

Joseph Gaudard

PhD (Science and Technology), Alpine and Arctic ecology, R package developer

<https://github.com/jogaudard>

Product-oriented field ecologist with a strong interest in Alpine and Arctic ecosystems, data workflows, and scientific software development. Experienced in developing user-driven tools in collaboration with industry actors, translating complex measurement workflows into robust, reproducible solutions. My experience as a military officer provided me with the capacity to rapidly adapt and lead in complex situations, and I have successfully transferred those skills in my scientific work, particularly in challenging fieldwork campaigns or teaching.

PRODUCTS, TOOLS & IMPACT

flexible (CRAN R package) Developed in collaboration with LI-COR Biosciences, significantly reducing gas flux data processing time while guaranteeing reproducibility, designed for field researchers and ecosystem scientists, validated with internal datasets and disseminated via LI-COR channels (social media and newsletter) and published in *Methods in Ecology and Evolution* (DOI: 10.1111/2041-210X.70161)

licoread and readosense Manufacturer-specific R packages to read raw data from instruments into flexible-friendly R objects, developed in collaboration with LI-COR Biosciences and Eosense

BIOoutside A platform to support researchers in organising safe and inclusive fieldwork

Personal projects turned GitHub templates to share with the community, **PhD thesis toolbox** (PhD thesis in Quarto, running on targets, automatically sourcing co-author lists and publications), **Early Career Researcher toolbox** (CV using bibtex and GitHub actions, scientific conference bingo)

CORE SKILLS

Product & Technical

- Product lifecycle & product strategy (user needs -> design -> validation -> dissemination)
- Scientific software development (R packages, git)
- Data pipelines, reproducibility (targets) & data-driven decision making

Domain Expertise

- Impact of warming, grazing & fertilisation on grasslands
- Ecosystem gas fluxes
- Field instrumentation

Collaboration & Dissemination

- Stakeholder communication
- Teaching & supervision
- Field leadership

EXPERIENCES

Doctoral Researcher “Global Change Impacts on Carbon Dynamics in Alpine Grasslands: Experimental Insights from Western Norway and Methodological Advances”

Department of Biological Sciences and Bjerknes Centre for Climate Research (BCCR),
University of Bergen (UiB), Bergen, Norway

May 2020 – June 2026

- Designed, and disseminated the **flexible R package**
- Taught in an intensive field course (**Plant Functional Traits Course**, 24 hours flux measurements along four locations on an elevation gradient)
- Presented scientific work at 6 international conferences
- Acquired research funding (185'000 NOK during the PhD)

Researcher & Field assistant

NatuRA project University of Bergen (UiB) & Universities of the Free State and Venda & University of Pretoria, Maloti-Drakensberg, South Africa November 2025 – February 2026

TERRA project University of Bergen (UiB) & The University Centre in Svalbard (UNIS),

Longyearbyen, Svalbard

June 2024

Arctic Station, Qeqertarsuaq, Greenland

June 2018 – September 2018

Denezhkin Kamen Zapovednik (Ecological preserve), Severouralsk, Russia

July 2017 – September 2017

- Designed project-specific equipment to measure ecosystem gas fluxes
- Led fieldwork in remote and challenging environments
- Supervised the data management and processing using automated data pipelines
- Used stable isotopes labelling

Military officer (NATO OF1), Swiss Army

Liaison and Monitoring Team (LMT) Leader in Peace Support Operation

2015 – 2016

- Led a team of 3 working independently in a post conflict zone with limited support
- Built trust with local actors at all levels of society and sides of the conflict
- Gathered intelligence and wrote security assessment reports

Rescue platoon leader at the Military Disaster Relief Rapid Response Command

2013 – 2015

- Trained and led 30 soldiers in a French-German bilingual platoon
- Organised and led missions in adverse conditions and with limited planning

EDUCATION

Philosophiae doctor (ph.d.)

Faculty of Science and Technology, University of Bergen (UiB), Norway

2026

European Double Master in Environmental Science (enveuro.eu)

University of Copenhagen (UCPH), Denmark & University of Natural Resources and Life

Sciences (BOKU) in Vienna, Austria & The University Centre in Svalbard (UNIS), Longyearbeen,

Norway

2019

Bachelor of Science in Geosciences and Environment

Université de Lausanne (UNIL), Switzerland & Université du Québec à Chicoutimi (UQAC),

Canada

2013