

## Curriculum Vitae

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### Personal

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**Name:** Alizée LE MOIGNE

**Date of birth:** 05 January 1992

**Place of birth:** Brest, France

**Nationality:** French



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### Employment

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**2022-current** Postdoctoral researcher, Limnological station, Department of Plant and Microbial Biology, University of Zurich, Switzerland.

Research Topic: Temporal variability and habitat compartmentalization of methanotrophic microbes in Arctic permafrost ponds

Supervision: Prof. Dr. Jakob Pernthaler, Prof. Dr. Gabriela Schaepman-Strub

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### Education

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**June 2017- May 2022** PhD student at Life Science Zurich Graduate School, Ecology

Funded by the University Research Priority

Programme on Global Change and Biodiversity (URPP GCB)

Limnological station, Department of Plant and Microbial Biology,  
University of Zurich, Switzerland

Committee members: Prof. Dr. Jakob Pernthaler (Main Supervision),  
Prof. Dr. Gabriela Schaepman-Strub, Prof. Dr. Owen L. Petchey, Prof.  
Dr. Samuel Abiven, Dr. Silke Langenheder

Dissertation Title: Emergent Complexity in Microbial Community  
Assembly: Insights from Taxonomic and Functional Properties

**2014-2015** MSc. Functional, Behavioral and Evolutionary Ecology, University of Rennes 1 (France), with honors (**major**).

Supervision : Dr. Françoise Binet, Dr. Cécile Monard, Dr. Gisèle El Dib, Msc. Kevin Potard

Dissertation Title: Land use influence on microbial Volatile Organic Compounds from soil and development of a technique to measure their atmospheric reactivity

**2013-2014** 1<sup>st</sup> year master Animal and Human behavior, University of Rennes 1 (France), with honors

2012-2013 1<sup>st</sup> year master Functional, Behavioral and Evolutionary Ecology, Erasmus, University of South Bohemia (Czech Republic), with honors

2011-2012 BSc. Life and Earth sciences, University of Rennes 1 (France), with honors

2009-2011 Classe préparatoire aux grandes écoles (CPGE BCPST): Advanced biology, physics, chemistry, mathematics and earth sciences. High school of Chateaubriand, Rennes (France)

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## Skills

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**Theoretical** Microbial community ecology, microbial functional ecology, biogeochemistry, global changes.

**Technical** Remote field campaigns, DNA extraction, Amplicon sequencing, multivariate statistics, microscopy, gas sampling and analysis, metagenomics (beginner).

**Informatics** R, linux (beginner)

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## Conferences and Awards

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### Oral presentations:

2023 Biodiversity Convention, Monte Verità, Ascona, Switzerland  
Methanotrophy in Arctic thermokarst ponds

2023 8<sup>th</sup> Swiss Microbial Ecology Meeting (SME), Mendrisio, Switzerland  
A global eco-evolutionary pattern of bacterial functional diversity

2021 Arctic Science Summit Week, Online  
Microbial diversity and functioning in thermokarst ponds

2019 6<sup>th</sup> Fresh Blood for Freshwater (FBFW), Tihany, Hungary  
Importance of stochastic processes in shaping community structure and function  
**Award:** Best presentation in Community Ecology

2019 16<sup>th</sup> Symposium of Aquatic Microbial Ecology (SAME), Germany, Potsdam  
Importance of stochastic processes in shaping community structure and function

### Posters:

2022 18<sup>th</sup> International Symposium on Microbial Ecology (ISME), Lausanne, Switzerland  
Taxonomic and functional divergence in replicated experimental bacterial communities.

- 2020 1<sup>st</sup> World Biodiversity Forum (WBF), Davos, Switzerland  
Microbial diversity in Arctic Siberian ponds and possible implications for the carbon cycle
- 2019 Global Change and Biodiversity conference, Monte Verita, Switzerland  
Stochasticity in bacterial community assembly: Impact on community functioning  
**Award:** Honourable mention
- 2019 Sentinel North scientific meeting, Quebec, Canada  
Microbial diversity in Arctic Siberian ponds and possible implication for C turnover

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### Teaching Experience

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- 2019-2020 Co-supervision of the master thesis of Azeglio Diethelm. Microbiology.  
Title: Functional redundancy in stochastically assembled microbial lake communities
- 2017-2018 Co-supervision of the master thesis of Florian Randegger. Ecology.  
Title: System Efficiency of Microbial Communities
- 2022 Teaching Assistant in Introduction to Limnology, Biogeochemical cycles. UZH, BIO 308, Lecture.
- 2018-2023 Teaching Assistant in Aquatic Microbial Ecology. UZH, BIO 290, practical.
- 2020 Teaching Assistant in Microbiology. UZH, BIO 138, practical.
- 2018-2019 Teaching Assistant in Ecology and Biodiversity. UZH, BIO 141, practical.

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### Grants

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- 2023 GRC Travel grant (1 120 CHF)
- 2022 Institute for Plant and Microbial Biology Travel Fund (880 CHF)
- 2018 Polar Access Fund from the Swiss Polar Institute (6000 CHF)

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### Other research activities

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- 2019 & 2023 Organisation member of the Global Science Film Festival (Zurich)
- 2017-2019 Outreach activities with Biodiversity Means Life (University of Zurich)
- 2018 Scientific content creation for the Irchel Nature Trail (University of Zurich)

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## Publications

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- 2023 **Le Moigne A.**, Randegger F., Gupta A., Petchey O.L., Pernthaler J. (2023). Stochasticity causes high  $\beta$ -diversity and functional divergence of bacterial assemblages in closed systems. *Ecology* 104 (4), e4005.
- 2023 Pernthaler, J., Krempaska, N., & **Le Moigne, A.** (2023). Small-scale spatial beta diversity of bacteria in the mixed upper layer of a lake. *Environmental Microbiology*.1-13.
- 2022 Dirren-Pitsch G., Bühler D., Salcher M.M., Bassin B., **Le Moigne A.**, Schuler M., Pernthaler J., Posch T. (2022). FISHing for Ciliates: Catalyzed Reporter Deposition Fluorescence in situ Hybridization for the Detection of Planktonic Freshwater Ciliates. *Frontiers in Microbiology*, 13, 1070232.
- 2020 **Le Moigne, A.**, Bartosiewicz, M., Schaepman-Strub, G., Abiven, S., & Pernthaler, J. (2020). The biogeochemical variability of Arctic thermokarst ponds is reflected by stochastic and niche-driven microbial community assembly processes. *Environmental microbiology*, 22(11), 4847-4862.