EMMA CHOLLET RAMAMPIANDRA

PhD Student in Ecological Modelling

Eawag, 8600 Dübendorf, Switzerland

emma.chollet@eawag.ch ◊ ORCID ◊ https://github.com/emmachollet

EDUCATION

Swiss Federal Institute of Aquatic Science and Technology (Eawag)

Eidgenössische Technische Hochschule Zürich (ETHZ)

Dübendorf, Switzerland
Zürich, Switzerland
2020 - present

PhD in Ecological Modelling

Thesis title (tentative): "Bridging the gap between data science and mechanistic modelling to gain knowledge about macroinvertebrate community assembly"

University of Neuchâtel (UNINE)

Neuchâtel, Switzerland
2015 - 2020

Bs. and Ms. of Science in Mathematics

Thesis title: "An Introduction to Simplicial Sets and Model Categories" Grade: cum laude

PUBLICATIONS

- **Chollet Ramampiandra, E.**, Scheidegger, A., Fragnière, G., Schuwirth, N., in prep. **Impact of hidden ecological processes and data limitations on the performance and interpretability of species distribution models.**

  in prep.

- Khaliq, I., **Chollet Ramampiandra, E.**, Vorburger, C., Narwani, A., Schuwirth, N., 2024. **The effect of water temperature changes on biological water quality assessment.** Ecological Indicators 159, 111652. https://doi.org/10.1016/j.ecolind.2024.111652

  2024

- **Chollet Ramampiandra, E.**, Scheidegger, A., Wydler, J., Schuwirth, N., 2023. **A comparison of machine learning and statistical species distribution models: Quantifying overfitting supports model interpretation.** Ecological Modelling 481, 110353. https://doi.org/10.1016/j.ecolmodel.2023.110353

  2023

CONFERENCES

16th Institute of Biogeochemistry and Pollutant Dynamics (IBP) PhD Congress

Zürich, Switzerland
April 2024

Talk: "How robust are species distribution models against noise in the data?"

European Conference on Ecological Modelling (ECEM)

Leipzig, Germany
September 2023

Talk: "A comparison of machine learning and statistical species distribution models: quantifying overfitting supports model interpretation"

13th Symposium for European Freshwater Sciences (SEFS)

Newcastle, UK
June 2023

Talk: "A comparison of machine learning and statistical species distribution models: quantifying overfitting supports model interpretation"

13th International Congress of Ecology (INTECOL)

Geneva, Switzerland
September 2022

Talk: "Learning ecological species responses through a comparative analysis of statistical and machine learning models"

14th Institute of Biogeochemistry and Pollutant Dynamics (IBP) PhD Congress

Zürich, Switzerland
April 2022

Poster: "Learning ecological species responses from machine learning models"

12th Symposium for European Freshwater Sciences (SEFS)

online
July 2021

Poster: "Combine modeling approaches to gain knowledge about community assembly of stream macroinvertebrates"

LEADERSHIP ACTIVITIES

Teaching
Zürich, Switzerland
yearly, 2020 - present
- Teaching assistant, <u>Modelling Aquatic Ecosystems</u>, ETH Zürich, Course 701-0426-00

Supervision
Dübendorf, Switzerland
2021 - present
- Jonas Wydler (internship), Gaspard Fragnière (civil service),
  Johanna Berger (master project), Adrien Perroud (civil service)

Other roles
Dübendorf, Switzerland
2022 - 2024
- Confidential Advisor/Vertrauensperson for PhD Students, Eawag

Organization of conference
Dübendorf, Switzerland
April 2023
- 15th Institute of Biogeochemistry and Pollutant Dynamics (IBP) PhD Congress, Eawag

Further education
Dübendorf, Switzerland
September 2021
- Summer School on Bayesian Methods for Environmental Modelling, Eawag

SKILLS

Programming
- Experienced: R
- Familiar: Python, Julia

Languages
- Native: French
- Fluent: English
- Intermediate: German, Spanish

Soft skills
- Communication
- Meticulousness
- Critical thinking