Six-month Master's-level internship in coastal air-sea CO_2 flux computation and analysis – UMR 7266 LIENSs, La Rochelle Université, France

The laboratory
LIENSs is an Interdisciplinary Joint Research Unit jointly operated by the French National Centre for Scientific Research (CNRS) and La Rochelle University. The laboratory focuses on the sustainability of coastal environments, which are increasingly vulnerable to the impacts of climate change and human activities. It brings together around 80 researchers, 29 permanent engineers and technicians, 24 postdoctoral and visiting researchers, and 40 doctoral students.

The project
This project is part of the French RiOMar project (https://riomar.lsce.ipsl.fr/le-projet-riomar/) funded by the PPR Ocean & Climat and of the La Rochelle Territoire Zéro Carbone LRTZC (https://www.larochelle-zerocarbone.fr). The goal is to investigate the impacts of terrestrial freshwater and organic/inorganic matter fluxes delivered through the Charente River on the air-sea CO_2 fluxes in the Pertuis Sea. The Charente River watershed is strongly affected by anthropic activities with consequences on the biogeochemistry of coastal waters. In particular, the study aims to elucidate how such transformations influence the coastal carbon cycle and the atmospheric CO_2 exchanges with the shallow and river-influenced waters of the Bay of Biscay (northeastern Atlantic Ocean).

We are seeking a highly motivated second-year MSc student to contribute to the calculation and analysis of air-sea CO_2 fluxes from in-situ data gathered in the Pertuis Sea in 2024 and 2026 with a UAV. The selected candidate will develop and modify existing codes in Python to provide a first-order estimation of the air-sea CO_2 fluxes of the plume and its uptake or outgassing potential. She/he will then link the flux measurements to a set of 14 physical and biogeochemical parameters that define the plume signature. She/he will play a key role in advancing understanding of coastal biogeochemical dynamics in our RiOMar and LRTZC study site. The position offers the opportunity to collaborate with a dynamic team of scientists from different labs.

Skills and requirements
- MSc in Earth or Environmental Sciences
- Knowledge in coastal ocean dynamics
- Some proficiency in Python programming
- Very good English skills, both written and verbal, with effective communication abilities

Working environment
6-month internship. Starting date expected in January 2027. The candidate will be hosted at the LIENSs laboratory, located in the coastal city of La Rochelle, France, with short-term visits to P. Polsenaere's lab at Ifremer (LER-PC, La Tremblade).

How to Apply
Interested candidates are invited to submit the following documents to Vincent Le Fouest (PR, vincent.le_fouest@univ-lr.fr), Christine Dupuy (PR, christine.dupuy@univ-lr.fr) and to Pierre Polsenaere (HDR, Pierre.Polsenaere@ifremer.fr):
- A cover letter detailing your motivation and qualifications
- A comprehensive curriculum vitae, including educational background
- BSc and MSc transcripts

For inquiries about the position, please feel free to contact Vincent Le Fouest (ccied to Christine Dupuy and Pierre Polsenaere) at the provided email addresses.