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Dott.ssa Paola Del Negro  
OGS General Director

December 12, 2021

**To the selection board**

My undergraduate studies were on general *Oceanography* with emphasis on the technical and interdisciplinary skills development. Additionally, I have a master degree in Science of Physical Oceanography, with focus on fluid dynamics, applied mathematics, statistics and programming.

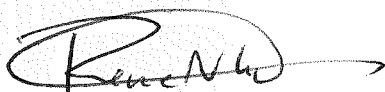
I have worked in the *Oceanographic Observational Network System* (cigom.info) as technical support for the *wave-current interactions* group. My analysis were mainly focuses in the estimation of climatological patterns, long-term trends, extreme value theory and extreme events such as tropical storms and frontal winter systems. Additionally, I collaborated in the *Mexican Center for Innovation in Ocean Energy* supporting the statistical and programming analysis. My work was mainly focused on the estimation of the global and regional wave-energy, using numerical model data outputs and observational data as well.

I am currently enrolled in the third year of the *Joint PhD Programme, Earth Science and Fluid Mechanics* (UniT-ICTP) in Trieste, Italy. The aim of my project is to evaluate the response of the global ocean climate to anomalous surface fluxes in terms of ocean heat uptake and circulation changes, with particular focus on the heat budget analysis in the Tropical Pacific and the role of the shallow overturn circulation. So far, I have done an exhaustive analysis of a set of numerical simulations following a state-of-art forcing protocol for Ocean General Circulation Models (<http://www.fafmip.org/>).

I believe I am suitable to fulfil the junior fellowship proposal since I have a particular interest and experience working with big data from numerical modelling and observational deployments. I hope you and all the other members of the selection board will find me suitable for the interview.

Sincerely yours,

**René Gabriel Navarro-Labastida**



Attached: curriculum vitæ

# René Gabriel Navarro-Labastida

## Curriculum Vitae

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### Education

- 2019 – **PhD in Earth Science and Fluid Mechanics**, *University of Trieste – International Centre for theoretical Physics (ICTP)*  
ongoing 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  
Supervisor: Prof. M. Lopez (malope@cicese.mx)
- 2008 – 2013 **BSc in Oceanography**, *Autonomous University of Baja California (UABC)*, Faculty of Marine Science  
Supervisor: Prof. R. Castro (rcastro@uabc.mx)

### Work experience

- Jun 2016 – **Collaborator**, *Oceanographic Observational Network System (cigom.info)*, Statistical analysis in line 3: Numerical simulation of wave-current interaction  
Jan 2019
- Feb 2017 – **Member**, *Mexican Centre for Innovation in Ocean Energy (cemioceano.mx)*, Data analysis support in line 1: Evaluation of the wave energy in México  
Jan 2019

### 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<sup>A</sup>T<sub>E</sub>X

Languages Spanish (Native speaker), English (High competition), Italian (intemediate competi-  
tion)  
Operative LINUX, MACOS, WINDOWS  
Systems

### 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

### 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*