

Pauline Rivoire

University of Bern

Oeschger Centre for Climate Change Research, Institute of Geography
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Education

-PhD student, Climate Science

University of Bern

October 2018 – present

Bern (Switzerland)

Institute of Geography and Oeschger Centre for Climate Change Research. See details below.

-Master of Science, Applied Statistics

Université Claude Bernard

2017–2018

Lyon (France)

First semester internship at IRSTEA (Lyon) about principle component analysis of flood occurrence in France, Supervisor : Benjamin Renard. Final internship at Hydrosiences Montpellier, see details below.

-University diploma, “Teaching mathematics in high school”

Université d’Auvergne

2016–2017

Clermont-Ferrand (France)

-Master of Science, General Mathematics

Université Claude Bernard

2016

Lyon (France)

2016 Agrégation (teaching diploma)

-“Classes préparatoires” : Mathematics preparatory class for engineering colleges

Lycée La Martinière Monplaisir

2011–2013

Lyon (France)

Intensive undergraduate courses to prepare entrance exams for French Engineering Schools.

Work Experience

PhD student

Institute of Geography and Oeschger Centre for Climate Change Research

October 2018 – present

Bern (Switzerland)

“Statistical analysis of Extreme Precipitation Clustering”. Supervisors: Olivia Romppainen-Martius (University of Bern) and Philippe Naveau (Laboratoire des Sciences du Climat et l’Environnement, Gif-sur-Yvette, France).

Master thesis/internship

Hydrosiences Montpellier

April – September 2018

Montpellier (France)

“Regional Frequency Analysis of Extreme Droughts around the Mediterranean Sea”. Supervisors: Luc Neppel and Yves Tramblay.

Mathematics teacher in high school

Lycée Montdory

2016–2017

Thiers (France)

References

- **Pr. Dr. Olivia Martius:** olivia.romppainen@giub.unibe.ch, +41 31 684 33 37. *Oeschger Centre for Climate Change Research and Institute of Geography, University of Bern, Bern, Switzerland.*
- **Dr. Philippe Naveau:** philippe.naveau@lsce.ipsl.fr, +33 1 69 08 41 58. *Laboratoire des Sciences du Climat et de l’Environnement, ESTIMR, CNRS-CEA-UVSQ, Gif-sur-Yvette, France.*
- **Dr. Jakob Zscheischler:** jakob.zscheischler@ufz.de, *Department of Computational Hydrosystems, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany.*

Supervision

M.Sc. Jerome Kopp: “Temporal Clustering of Heavy Precipitation” (09.2019 - 09.2020).

Languages

English: Fluent. **French:** Native speaker. **Spanish:** B1.

Computer Skills

R, Python, L^AT_EX, Shell scripting, CDO, Version Control with GitHub.
Linux and Windows operating systems

Conferences, Training Schools and Workshops

- VALPRED3 Workshop** **4-7.10.2021**
Assessment of ensemble forecasts *Aussois (France)*
Oral presentation: Extreme daily precipitation in Europe estimated using regionalized extreme value distributions
- 19th International Swiss Climate Summer School** **29.08-03.09.2021**
Vegetation, Land Surface and Climate Interactions *Ascona (Switzerland)*
- ASP Summer Colloquium, NCAR/UCAR** **4-7.10.2021**
The Science of Subseasonal to Seasonal (S2S) Predictions *Online*
Student group project: Verification of hindcast with the Python package ClimPred
- EGU 2021** **26-30.04.2021**
European Geosciences Union *Online*
Pico presentation “A comparison of moderate and extreme ERA-5 daily precipitation with two observational data sets”
- Workshop on Compound Weather and Climate Events** **12-15.01.2021**
OCCR and DAMOCLES *Online*
Lightening presentations: “Identifying meteorological drivers of extreme impacts: an application to simulated crop yields” and “Spatial clustering of heavy clustering in ERA-5 precipitation over Europe”
- AGU 2020** **1-17.12.2020**
American Geosciences Union *Online*
Poster presentation “ERA5 daily precipitation compared with observational datasets”
- Bottom-up identification of key elements of compound events** **3-6.11.2020**
DAMOCLES *Online*
Bevecqua et al. (2021)
- EGU 2020** **4-8.05.2020**
European Geosciences Union *Online*
Oral presentation “Characterization of ERA5 daily precipitation using the extended generalized Pareto distribution”
- VALPRED2 Workshop** **9-12.03.2020**
Assessment of ensemble forecasts *Aussois (France)*
Oral presentation “Comparison of ERA5 and EOBS daily precipitation”
- Training School on Statistical Modelling of Compound Events** **23.09-04.10.2019**
Cost action DAMOCLES *Como (Italy)*
Lead author of Vogel, Rivoire et al. (2021)
- 14th IMSC** **24-28.06.2019**
International Meeting on statistical climatology *Toulouse (France)*
Poster: “Characterization of daily precipitation using the Extended Generalized Pareto Distribution. Bootstrap procedure for Bern and Toulouse precipitation”
- VALPRED Workshop** **18-21.03.2019**
Validation of ensemble forecasting *Aussois (France)*
Poster “Characterization of Swiss daily precipitation using the Extended Generalized Pareto Distribution”

Publications

Emanuele Bevacqua, Carlo De Michele, Colin Manning, Anaïs Couasnon, Andreia F.S. Ribeiro, Alexandre M. Ramos, Edoardo Vignotto, Ana Bastos, Suzana Blesić, Fabrizio Durante, John Hillier, Sérgio C. Oliveira, Joaquim G. Pinto, Elisa Ragno, **Pauline Rivoire**, Kate Saunders, Karin van der Wiel, Wenyan Wu, Tianyi Zhang, and Jakob Zscheischler. Guidelines for Studying Diverse Types of Compound Weather and Climate Events. *Earth's Future*, 9(11):1–23, 2021.

Jérôme Kopp, **Pauline Rivoire**, S. Mubashshir Ali, Yannick Barton, and Olivia Martius. A novel method to identify sub-seasonal clustering episodes of extreme precipitation events and their contributions to large accumulation periods. *Hydrology and Earth System Sciences*, 25(9):5153–5174, 2021.

Pauline Rivoire, Olivia Martius, and Philippe Naveau. A Comparison of Moderate and Extreme ERA-5 Daily Precipitation With Two Observational Data Sets. *Earth and Space Science*, 8(4), 2021.

Pauline Rivoire, Yves Trambly, Luc Neppel, E. Hertig, and Sergio Vicente-Serrano. Impact of the dry-day definition on mediterranean extreme dry-spell analysis. *Natural Hazards and Earth System Sciences*, 19:1629–1638, 08 2019.

Johannes Vogel, **Pauline Rivoire**, Cristina Deidda, Leila Rahimi, Christoph Sauter, Elisabeth Tschumi, Karin van der Wiel, Tianyi Zhang, and Jakob Zscheischler. Identifying meteorological drivers of extreme impacts: an application to simulated crop yields. *Earth System Dynamics*, 12:151–172, 02 2021.

Pauline Rivoire, Philomène Le Gall, Anne-Catherine Favre, Olivia Martius, Philippe Naveau. High return level estimates of daily ERA-5 precipitation in Europe estimated using regionalised extreme value distributions (*submitted to Weather and Climate Extremes*).

Yannick Barton, **Pauline Rivoire**, Jonathan Koh, S. Mubashshir Ali, Jérôme Kopp, and Olivia Martius. On the temporal clustering of European extreme precipitation events and its relationship to persistent and transient large-scale atmospheric drivers (*submitted to Weather and Climate Extremes*).

Pauline Rivoire, Olivia Martius, Philippe Naveau. Precipitation extremes in S2S hindcast data: a verification of temporal clustering (*in preparation*).

Online Representation

- University of Bern: https://www.geography.unibe.ch/about_us/staff/rivoire_pauline/index_eng.html
- ResearchGate: <https://www.researchgate.net/profile/Pauline-Rivoire-2>
- Google Scholar: <https://scholar.google.com/citations?hl=en&user=5u7i2WwAAAAJ>
- LinkedIn: https://www.linkedin.com/in/pauline-rivoire-719692216/?locale=en_US
- Github: <https://github.com/PauRiv>

Service

- Board member of the Oeschger Center Climate Students Council, University of Bern (Switzerland), *February 2020-present*.
- Review of articles in different journals (Advances in Statistical Climatology, Meteorology and Oceanography, Hydrology and Earth System Sciences, Earth System Dynamics).