

# LEONARDO NASCIMENTO LIMA

## PERSONAL INFORMATION

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Name: Leonardo Nascimento Lima.

Date of Birth (mm/dd/yyyy): 07/06/1986

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Professional Address: Viale Carlo Berti Pichat, 6/2, 40127, Bologna, BO

## EDUCATION

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- 2018 (in progress) Post doctoral  
Euro-Mediterranean Center on Climate Change, Italy
- 2014 – 2018 Ph.D. in Meteorology  
National Institute for Space Research, Brazil  
Visiting scholar at the University of Maryland, USA during 03/15/2016 to 10/15/2016
- 2010 – 2012 Master's in Geophysics  
Federal University of Bahia, Brazil
- 2005 – 2009 Bachelor's in Oceanography  
Federal University of Bahia, Brazil

## EMPLOYMENT HISTORY

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- 2012 – 2014 Researcher in Oceanography  
Oceanographic Modeling and Observation Network (REMO) ([www.rederemo.org](http://www.rederemo.org))

## RESEARCH INTERESTS

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- Implementing advanced data assimilation methods in ocean models.
- Studying the growing errors in an oceanic analysis.
- Investigating the spatial variation of the horizontal decorrelation and localization to apply in data assimilation experiments.
- Developing experiments to evaluate the observation impact on data assimilation: Observing System Simulation Experiments (OSSE) and Observing System Experiments (OSE).

## PUBLICATIONS

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- Le-Traon, P. Y., Reppucci, A., Fanjul, E. A., Aouf, L., Behrens, A., Belmonte, M., et al., 2019. From observation to information and users: the copernicus marine service perspective. *Frontier Marine Science*, 6:234. <https://doi.org/10.3389/fmars.2019.00234>.
- Palazov, A., Ciliberti, S., Peneva, E., Gregoire, M., Staneva, J., Lemieux-Dudon, B., Masina, S., Pinardi, N., Vandenbulcke, L., Behrens, A., **LIMA, L.**, Coppini, G., Marinova, V., Slabakova, V., Lecci, R.; Creti, S., Palermo, F., Stefanizzi, L., Valcheva, N., Agostini, P., 2019. Black Sea Observing System, *Frontier Marine Science*, 6:315. <https://doi.org/10.3389/fmars.2019.00315>.
- Endo, C. A. K., Gherardi, D. F. M., Pezzi, L. P., **LIMA, L. N.**, 2019. Low connectivity compromises the conservation of reef fishes by marine protected areas in the tropical South Atlantic, *Scientific Reports*, 9(1), <https://doi.org/10.1038/s41598-019-45042-0>.
- **LIMA, L. N.**, Pezzi, L. P., Penny, S. G., Tanajura, C. A. S., 2019. An Investigation of Ocean Model Uncertainties Through Ensemble Forecast Experiments in the Southwest

Atlantic Ocean. *Journal of Geophysical Research: Oceans*, 124, 432-452. <https://doi.org/10.1029/2018JC013919>.

- **LIMA, L. N.**, Pezzi, L. P., 2018. Assimilação de dados com o método LETKF no Oceano Atlântico Sudoeste: A importância das observações de satélite. In: Leonardo Tulio. (Org.). *Aplicações e Princípios do Sensoriamento Remoto 2*. 1ed. Ponta Grossa, Paraná: Atena, 2018, v. 2, 54-68. <http://www.atenaeditora.com.br/wp-content/uploads/2018/10/E-book-Aplica%C3%A7%C3%B5es-e-Princ%C3%ADpios-do-Sensoriamento-Remoto-2-4.pdf>.
- Tanajura, C. A. S., **LIMA, L. N.**, Belyaev, K. P., 2016. Impact on oceanic dynamics from assimilation of satellite surface height anomaly data into the Hybrid Coordinate Ocean Model (HYCOM) over the Atlantic Ocean. *Oceanology* (Washington. 1965), 56, 509-514. <http://dx.doi.org/10.1134/S000143701603022X>.
- Tanajura, C. A. S., **LIMA, L. N.**, Belyaev, K. P., 2015. Assimilation of satellite surface-height anomalies data into a Hybrid Coordinate Ocean Model (HYCOM) over the Atlantic Ocean. *Oceanology* (Washington. 1965), 55, 738-750. <http://dx.doi.org/10.1134/S0001437015050161>.
- Mignac, D., Tanajura, C. A. S., Santana, A. N., **LIMA, L. N.**, XIE, J., 2015. Argo data assimilation into HYCOM with an EnOI method in the Atlantic Ocean. *Ocean Science*, 11, 195-213. <https://doi.org/10.5194/os-11-195-2015>.
- Tanajura, C. A. S., Santana, A. N., Mignac, D., **LIMA, L. N.**, Belyaev, K. P., Xie, J., 2014. The REMO Ocean Data Assimilation System into HYCOM (RODAS\_H): General Description and Preliminary Results. *Atmospheric and Oceanic Science Letters*, 7, 464-470. <https://doi.org/10.3878/j.issn.1674-2834.14.0011>.
- **LIMA, L. N.**, Tanajura, C. A. S., 2013. A study of the impact of altimetry data assimilation on short-term predictability of the HYCOM ocean model in regions of the Tropical and South Atlantic Ocean. *Brazilian Journal of Geophysics*, 31, 271-288. <http://dx.doi.org/10.22564/rbgf.v31i2.302>.
- Santos, W. P. C., Hatje, V., **LIMA, L. N.**, Trignano, S. V., Barros, Francisco C. R. de, Castro, J. T., Korn, M. G. A., 2008. Evaluation of sample preparation (grinding and sieving) of bivalves, coffee and cowpea beans for multielement analysis. *Microchemical Journal*, 89, 123-130. <https://doi.org/10.1016/j.microc.2008.01.003>.

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## CONFERENCE PRESENTATIONS

- **LIMA, L. N.**, Pezzi, L. P., Penny, S. An investigation of numerical oceanic uncertainties in the Southwest Atlantic Ocean. In: Seventh International WMO Symposium on Data Assimilation, Florianopolis, Brazil, 2017.
- **LIMA, L. N.**, Penny, S., Pezzi, L. P. An investigation of ocean model uncertainty through ensemble forecast and data assimilation experiments in the Southwest Atlantic Ocean. In: 4th Conference of Computational Interdisciplinary Science, Sao Jose dos Campos, Brazil, 2016.
- **LIMA, L. N.**, Pezzi, L. P. Data assimilation experiments in the Southwest Atlantic Ocean. In: Big Data and Environment, Buenos Aires, Argentina, 2015.
- **LIMA, L. N.**, Pezzi, L. P., Tanajura, C. A. S. Experiment design to investigate the SLA and SST data assimilation impact over the South Atlantic Ocean. In: Fourth International Symposium on Data Assimilation, Kobe – Japan, 2015.
- Tanajura, C. A. S., Santana, A., Mignac, D., **LIMA, L. N.**, Belyaev, K. P., Zhu, J., Xie, J. RODAS.1: The first version of the brazilian REMO multivariate ocean data assimilation system into HYCOM. In: 12th CAS-TWAS-WMO Forum, The

International Workshop on Operational Oceanography for Developing Countries, 2013, Beijing – China, 2013.

- Mignac, D., Tanajura, C. A. S., Santana, A., **LIMA, L. N.**, Zhu, J., Xie, J. The impact of ARGO data assimilation into HYCOM through the ENOI scheme and the evaluation of applying vertical localization for the Atlantic Ocean. In: 12th CAS-TWAS-WMO Forum, The International Workshop on Operational Oceanography for Developing Countries, Beijing – China, 2013.
- **LIMA, L. N.**, Tanajura, C. A. S., Belyaev, K. P., Santana, A., Mignac, D., Zhu, J., Xie, J. Assimilation of along-track sea level anomaly data into HYCOM in the Atlantic Ocean. In: 12th CAS-TWAS-WMO Forum, The International Workshop on Operational Oceanography for Developing Countries, Beijing – China, 2013.
- **LIMA, L. N.**, Tanajura, C. A. S., Belyaev, K. P., Santana, A., Mignac, D., Zhu, J., Xie, J. Assimilation of sea surface temperature data into HYCOM in the Atlantic Ocean. In: GODAE OceanView Symposium, Baltimore – USA, 2013.
- Mignac, D., Tanajura, C. A. S., Santana, A., **LIMA, L. N.**, Zhu, J., Xie, J. Argo data assimilation into HYCOM with an EnOI method over the Atlantic Ocean. In: GODAE OceanView Symposium, Baltimore – USA, 2013.
- Tanajura, C. A. S., Santana, A., Mignac, D., **LIMA, L. N.**, Belyaev, K. P., Zhu, J., Xie, J. REMO Ocean Data Assimilation System into HYCOM (RODAS.H1). In: GODAE OceanView Symposium, Baltimore – USA, 2013.

## **TECHNICAL SKILLS**

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- Extensive experience: FORTRAN77/90, MATLAB, MS Office, UNIX shell scripting, ocean modeling (ROMS, HYCOM).
- Limited experience: GrADS, FERRET, Python.