

# Yoann Cartier

[yoann.cartier@enpc.fr](mailto:yoann.cartier@enpc.fr) | [website](#)

## WORK EXPERIENCE

---

### PhD candidate

Ecole nationale des Ponts et Chaussées

Characterization of sources of microbiological contamination in rivers using statistical and inverse modeling.

Oct 2023 – present

Paris, France

### Research intern

INRAE - MISTEA

Impact of climate change on the thermal dynamics of a small urban lake. Use of 1D modeling tools. Sensitivity analysis and model calibration using real data sets.

Feb – July 2023

Montpellier, France

### Research intern

Wageningen Environmental Research

Modeling natural habitats on a European scale using machine learning, deep learning, and satellite imagery models. Involved in the entire process, from data selection and processing to modeling.

Oct 2021 – Apr 2022

Wageningen, Netherlands

### Research intern

Laboratoire d'écologie alpine

Evaluation of machine learning methods for habitat recognition based on environmental data.

June – Aug 2021

Grenoble, France

## EDUCATION

---

### Engineering exchange semester

Norwegian University of Science and Technology

Courses taken: machine learning, multivariate data analysis, bioacoustics for biodiversity, control of nonlinear systems.

Aug – Dec 2022

Trondheim, Norway

### Engineering

Ecole Nationale Supérieure d'Energie, Eau et Environnement

A leading French school in energy, hydraulics and environmental engineering, part of Grenoble Institute of Technology. Three-year program in: electric power, fluid mechanics, computer science, hydraulics. Specialization: automatic and smart systems.

Sep 2019 – July 2023

Grenoble, France

### Pre-engineering

Lycée Gay-Lussac

Preparation in Math and Physics for the competitive entrance exams to French "Grandes Ecoles".

Sep 2017 – July 2019

Limoges, France

## RESEARCH INTERESTS

---

Applied mathematics for environmentally sustainable human activities and biodiversity preservation. More specifically:

- Water quality
- Optimization
- Differential equations
- Statistics
- Fluid mechanics
- Sensitivity analysis
- Machine learning
- Signal processing
- Modeling

## SUPERVISION

---

### INTERNSHIPS

#### Supervisor of M1 student Liyu Lei

Ecole nationale des Ponts et Chaussées

Evaluation of 1D Modeling for Contaminant Transport by Comparison with 2D Modeling.

June – Aug 2025

Paris, France

## STUDENT PROJECTS

### Supervisor of L3 students Arthur Montfort, Mehdi Moumen

Ecole nationale des Ponts et Chaussées

Mathematical modeling of water quality in river.

Feb – June 2025

Paris, France

### Supervisor of M1 students Lise Pontoizeau, Albin Champetier, Aby Hermier, Ousswa Halleb, Huang Yuyan, He Haohong, Liang Yuyin

Ecole Nationale Supérieure de l'Energie, l'Eau et l'Environnement

Bio-hydrogen production from microorganisms.

Feb – June 2024

Grenoble, France

### Supervisor assistant of L3 students Emilie Caron, Eline Cholle, Adèle Pagneux, Agathe Prevost

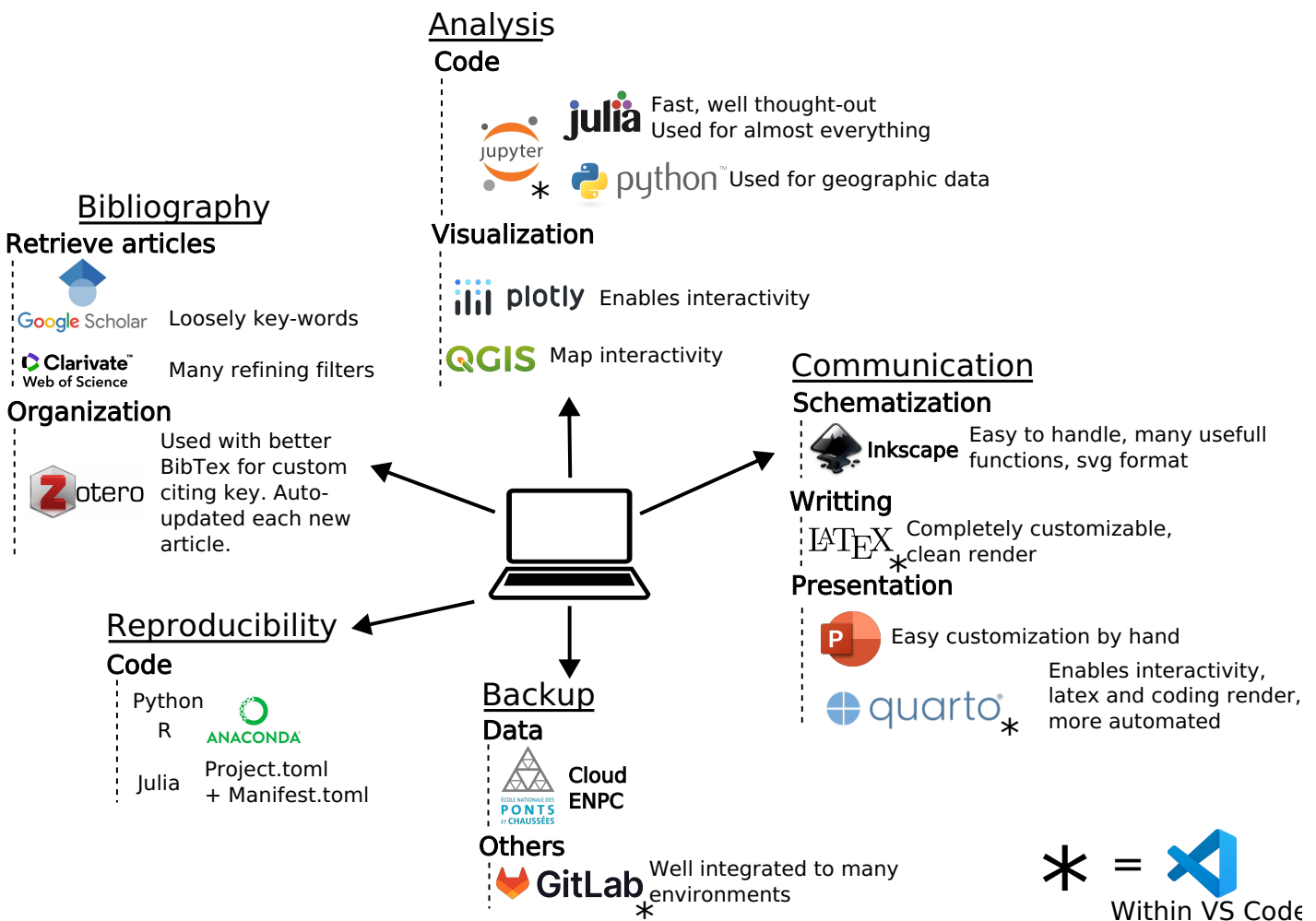
Ecole nationale des Ponts et Chaussées

Identification of microbial biomarkers of ammonia-related dysfunction in anaerobic digesters.

Feb – June 2024

Paris, France

## COMPUTER SKILLS



## COMMUNICATIONS

- **Sep. 25** 13th Urban Drainage Modelling Conference, Oral Innsbruck
- **May 25** EGU General Assembly, Oral Vienna
- **Nov. 24** 5th IAHR Young Professionals Congress, Poster Online
- **Nov. 24** 24th Young Mathematicians Forum, Oral Montpellier

## PUBLICATIONS

No publications yet.