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PERSONAL

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HIGHER EDUCATION

- 2008 **PhD**, Physical Oceanography, Université Paul Sabatier, Toulouse, France.
2004 **Master Degree**, Marine Science, Meteorology and Environment, Univ. Pierre et Marie Curie, Paris, France.
2004 **Engineer Degree**, ENSTA, Paris, France.

PROFESSIONAL EXPERIENCE

- May 2012 – present **Assistant Scientist, UM, RSMAS/CIMAS**, Miami, FL, USA.
Feb 2009 – Apr 2012 **Postdoctoral Associate, UM, CIMAS**, Miami, FL, USA.
Feb 2008- Jan 2009 **Research engineer, Laboratoire d'Etudes en Géophysique et d'Océanographie Spatiales (LEGOS)**, Toulouse, France.
Nov 2004- Feb 2008 **PhD, LEGOS**, Toulouse, France. Dissertation title: “*Objective evaluation of observational networks in coastal ocean using ensemble modeling.*” Advisors: Pierre De Mey, LEGOS, Toulouse, France, and Pierre-Yves Le Traon, Ifremer, Plouzané, France.
Apr-Nov 2004 **Master Degree training period, Laboratoire d'Océanographie Dynamique et de Climatologie (LODYC)**, Paris, France. Thesis title: “*Interannual variability of the Tropical Atlantic.*” Advisors: Christophe Menkes, Alban Lazar, and Jérôme Vialard.

PUBLICATIONS

Refereed journal articles:

- Le Hénaff, M.**, F.E. Muller-Karger, V.H. Kourafalou, D. Otis, K.A. Johnson, L. McEachron, and H.-S. Kang (2019). Coral Mortality Event in the Flower Garden Banks of the Gulf of Mexico in July 2016: Local Hypoxia due to Cross-Shelf Transport of Coastal Flood Waters? *Continental Shelf Research*, p.103988.
- Garcia-Pineda, O., Y. Androulidakis, **M. Le Hénaff**, V. Kourafalou, L.R. Hole, H.-S. Kang, G. Staples, E. Ramirez, and L. DiPinto (2019). Measuring oil residence time with GPS-drifters, satellites and unmanned aerial systems (UAS). *Marine Pollution Bulletin*, In Press.
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- Androulidakis, Y., V.H. Kourafalou, **M. Le Hénaff**, H.-S. Kang, T. Sutton, S. Chen, C. Hu, and N. Ntaganou (2019). Offshore spreading of Mississippi waters: pathways and vertical structure under eddy influence. *Journal of Geophysical Research: Oceans.*, 124, 5952–5978. <https://doi.org/10.1029/2018JC014661>.
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- Wang, S., G. Li, M. Iskandarani, **M. Le Hénaff**, and O. Knio (2018). Verifying and assessing the performance of the perturbation strategy in polynomial chaos ensemble forecasts of the circulation in the Gulf of Mexico. *Ocean Modelling*, 131, 59-70.
- Sun, S., C. Hu, O. Garcia-Pineda, V. Kourafalou, **M. Le Hénaff**, and Y. Androulidakis (2018). Remote sensing assessment of oil spills near a damaged platform in the Gulf of Mexico. *Marine Pollution Bulletin*, 136, 141-151.
- Androulidakis Y., V. Kourafalou, T. Özgökmen, O. Garcia–Pineda, B. Lund, **M. Le Hénaff**, C. Hu, B.K. Haus, G. Novelli, C. Guigand, and H. Kang (2018). Influence of River-Induced Fronts on Hydrocarbon Transport: A Multiplatform Observational Study. *Journal of Geophysical Research - Oceans*, 123, 3259-3285.
- Meinen, C.S., S. Speich, A.R. Piola, I. Ansorge, E. Campos, M. Kersalé, T. Terre, M.P. Chidichimo, T. Lamont, O.T. Sato, R.C. Perez, R.C., D. Valla, M. van den Berg, **M. Le Hénaff**, S. Dong, S. L. Garzoli (2018). Meridional Overturning Circulation Transport Variability at 34.5° S During 2009-2017: Baroclinic and Barotropic Flows and the Dueling Influence of the Boundaries. *Geophysical Research Letters*, 45(9), 4180-4188.
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- Putrasahan, D.A., I. Kamenkovich, **M. Le Hénaff**, and B. P. Kirtman (2017). Importance of ocean mesoscale variability for air-sea interactions in the Gulf of Mexico. *Geophysical Research Letters*, 44, 6352-6362.
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- Androulidakis, Y. S., V. H. Kourafalou, G. R. Halliwell, Jr., **M. Le Hénaff**, H-S. Kang, M. Mehari, and R. Atlas (2016). Hurricane interaction with the upper ocean in the Amazon-Orinoco plume region. *Ocean Dynamics*, 66(12), 1559-1588.
- Kourafalou, V. H., Y. S. Androulidakis, G. R. Halliwell, Jr., H-S Kang, M. Mehari, **M. Le Hénaff**, R. Atlas, and R. Lumpkin (2016). North Atlantic Ocean OSSE System Development: Nature Run Evaluation and Application to Hurricane Interaction with the Gulf Stream. *Progress in Oceanography*, 148, 1-25.
- Iskandarani, M., **M. Le Hénaff**, W. C. Thacker, A. Srinivasan, and O. M. Knio (2016). Quantifying uncertainty in Gulf of Mexico forecasts stemming from uncertain initial conditions. *Journal of Geophysical Research-Oceans*, 121(7), 4819-4832, Gulf Oil Spill special section.
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- Le Hénaff, M.**, and V. H. Kourafalou (2016). Mississippi waters reaching South Florida reefs under no flood conditions: synthesis of observing and modeling system findings, *Ocean Dynamics*, 66, 435-459.
- Lamouroux, J., G. Charria, P. De Mey, S. Raynaud, C. Heyraud, P. Craneguy, F. Dumas, and **M. Le Hénaff** (2016). Objective assessment of the contribution of the RECOPECA network to the monitoring of the 3D coastal ocean variables in the Bay of Biscay and the English Channel, *Ocean Dynamics*, 66, 567-588.
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- Oke, P. R., G. Larnicol, E. M. Jones, V. H. Kourafalou, A. K. Sperrevik, F. Carse, C. A. S. Tanajura, B. Mourre, M. Tonani, G. B. Brassington, **M. Le Hénaff**, G. R. Halliwell, R. Atlas, A. M. Moore, C. A. Edwards, M. J. Martin, A. A. Sellar, A. Alvarez, P. De Mey, M. Iskandarani (2015). Assessing the impact of observations on ocean forecasts and reanalyses: Part 2: Regional applications. *Journal of Operational Oceanography*. 8(sup1), s63-s79.

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Thacker, W. C., A. Srinivasan, M. Iskandarani, O. M. Knio, and **M. Le Hénaff** (2012). Propagating boundary uncertainties using polynomial expansions, *Ocean Modelling*, 43-44, pp 52-63.

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Roblou L., F. Lyard, **M. Le Hénaff**, and C. Maraldi (2007). X-track, a new processing tool for altimetry in coastal oceans, *ESA ENVISAT Symposium*, Montreux, Switzerland, ESA SP- 636, July 2007.