



Rémi Laxenaire

Physical Oceanographer

Address

631 East Call Street #402
32301, Tallahassee, États Unis

Tel & Skype

+1 (850) 300 2532
remi_lax

Mail

rlaxenaire@fsu.edu
remi.laxenaire@wanadoo.fr

Web

Researchgate
Linkedin

Languages

French ★★★★★

English ★★★★★

IELTS 6.5 (2010)

CECRL B2 (2014)

Spanish ★★★★★

Certifications

Car License (2008)

Motorbike License (2009)

Offshore boating License (2011)

First Aid Certification (2014)

Education

- 2019/02 **Ph.D in Physical Oceanography** [Université de Paris Saclay, France](#)
Laboratoire de Météorologie Dynamique (LMD).
at the École Polytechnique & the École Normale Supérieure.
Title of the Thesis: "Assessments on the fate of the Agulhas Rings and their transport in the South Atlantic estimated by combining satellite altimetry and in situ observations".
Supervisors: Prof. Sabrina Speich & Dr. Alexandre Stegner.
- 2014/09 **Master in Physical Oceanography** [Institut Universitaire Européen de la Mer, France](#)
Laboratoire d'Océanographie Physique et Spatiale (LOPS).
Main lectures: Physics of Ocean and Climate, Geophysical Fluid Dynamic & Programming (Matlab).
Title of the Thesis: "Structure and evolution of mesoscale eddies achieving the Indo-Atlantic exchange from observational and model data".
Thesis activity carried out during an internship period shared between the LOPS (France) and the IMARPE (Peru).
Supervisors: Prof. Sabrina Speich, Prof. Bruno Blanke & Assoc Prof. Alexis Chaigneau.
- 2012/09 **Bachelor in Physic** [Université de Bretagne Occidentale, France](#)
Main lectures: Continuum Mechanics, Mathematics, Electronic & Programming (Matlab & C++).
- 2011/09 **Bachelor Oceanographe Prospector** [Cnam - Intechmer, France](#)
Main lectures: Oceanography, Instruments, Electronic & Programming (GIS, SQL, R, HTML & Php).
Title of the Thesis: "Sedimentary and hydrologic processes on the slope of the Bay of Biscay".
Thesis activity carried out during an internship period shared between the LES and LOPS both at the IFREMER (France).
Supervisors: D.D. Jean-François Bourillet & Dr. Pascale Lherminier.
- 2010/09 **Marine Science Dip HE** [University of South Wales, United Kingdom](#)
Main lectures: Sedimentology, Remote Sensing, Geographic Information System & Programming (R).
Title of the Thesis carried in parallel to lectures: "Computer-based tracking of North Atlantic icebergs in SAR images and relation with surface currents".
Supervisor: Iain Bye.
- 2008/09 **1st year of Bachelor in Marine Biology** [UQAR, Canada](#)
Main lectures: Descriptive Oceanography, Bio-statistics, Ecology & Programming (R).

Experiences as an Oceanographer

- 2019/08 - now **Postdoctoral Research Associate** [COAPS, Florida State University, USA](#)
Impact of the internal gravity waves on the ocean circulation and associated eddies.
- 2018/11 - 2018/05 **Postdoctoral position in the context of the AtlantOS Project** [LMD, CNRS, France](#)
Development and validation of the global database of the TOEddies algorithm colocalized with Argo profiles and PIV processing of the SLOCET experiments.
- 2015/05 - 2015/10 **Assistant researcher, Coriolis** [LMD, CNRS, France](#)
Improvement of Argo profiles data delayed-mode processing and salinity data calibration.
- 2015/04 - 2015/04 **Assistant researcher, SAMOC ANR** [LMD, École Normale Supérieure, France](#)
Colocation of mesoscale eddies and profiling floats in the South Atlantic Ocean.
- 2015/02 - 2015/03 **Assistant researcher, OCEANOMICS ANR** [LMD, École Normale Supérieure, France](#)
Study of the mesoscale ocean dynamic from the data of the TARA Ocean missions.

Oceanographic cruises & Experimental missions

- 2017/11 (5 weeks) **SLOCET experimental mission** [LEGI, Communauté Université de Grenoble Alpes, France](#)
Laboratory experiments on the Coriolis rotating tank to investigate the impact of varying shelf slopes on the propagation of topographic Rossby waves and coastal currents.
- 2016/10 (4 weeks) **SOCLIM cruise** ["Marion Dufresne" research vessel in the Kerguelen region](#)
Southern Ocean cruise focusing in mesoscale dynamics, the biological carbon pump and the total anthropogenic carbon sequestration.
- 2016/06 (2 weeks) **Leg 2 of the MOOSE-GE cruise** ["L'Atalante" research vessel in the Mediterranean Sea](#)
Detecting and characterizing long-term environmental anomalies in the Mediterranean Sea.
- 2015/07 (5 weeks) **Winter 2015 cruise** ["SA Agulhas II" research vessel in the Southern Ocean](#)
Retrieval, reconditioning and deployment of physical oceanography moorings along the SAMBA-SAMOC CLIVAR line. Participation of master students training via lectures and presentations related to my research works.
- 2011/09 (2 weeks) **Leg 1 of the BobEco mission cruise** ["Pourquoi Pas?" research vessel in the Bay of Biscay](#)
Observations of deep-water corals offshore of the Bay of Biscay and Irish coasts.

Teaching & Science popularization

- 2017/11 - 2018/10 **Teaching Assistant** [Department of Geosciences, École Normale Supérieure, France](#)
68 hours of classes at Bachelor and Master level in Fluid Mechanics, Oceanography, Numerical Computation & Remote Sensing.
- 2016/02 - 2017/06 **Scientific Supervisor** [F93, France](#)
Build, with students and their teacher, a project of 20 hours and 2 days of field works related to the Geology of rocks (2016) and Physics of the atmosphere (2017) in a middle school class.

Publications in peer-reviewed journals

– 1st author

Laxenaire, R., Speich S., Blanke B., Chaigneau A., Pegliasco C., & Stegner, A. (2018). Anticyclonic eddies connecting the western boundaries of Indian and Atlantic oceans. *Journal of Geophysical Research: Oceans*, 123, 7651–7677. <https://doi.org/10.1029/2018JC014270>.

Laxenaire, R., Speich S., & Stegner, A. (In Press). Evolution of the thermohaline structure of one Agulhas Ring reconstructed from satellite altimetry and Argo floats. *Journal of Geophysical Research: Oceans*. <https://doi.org/10.1029/2018JC014426>.

Laxenaire, R., Speich S., & Stegner, A. (Submitted). Quantification of the Agulhas Rings heat fluxes as estimated using Altimetry and Argo floats. *Journal of Geophysical Research: Oceans*.

– Other Publications

Capuano, T. A., Speich, S., Carton, X., & **Laxenaire, R.** (2018). Indo-Atlantic exchange, mesoscale dynamics, and Antarctic intermediate water. *Journal of Geophysical Research: Oceans*, 123. <https://doi.org/10.1002/2017JC013521>.

Kersalé, M., Lamont T., Speich S., Terre T., **Laxenaire R.**, Roberts M. J., van den Berg M. A., & Ansorge I. J. (2018), Moored observations of mesoscale features in the Cape Basin: characteristics and local impacts on water mass distributions, *Ocean Science*, 14(5), 923–945. <https://doi.org/10.5194/os-14-923-2018>.

Liebrand, D., Raffi, I., Fraguas, Á., **Laxenaire, R.**, Bosmans, J. H. C., Hilgen, F. J., et al. (2018). Orbitally forced hyper-stratification of the Oligocene South Atlantic Ocean. *Paleoceanography and Paleoclimatology*, 33. <https://doi.org/10.1002/2017PA003222>

Foltz G.R., Brandt P., Richter I., Rodríguez-Fonseca M., Hernandez F., [...], **Laxenaire R.**, et al. (2019). The Tropical Atlantic Observing System, *Frontiers in Marine Science*, 6(206). <https://doi.org/10.3389/fmars.2019.00206>

Sauzede, R., Martinez, E., Maes, C., Dufois, F., Mignot, A., **Laxenaire R.**, Maamaatuaiahutapu, K., & Petrenko, A. (In preparation). Impact of eddy activity on the vertical distribution of phytoplankton biomass in the South Pacific Subtropical Gyre.

Technical Reports

Laxenaire, R., Lepesqueur J., Cabanes C., Speich S. & Reverdin, G. (2016). Validation de différentes configurations de la méthode Owens-Wong dans l’océan Austral.

Laxenaire, R., Speich S., & Kokoszka, F. (2015). Automatically produced station reports of the *Tara* Oceans data.

Communications & conferences

2018/09	25 Years of Progress in Radar Altimetry Symposium Poster.	Ponta Delgada, Açores, Portugal
2018/02	Ocean Science Meeting Oral Presentation.	Portland, Oregon, USA
2016/11	Invited Talk at the Laboratoire de l'Atmosphère et des Cyclones Oral Presentation.	Saint-Denis, Réunion, France
2016/05	2016 International Liege Colloquium, Submesoscale Processes: Mechanisms, Implications and new Frontiers Poster.	Liège, Belgium
2016/02	2016 Ocean Science Meeting Poster.	New Orleans , Louisiana, USA

Database & website

2019	TOEddies Global Atlas and Argo profiling floats colocalization Under finalization	LMD, CNRS, Paris
2018	TOEddies South Atlantic Eddy Atlas https://vesg.ipsl.upmc.fr/thredds/catalog/IPSLFS/rlaxe/catalog.html?dataset=DatasetScanIPSLFS/rlaxe/Database_South_Atl.zip	LMD, École Polytechnique, Paris
2017	WebSite creation with CMS https://www1.lmd.polytechnique.fr/dyned/	LMD, École Polytechnique, Paris

References

PostDoc Supervisor	Prof. Éric Chassignet ph: +1 850 645 7288 & email: echassignet@fsu.edu	COAPS, Florida State University, USA
PhD Supervisor	Prof. Sabrina Speich ph: +33 1 44 32 22 48 & email: speich@lmd.ens.fr	LMD, École Normale Supérieure, France
PhD Examiner	Dr. Rosemary Morrow ph: +33 5 61 33 29 44 & email: rosemary.morrow@legos.obs-mip.fr	LEGOS, Observatoire Midi-Pyrénées, France

November 18th, 2019

Rémi Laxenaire