Gerard Rocher-Ros

PhD Candidate in Biogeochemistry, Umeå University
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Aquatic biogeochemist interested in spatial patterns,
with a background in complex systems and statistical modelling.

EDUCATION

Umeå University, Sweden, Ph.D. Candidate in Biogeochemistry 2014-
Climate Impacts Research Centre. Department of Ecology and Environmental Science.
Thesis: *Biophysical controls of CO_2 evasion in inland waters*. Supervisors: Reiner Giesler, Ryan Sponseller, Ann-Kristin Bergström

Autonomous University of Barcelona, Spain, M.S. Statistical Modelling 2013-2014
Department of Mathematics. Specialty in Statistical Modelling and Complex Systems.
Thesis: *"Multifractal patterns in ecosystems: implications for the response of forest fires to environmental conditions"*. Supervisor: Salvador Pueyo

University of Barcelona, B.S. Environmental Sciences 2008-2013
Thesis: *"Carbon Budget and CO_2 evasion of Lake Torneträsk, a large, subarctic lake in Northern Sweden"*. Supervisor: Jan Karlsson

PUBLICATIONS

- **Rocher-Ros G**, Giesler, R, Lundin E, Salimi S, Jonsson A, Karlsson J. (2017). *Large lakes dominate CO_2 evasion from lakes in an arctic catchment*. *Geophysical Research Letters*, 44(24).
- Myrstener M, **Rocher-Ros G**, Burrows RM,, Bergström AK, Giesler R, Sponseller RA. (2018). *Persistent nitrogen limitation of stream biofilm communities along climate gradients in the arctic . Global Change Biology*.
- Lyon SW, Ploum SW, van der Velde Y, **Rocher-Ros G**, Mörth C-M, Giesler R. *Lessons learned from monitoring the stable water isotopic variability in precipitation and streamflow across a snow-dominated subarctic catchment*. *Arctic, Antartic and Alpine Research*.
- **Rocher-Ros G**, Sponseller RA, Lidberg W, Mörth C-M, Giesler R. *Landscape process domains drive patterns of CO_2 supply and evasion from river networks.* Submitted.
- **Rocher-Ros G.**, Sponseller RA, Bergström A-K, Myrstener M, Giesler R. *In-stream metabolism controls CO_2 dynamics in arctic streams.* In prep.
- **Rocher-Ros G**, Pueyo S. *Multifractal patterns make ecosystems sensitive to climate.* In prep.
- Myrstener M, **Rocher-Ros G**, Gomez-Gener L, Giesler R, Sponseller RA. *Nutrient availability shapes metabolic seasonal regimes in Arctic streams.* In prep.
- Serikova S, Pokrovsky OS, **Rocher-Ros G**, Denfeld B, Karlsson J. *Greenhouse gas emissions from Western Siberian Inland Waters.* In prep.

ORAL COMMUNICATIONS

- **Rocher-Ros G**, Sponseller RA, Mörth C-M, Myrstener M, Giesler R. *Aquatic metabolism is an important driver of CO_2 dynamics in Arctic streams of Sweden.* (Presented at SFS meeting in Detroit, 2018, and in ASLO meeting in Victoria, 2018)
- Myrstener M, **Rocher-Ros G**, Gomez-Gener L, Giesler R, Sponseller RA. *Nutrient availability shapes seasonal metabolic regimes in Arctic streams.* (Presented in ASLO meeting in Victoria-Canada, 2018)

- **Rocher-Ros G**, Sponseller RA, Mörth C-M, Giesler R. *High resolution measurements of CO_2 fluxes in an Arctic stream network reveal high spatial variability.* (Presented at SEFS meeting in Olomouc-Czech Republic, 2017)
- **Rocher-Ros G**, Burrows R, Bergström A-K, Giesler R, Sponseller RA. *Resource limitation in arctic stream ecosystems: a comparative study in three ecoregions in northern Sweden.* (Presented at ASLO Meeting in Granada-Spain, 2015)
- Karlsson J, Giesler R, **Rocher-Ros G**, Salimi S, Lundin E. *The role of inland waters in the carbon cycle at high latitudes: Assessment from integrated terrestrial-aquatic carbon balances of subarctic catchments* (Presented at JASM meeting in Portland-Oregon, 2014)
- Karlsson J, Klaus M, Lundin E, **Rocher-Ros G.** *Spatiotemporal variability in GHG fluxes and implications for accurately estimating GHG emissions from inland waters.* (Presented at AGU Meeting in San Francisco-USA, 2013)
- Vogel H, Wagner B, Rosén P, Meyer-Jacob C, Ritter B, Boxberg F, Gudasz C, **Rocher-Ros G.**, Snowball I. *Lake floor morphology, sediment architecture, and patterns of sedimentation in Lake Torneträsk.* (Presented at EGU Meeting in Vienna-Austria, 2012).

TEACHING EXPERIENCE

Umeå University

- Teaching assistant in Arctic Geoecology. 2015-2018
  Field course taught in Abisko, Sweden. Coordinating field projects and one lecture. Course coordinator: Reiner Giesler.
- Teaching assistant in Water quality and management. 2015-2017
  Supervising lab classes about aquatic macroinvertebrates and its use for water quality assessment. Course coordinator: Ryan Sponseller.
- Teaching assistant in *Miljöresan* 2015-2017
  Field course taught in Abisko, Sweden. Coordinating field projects and leading one excursion. Course coordinator: Micael Jonsson.

PROFESSIONAL CONTRIBUTIONS AND AFFILIATIONS

- Reviewer for *Hydrological Processes*.
- Member of the *Association for the Sciences of Limnology and Oceanography* (ASLO).
- Member of the *Society for Freshwater Science* (SFS).
- Member of the *Asociación Ibérica de Limnología* (AIL).

RELEVANT SKILLS

Software skills

- Intermediate level programming in C.
- Profficiency level programming with R. Use of *tidyverse*, *Rmarkdown*.
- User of ArcGIS.
- User of github.
- User of Linux and Windows OS.

Environmental science skills

- Coordinate and perform fieldwork campaigns in remote places.
- Perform hydrological measures in streams and rivers.
- Field and lab handling of a wide array of water, soil and biological samples.

Languages skills

- Native in: Catalan, Spanish, Occitan.
- Profficient in: English.
- Intermediate in: French, Swedish.

Community engagement

- Vice-chairman (2015-2017) and Chairman (2017-2018) of the PhD branch of NTK (Student association of the Science and Technology faculty, Umeå University).
- Treasurer of the Association *Eth Pè deth Cèu* (2010-2015). Association with the aim to promote the knowledge of the Pyrenees in Val d'Aran, Spain.
- Responsible of one study site of the Catalan Butterfly Monitoring Scheme in Val d'Aran, Spain (2009-2014).