

René Gabriel Navarro-Labastida

Curriculum Vitae

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Place and date of birth: México, December 4, 1989

Residence: Trieste, Salita Di Gretta, 12 CP 34135

Citizenship: Mexican

Education

2019 – ongoing **PhD in Earth Science and Fluid Mechanics**, *University of Trieste – International Centre for theoretical Physics (ICTP)*

Numerical analysis of the low latitude ocean the heat budgets and the role shallow and deep Tropical Ocean using the ocean general circulation model NOAA-GFDL Modular Ocean Model version 5, both under equilibrium-state and perturbed climate conditions as well. Supervisor: Prof. R. Farneti (rfarneti@ictp.it)

2013 – 2016 **MSc in Physical Oceanography**, *Center for Scientific Research and Higher Education at Ensenada (CICESE)*, Department of Physical Oceanography

As thesis project I worked with a wide source of observational data (ADCPs, pressure sensors, CTD, altimetry and reanalysis products) using different statistical methods (Empirical Orthogonal Functions, Harmonic analysis, complex demodulation, spectral analysis) and basic theoretical assessments as well. Supervisor: Prof. M. López (malope@cicese.mx)

2008 – 2013 **BSc in Oceanography**, *Autonomous University of Baja California (UABC)*, Faculty of Marine Science

As thesis project, I made a simple assessment of the temporal variability of the Southern Gulf of California coastal wind by using observational data from a coastal meteorological station. Supervisor: Prof. R. Castro (rcastro@uabc.mx)

Work experience

Jun 2016 – Jan 2019 **Collaborator**, *Oceanographic Observational Network System (cigom.info)*, Statistical analysis in line 3: Numerical simulation of wave-current interaction

Technical support in the statistical description of Gulf of México by the analysis outputs from different numerical models, mainly with Matlab, Fortran, Bash and Python. I was in charge of the production of scientific reports and seminars preparation. Supervisor: Dr. Pedro Osuna (osunac@cicese.mx)

Feb 2017 – **Member**, *Mexican Centre for Innovation in Ocean Energy (cemieoceano.mx)*, Data analysis support in line 1: Evaluation of the wave energy in México
 Jan 2019 Evaluation of the wave energy potential in México. Statistical and programming focused on the estimation of global and regional wave-energy by the analysis of numerical outputs and observational data from buoys and moorings. I was in charge of the production of scientific reports and seminars preparation. Supervisor: Dr. F.J. Ocampo-Torres (ocampo@cicese.mx)

Cruises

May, 2013 **PESCAR-24 cruise**, *Point Sur RV (Moss Landing Institute of Oceanography)*
 12 – 22 Apr, 2016 **IMECOCAL 1604 cruise**, *Alpha Helix RV (CICESE)*
 23 Jun – 2 Jul, 2017 **CICESE-JPL/NASA cruise**, *Alpha Helix RV (CICESE)*

Teaching Experience

Aug – Nov, 2017 **Probability and Statistics (60 h)**, *Bachelor on Nanotechnology*, Center of Nanoscience and Nanotechnology, UNAM

Skills

Programation tools PYTHON, FORTRAN, MATLAB, BASH, SHELL, CDO, NCO, FERRET
 Model User of NOAA-GFDL Modular Ocean Model (MOM) version 5
 Writing L^AT_EX
 Languages SPANISH (Native speaker), ENGLISH (High competition), ITALIAN (Intermediate competition)
 Operative Systems LINUX, MACOS, WINDOWS

Scientific meetings (highlights)

- o Participant (2021) *Physics of the Ocean Bad Honnef Physics School, Ocean Physics Summer School 2020*, Bonn, Germany (postponed)
- o Participant (May 3, 2020). *EGU General Assembly 2020 Improved Understanding of Ocean Variability and Climate, Sharing Geoscience Online*, Online
- o Participant (Jul 1-12, 2019). *2nd ICTP Summer School on Theory, Mechanisms and Hierarchical Modelling of Climate Dynamics: Convective Organization and Climate Sensitivity*, Trieste, Italy
- o Participant (Jul 15-19, 2019). *ICTP-CLIVAR Summer School on Oceanic Eastern Boundary Upwelling Systems*, Trieste, Italy
- o Ocampo-Torres F.J., Navarro, R., and Osuna, P., (2018). *Progress in ocean surface waves hindcast in ocean waters around México*. The Coordinated Ocean Wave Climate Project (COWCLIP) 2018 Workshop. UNESCO building (IOC), Paris, France

- o Navarro, R., López, M., (2017). *Ciclo estacional de las corrientes y del transporte en los umbrales del Golfo de California*, Reunión Anual de la Unión Geofísica Mexicana, Jalisco, México
- o Organizer (November 19-21, 2014). *7th International Meeting of Students in Physical Oceanography* (+30 participants and 7 plenary talks). Ensenada, México

Publications

- o Navarro, R., López, M., & Candela, J. (2016). **Seasonal cycle of near-bottom transport and currents in the northern Gulf of California**. *Journal of Geophysical Research: Oceans*, 121. doi: 10.1002/2016JC012063
- o Navarro, R. (2016). **Seasonal cycle of currents and transport on the sills from Gulf of California**. MSc. Thesis. Centro de Investigación Científica y de Educación Superior de Ensenada, México
- o Navarro, R. (2013). **Diurnal, seasonal and synoptical wind variability at the Southern Gulf of California**. BSc. Thesis. Universidad Autonoma de Baja California, México
- o Todd et al., (in press). **Ocean-only FAFMIP: Understanding Regional Patterns of Ocean Heat Content and Dynamic Sea Level Change**. *Journal of Advances in Modeling Earth Systems*, doi:org/10.1002/essoar.10501557.1

Declaration

All the information contained in this Curriculum Vitae et Studiorum is accurate and truthful and is given under my responsibility according to articles 46 and 47 of the Presidential Decree dated 28.12.2000, n. 445. I am aware that false declarations are punishable by law in accordance with art. 76 of the same Presidential Decree dated 28.12.2000, n. 445