full year)
- 2016 **Assistant Professor ‘Climate Change’ course** – Queen’s University, Kingston, Canada  
Fall semester\_M.Sc. level, 130 students
- 2014 **Co-instructor for a 3-day field and lab course in Paleolimnology** – University of Bern, Switzerland (two consecutive summers)

---

## Mentoring

---

06. 2021 **MSc. thesis co-supervisor** – La Rochelle University, France  
“Evolution du schorre dans l’anse de l’Aiguillon depuis 1950”, Laura Olivier
06. 2021 **MSc. thesis co-supervisor** – La Rochelle University, France  
“Suivi et quantification des évolutions du trait de végétation des marais littoraux à partir d’images satellitaires et photographies aériennes”, Jasson Mora Mussio
09. 2020 **Ph.D. thesis reviewer and jury member** – Ghent University, Belgium  
“Towards the construction of a multi-lake paleoseismic record in south-central Alaska: a trembling tale of landslides and turbidites”, Dr. Praet Nore
08. 2019 **M.Sc. thesis reviewer and jury member** – Ghent University, Belgium  
“Lake sediment records of late Holocene proglacial floods from the San Lorenzo Icefield (Patagonia)”, M.Sc. Stijn Albers
08. 2019 **M.Sc. thesis reviewer and jury member** – ‘OCEANS AND LAKES’ Interuniversity Master in Marine-Lacustrine Science and Management (Antwerp, Ghent, Brussels)  
“Fjord sediment records of Patagonian river discharge during the last centuries”, M.Sc. Nguyen Minh Nhut
06. 2019 **B.Sc. thesis supervisor** – Ghent University, Belgium  
“Evaluating the intensity of late Holocene proglacial floods in Patagonia based on the grain size of floodplain sediments”, B.Sc. Sarah Stammen
08. 2018 **M.Sc. thesis reviewer and jury member** – ‘OCEANS AND LAKES’ Interuniversity Master in Marine-Lacustrine Science and Management (Antwerp, Ghent, Brussels)  
“Evolution of San Lorenzo proglacial floods (Patagonia) during the late Holocene: are they related to glacier variability?”, M.Sc. Alejandro Rojas Aldana

I took active part in the IPCC review of the First Order Draft of the *Sixth Assessment Report (AR6) Climate Change 2021: The Physical Science Basis* from the Working Group I (WGI) - (Spring 2019)

I have joined the review process for the following Journals:

- *Quaternary Science Reviews*\_IF: 4.797 (2016)
- *Earth Surface Processes and Landforms*\_IF: 3.697 (2016)
- *International Journal of Climatology*\_IF: 3.601 (2016)
- *Climate of the Past*\_IF: 3.543 (2016)
- *MDPI Applied Sciences*\_IF: 2.679 (2020)
- *Quaternary Research*\_IF: 2.195 (2016)
- *Journal of Paleolimnology*\_IF: 2.168 (2016)
- *Geological Society of Sweden*\_IF: 1.142 (2016)

---

Invited seminars

---

- 2019      **BELQUA National Committee**, Brussels, Belgium  
            Training course in Quaternary Geochronology - Invited expert in varve chronology
- EDYTEM Seminar series**, Le Bourget-du-Lac, France  
            "From sediment processes to paleoclimatology and flood history – A varved sediment tool"
- Geology Research Seminars** at Ghent University, Belgium  
            "Varved lake sediments to track past seasonal climatic changes - A hint from the Canadian High Arctic"
- 2018      **Café Séminaire IPREM** in Pau University, France  
            "Varved lake sediments to track past climatic changes: a hint from the Canadian High Arctic"
- 2017      **PEARL Limnology Seminar Series** at Queen's University, Kingston, Canada  
            "Varved lake sediments for millennial-long hydroclimate reconstructions: a hint from the European Alps"

---

International conferences & workshops

---

**ORAL**

- 2019      **INQUA 2019** in Dublin, Ireland: "Spatio-temporal variability of modern sediment composition in Baker fjord (Chilean Patagonia, 48°S): pre-requisite for paleohydrological reconstructions"
- 2018      **European Conference on Permafrost EUCOP2018** in Chamonix-Mt Blanc, France: "Seasonality matters: Past winter climate from the Canadian High Arctic" [Oral1], "Thaw slurry lake deposits: paleoenvironmental indicators of long term permafrost dynamics" [Oral2, on behalf of S. Lamoureux]
- 2017      **Paleolimnology Symposium PALS 2017** in Sainte-Catharines, Canada: "When seasonality matters: a quantitative winter climate reconstruction using clastic varves from the Canadian High Arctic"
- Arctic Workshop 2017** in Buffalo NY, United States: "A 400-yr temperature reconstruction from the High Arctic using varved lake sediments"
- 2015      **PAGES Climate2k International conference** - Climate variability and human impacts in Central and Eastern Europe during the last two millennia: "Spring temperature signal in the sediments of Lake Zabinskie, Poland - Calibration and 400yr reconstruction"

- 2014 **1<sup>st</sup> Spörer Minimum workshop** in Bern, Switzerland: “The Spörer minimum represented in lake sediments: case studies from the Alps and Poland”  
**4<sup>th</sup> Climpol workshop** in Gdańsk, Poland: “Sedimentary pigments & VIS-RS data – Potential for a 1000yr climate reconstruction”
- 2013 **11<sup>th</sup> Swiss Geoscience Meeting** in Lausanne, Switzerland: “Scanning reflectance spectroscopy (380-730nm) for Paleoenvironmental and climatic changes assessment”  
**3<sup>rd</sup> Climpol workshop** in Jeziorowskie, Poland: “Geochemical proxies: calibration with climate data” [Oral1], “Sedimentary pigments and VIS-RS data” [Oral2]
- 2012 **10<sup>th</sup> Swiss Geoscience Meeting** in Bern, Switzerland: “Varved Lake Oeschinen: quantitative assessment of climate signal in the sediments”  
**2<sup>nd</sup> ClimPol Workshop** in Gdańsk, Poland: “High-resolution VIS-RS scanning”  
**3<sup>rd</sup> Varve Working Group Workshop** in Manderscheid, Germany: “Quantitative summer precipitation and rainstorms from varved Lake Oeschinen, Swiss Alps: calibration and validation AD 1920-1986”

## POSTER

- 2019 **INQUA 2019** in Dublin, Ireland: "Holocene environmental changes in the western Canadian High Arctic (Boundary Lake, Melville Island, 74°N – 109°W)"
- 2017 **Swiss Polar Institute, Crans-Montana Conference**\_High Altitudes meet High Latitudes: Globalizing Polar Issues: "When seasonality matters: climate reconstructions from the Canadian High Arctic & the European Alps over the last millennium using lake sediments"
- 2016 **AGU Fall meeting** in San Francisco, United States: “A 400-year reconstruction of winter conditions using varved lake sediments, Canadian High Arctic: a step forward in the data coverage for the most sensitive season to climate change”  
**EGU General Assembly** in Vienna, Austria: “Varved sediments of Lake Oeschinen, NW Alps: filling the gap in the flood frequency-precipitation relationship for the last millennium” [Poster1], “Multiple climatic signals inferred from the varved sediments of a coastal lake in the Canadian High Arctic” [Poster2]  
**Queen’s Northern Research Symposium** in Kingston, Canada: “Winter climate conditions of the Canadian High Arctic reconstructed over the last 400 years using varved lake sediments”
- 2014 **EGU General Assembly** in Vienna, Austria: “Quantitative high-resolution rainfall reconstruction back to AD 750 from the varved sediments of Lake Oeschinen, northern Swiss Alps” [Poster1] “Spring-temperature variability and eutrophication history inferred from sedimentary pigments in the varved sediments of Lake Żabińskie, NE Poland” [Poster2]  
**15<sup>th</sup> Swiss Global Change Day** in Bern, Switzerland: “Varved lake sediments for quantitative climate research”
- 2013 **12<sup>th</sup> International NCCR Climate Summer School** in Grindelwald, Switzerland: “Varved lake sediments for quantitative climate research”  
**14<sup>th</sup> Swiss Global Change Day** in Bern, Switzerland: “Varved Lake Oeschinen, Swiss Alps: quantitative assessment of precipitation signal in the sediments”
- 2012 **11<sup>th</sup> International NCCR Climate Summer School** in Monte Verità, Ticino, Switzerland: “Quantitative summer (MJJ) precipitation; calibration and validation from varved Lake Oeschinen, Swiss Alps”  
**13<sup>th</sup> Swiss Global Change Day** in Bern, Switzerland: “A promising site for high-resolution multi-proxy European paleoclimate reconstructions: the last millennium from northern Poland”

## List of publications

---

- Amann, B.**, Bertrand, S., Alvarez-Garretón, C., Reid, B. (2022). Seasonal variations in fjord sediment grain size: A pre-requisite for hydrological and climate reconstructions in partially glacierized watersheds (Baker River, Patagonia). *Journal of Geophysical Research: Earth Surface*. <https://doi.org/10.1029/2021JF006391>
- Wilhelm, B., **Amann, B.**, Corella, J. P., Rapuc, W., Giguet-Covex, C., Merz, B., Storen, E. (2022). Reconstructing paleoflood occurrence and magnitude from lake sediments, the updated cooking book. *Quaternary* 5, 9. <https://doi.org/10.3390/quat5010009>
- Wilhelm, B., Rapuc, W., **Amann, B.**, Anselmetti, F., Arnaud, F., Blanchet, J., Brauer, A., Czymzik, M., Giguet-Covex, C., Gilli, A., Glur, L., Grosjean, M., Irmler, R., Nicolle, M., Sabatier, P., Swierczynski, T., Wirth, S. (2022). Impact of warmer climate periods on flood hazard in the European Alps. *Nature Geoscience*. <https://doi.org/10.1038/s41561-021-00878-y>
- Troch, M., Bertrand, S., **Amann, B.**, Liu, D., Placencia, J.A., Lange, C.B. (2021). Sediment Provenance in the Baker-Martínez Fjord System (Chile, 48°S) Indicated by Magnetic Susceptibility and Inorganic Geochemistry. *Frontiers in Marine Science*, 612309. <https://doi.org/10.3389/fmars.2021.612309>
- Piret, L., Bertrand, S., Hawkings, J., Kylander, M. E., Torrejon, F., **Amann, B.**, Wadhams, J. (2021). High-resolution fjord sediment record of a receding glacier with growing intermediate proglacial lake (Steffen Fjord, Chilean Patagonia). *Earth Surface Processes and Landforms* 46, 239–251. <https://doi.org/10.1002/esp.5015>
- Schulte, L., Wetter, O., Wilhelm, B., Juan Carlos Peña, J. C., **Amann, B.**, Wirth, S. B., Carvalho, F., Gómez-Bolea, A. (2019). Integration of multi-archive datasets for the development of a four-dimensional paleoflood model of alpine catchments. *Global and Planetary Change* 180, 66–88. <https://doi.org/10.1016/j.gloplacha.2019.05.011>
- Amann, B.**, Boreux, M.P., Lamoureux, S.F. (2017). Winter temperature conditions (1670–2010) reconstructed from varved sediments, western Canadian High Arctic. *Quaternary Science Reviews* 172, 1–14. <https://doi.org/10.1016/j.quascirev.2017.07.013>
- Camenisch, C., Keller, K., Salvisberg, M., **Amann, B.**, et al. (2016). The 1430s: a cold period of extraordinary internal climate variability during the early Spörer Minimum with social and economic impacts in north-western and central Europe. *Climate of the Past* 12, 2107–2126. <https://doi.org/10.5194/cp-12-2107-2016>
- Amann, B.**, Szidat, S., Grosjean, M. (2015). A millennial-long record of warm season precipitation and flood frequency for the North-western Alps inferred from varved lake sediments: implications for the future. *Quaternary Science Reviews* 115, 89–100. <https://doi.org/10.1016/j.quascirev.2015.03.002>
- Amann, B.**, Lobsiger, S., Fischer, D., Tylmann, W., Bonk, A., Filipiak, J., Grosjean, M. (2014a). Spring temperature variability and eutrophication history inferred from sedimentary pigments in the varved sediments of Lake Żabińskie, north-eastern Poland, AD 1907–2008. *Global and Planetary Change* 123, 86–96. <https://doi.org/10.1016/j.gloplacha.2014.10.008>
- Amann, B.**, Mauchle, F., Grosjean, M. (2014b). Quantitative high-resolution warm season rainfall recorded in varved sediments of Lake Oeschinen, northern Swiss Alps: calibration and validation AD 1901–2008. *Journal of Paleolimnology* 51, 375–391. <https://doi.org/10.1007/s10933-013-9761-3>
- Bonk, A., Tylmann, W., **Amann, B.**, Enters, D., Grosjean, M. (2014). Modern limnology and varve-formation processes in Lake Żabińskie, northeastern Poland: comprehensive process studies as a key to understand the sediment record. *Journal of Limnology* 74, 358–370. <https://doi.org/10.4081/jlimnol.2014.1117>
- Grosjean, M., **Amann, B.**, Butz, C., Rein, B., Tylmann, W. (2014). Hyperspectral imaging : a novel, non-destructive method for investigating sub-annual sediment structures and composition. *Past Global Changes PAGES Magazine* 22, 10–11. <https://doi.org/10.22498/pages.22.1.10>