

# François Leroy

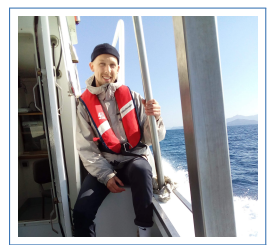
10 Rue des Préaux, Saint-Marcel  
27950, Normandy, France

+420737480623

leroy@fzp.czu.cz

Website

GitHub (FrsLry)



Keywords: Numerical Ecology, Modeling, Machine Learning

## Experience

2020–2024 **PhD. Modeling spatio-temporal biodiversity changes across scales**, *Faculty of Environmental Sciences, CZU, dept. of Spatial sciences*, Prague.

- Modeling biodiversity using machine learning, frequentists and bayesian methods
- Programming
- English communication skills (both oral and writing)
- Supervised by [Dr. Petr Keil](#)



2018–2020 **Marine Sciences MSc**, *Sorbonne University*, Paris (France, graduated September 2020).



*Numerical Ecology, modelling, geostatistics, GIS*, oceanography, marine ecology, biogeochemistry, database management

2017–2018 **3<sup>rd</sup> year of Bachelor of Science**, *South Brittany University*, Vannes (France).

Specialized in Coastal Ecosystems and Management, *GIS*

2015–2017 **1<sup>st</sup> and 2<sup>nd</sup> year of Bachelor of Science**, *Rouen Normandy University*, Rouen (France).

Specialized in Botanic

## Internships

2020 **Community modelling**, *DYNECO-LEBCO, IFREMER*, Brest (France).

(6 months)



- Objective:** develop a simulation tool to assess dynamic communities accompanying biogenic reefs built by *Sabellaria alveolata* (Linnaeus, 1767)(honeycomb worm)
- Explore the community topology using *qualitative modelling* (Dambacher *et al.* 2002, Marzloff *et al.* 2016)
- Infer a *Dynamic Bayesian Network* (BN) from a large database (*REEHAB project*)

2019 **Numerical ecology study**, *UMR BOREA - MNHN - LOCEAN*, Paris (France).

(2 months)



- Objective:** spatiotemporal recruitment variability of *Sicyopterus lagocephalus* (Pallas 1770)(Teleostei : Gobiidae : Sicydiinae), amphidromous species of the Indian Ocean
- Pelagic Larval Duration (PLD) determination by otolithometry
- Statistical analysis* to observe spatial (rivers) and temporal (season/year) differences of those PLD
- Larval dispersion *modelling* using the Ichthyop lagrangian model in backward to assess larval provenance

2018 **Ecological study**, *Géoarchitecture Laboratory*, Vannes (France).

(2 months)

- Objective:** use the opportunistic feature of the European shag to assess fish biodiversity
- Rejection pellets dissection and harvesting
- Fish identification using otoliths, data analysis

2017 **Mapping, Photogrammetry**, *Géosciences Océans Laboratory*, Vannes (France).

(5 months)

- Objective:** study the coastal dynamic of a beach in order to distribute sediment at the most relevant place
- Three dimensional modelling of a beach to observe its evolution
- Production of DEM (*i.e.* Digital Elevation Model) to exploit in *GIS* software

## Computer skills

Basic Julia, Shell, MATLAB, HTML5, CSS

Intermediate Python, MySQL, Creative Cloud, Agisoft Metashape

Advanced R, Git, QGIS, ArcGIS, LaTeX

## Teaching

2021 Introduction to GIS using ArcGIS (14 hours)

## Languages

French (mothertongue), English (fluent speaking, reading, writing), Spanish (basic)