Dr. Ricardo Martins Campos, PhD

PhD Naval Architecture and Marine Engineering, PhD Ocean Engineering, MSc Ocean Engineering, BSc Meteorology

---

RESUME

Summary

Dr. Ricardo Campos has been studying and working in the fields of Ocean Engineering, Physical Oceanography, and Meteorology for the last 18 years, more specifically with ocean waves. Numerical and statistical modeling of wind-generated ocean waves, extreme value analysis, machine learning, and satellite and buoy data processing form part of his main duties. Ricardo has integrated research and operational centers as well as metocean teams in Brazil, Portugal, the USA, and the UK. He is currently an Assistant Scientist at the Cooperative Institute For Marine And Atmospheric Studies (CIMAS, NOAA/AOML), with research activity listed below. He combines technical background from the industry sector with research experience from universities, as well as being part of international committees and development groups. His knowledge of numerical wave modeling, neural networks, and observations (buoys and satellites) are essential components for the development of a next-generation wave forecast system – his main research interest.

Education

- PostDoctoral, Atmospheric and Oceanic Science, AOSC - University of Maryland, USA, 2019.
- PhD, Naval Architecture and Marine Engineering, IST - University of Lisbon, Portugal, 2014.
- PhD, Ocean Engineering, COPPE - Federal University of Rio de Janeiro, Brazil, 2014.
- MSc, Ocean Engineering, COPPE - Federal University of Rio de Janeiro, Brazil, 2009.
- BSc, Meteorology, IAG - University of São Paulo, Brazil, 2006.

Contacts

- E-Mail: ricardo.campos@noaa.gov; Phone: +1(305)-2828720
- Address: 905 NW 110th Terrace, Plantation Fl, 33324

EXPERIENCE

Technical

- Assistant Scientist, CIMAS NOAA/AOML, Miami Florida, USA, Jul 2021 - present.
- Principal Investigator, CENTEC-IST / University of Lisbon, Portugal, Jan 2019 - Jul - 2021.
- Visiting Scientist (part of the Postdoc program), NCEP/NOAA, College Park MD USA, Jan 2017 - Jan 2019.
- Research Engineer, CENTEC-IST / University of Lisbon, Portugal, Jun 2015 - Jan 2017.
- Senior Metocean Engineer, DNV GL, London UK, Oct 2014 - Apr 2015.
- Visiting Scientist (part of the PhD program), NCEP/NOAA, College Park MD USA, Sep 2012 - Sep 2013.
- Meteorologist, Research Center PETROBRAS, Rio de Janeiro Brazil, Dec 2010 - Jul 2012.
- Research Engineer, CENTEC-IST / University of Lisbon, Portugal, Aug 2009 - Oct 2010.
- Meteorologist, Research Center PETROBRAS, Rio de Janeiro Brazil, Apr 2009 - Jul 2009.

Teaching experience and Pedagogical qualifications

- Visiting Professor, IST- University of Lisbon: Sep 2015 to Jan 2017; and Feb 2020 to Jul 2021.
  AWARDED AS DOCENTE EXCELENTE 2016/2017 FROM IST, UNIVERSITY OF LISBON.
  Please see certificate attached at the end of this file
  - 3 X MSc course "Modeling Sea Waves", IST - University of Lisbon. Semester course including: fluid mechanics, linear wave theory, wave generation and JONSWAP, waves in coastal waters, stochastic processes, wave spectra and probabilistic models, buoy dynamics, and renewable wave energy.
  - 2 X PhD course "Modelling and Analysis of Ocean Waves", IST - University of Lisbon. Semester course including: stochastic models of ocean waves, spectral analysis, probability distribution models of surface elevations and wave heights, short-term and long-term distributions, wave groups, joint distribution models, extreme wave statistics, abnormal waves, and physics of wave generation and propagation.

- First Workshop on Wave Modeling using WAVEWATCH III applied to operational forecasts. Centro de Hidrografia da Marinha (CHM - Brazilian Navy) in partnership with Rede de Modelagem e Observação Oceanográfica (REMO) and PETROBRAS, http://www.rederemo.org/. Niteroi RJ, Brazil, 2018. 3-days course (lectures in the morning and tutorials in the afternoon) entirely developed and taught by Dr. Campos.

- Lecturer at Waves Summer School (WAVEWATCH III v6.08), one week. Waves Group at NCEP/NOAA in partnership with the University System of Maryland Foundation. College Park MD, USA, 2019.
  http://polar.ncep.noaa.gov/waves/workshops/
  See the NOAA certificate letter attached at the end of this file

- Lecturer at Waves Summer School (WAVEWATCH III v5.16), one week. Waves Group at NCEP/NOAA in partnership with the University System of Maryland Foundation. College Park MD, USA, 2018.

- Lecturer at Waves Summer School (WAVEWATCH III v4.18), one week. Waves Group at NCEP/NOAA in partnership with the University System of Maryland Foundation. College Park MD, USA, 2017.

- Introduction to Python for Environmental Data Analysis, 2 days. CENTEC IST University of Lisbon, Portugal, 2016.

- Wave Modelling and Dynamics (WAVEWATCH III) and Cyclone Tracking Workshop, one week - Chulalongkorn University, Bangkok, Thailand, 2016.

- Wave Modelling and Dynamics Workshop (WAVEWATCH III), one week - Intituto Nacional de Pesquisas Espaciais INPE, Brazil, 2014.

- Wave Buoy Data Analysis - Ocean Engineering Program - COPPE - Federal University of Rio de Janeiro, 2012.

- Extreme Value Analysis based on Peaks Over Threshold (POT), one day - Research Center (CENPES) of PETROBRAS, 2009.

- 18 hours offered in the courses "Wave Mechanics I" and "Data analysis", Ocean Engineering Program - COPPE - Federal University of Rio de Janeiro, 2009, 2011 and 2012.

Academic Supervision

— PostDoctoral level: Carolina Barnez Gramcianinov - IST University of Lisbon, Feb 2019 - Jul 2021.
— PhD. level: Ronaldo Maia de Jesus Palmeira - IAG University of Sao Paulo, 2019 - Present.
— MSc. level: Mariana Costa - IST University of Lisbon, Aug 2020 - Jul 2021.
— BSc. level: Maria Inês Buco Cajada - IST University of Lisbon, 2019.

Member of examining board

— Aug 2020 - Student: Irwin Mosquera. PhD in Ocean Engineering / Federal University of Rio de Janeiro.
— Jun 2019 - Student: Fillipe Lourenço Soares. MSc in Naval Architecture and Marine Engineering / University of Lisbon.
— Jun 2009 - Student: Mariana Souza. BSc in Oceanography / State University of Rio de Janeiro.
— Feb 2011 - Student: Mariana Ximenes do Nascimento. BSc in Meteorology / Federal University of Rio de Janeiro.

SCIENTIFIC PUBLICATIONS

Peer-reviewed International Journals (most relevant)

▷ Campos, R.M., Bernardino, M., Gonçalves, M., Guedes Soares, C., 2022. ASSESSMENT OF METOCEAN FORECASTS FOR HURRICANE LORENZO IN THE AZORES ARCHIPELAGO. ***Ocean Engineering***, *243, 110292.*
https://doi.org/10.1016/j.oceaneng.2021.110292

▷ Campos, R.M., D'Agostini, A., França, B.R.L., Damião, A.L.A., Guedes Soares, C., 2022. IMPLEMENTATION OF A MULTI-GRID OPERATIONAL WAVE FORECAST IN THE SOUTH ATLANTIC OCEAN. ***Ocean Engineering***, *243, 110173.*
https://doi.org/10.1016/j.oceaneng.2021.110173

▷ Campos, R.M., Islam,H., Ferreira,T.R.S., Guedes Soares, C., 2021. IMPACT OF HEAVY BIOFOULING ON A NEARSHORE HEAVE-PITCH-ROLL WAVE BUOY PERFORMANCE. ***Applied Ocean Research***, *107, 102500*. https://doi.org/10.1016/j.apor.2020.102500

▷ Campos, R.M., Costa, M.C., Almeida, F., Guedes Soares, C., 2021. OPERATIONAL WAVE FORECAST SELECTION IN THE ATLANTIC OCEAN USING RANDOM FORESTS. ***Journal of Marine Science and Engineering***, *9(3), 298.*
https://doi.org/10.3390/jmse9030298

▷ Campos, R.M., D'Agostini, A., França, B., Cruz, L.M., Guedes Soares, C., 2021. EXTREME WIND AND WAVE PREDICTABILITY FROM OPERATIONAL FORECASTS AT THE DRAKE PASSAGE. ***Journal of Offshore Mechanics and Arctic Engineering***, 143(2): 021703. https://doi.org/10.1115/1.4048151

▷ Campos, R.M., Krasnopolsky, V., Alves, J.H.G.M, Penny, S.G., 2020. IMPROVING NCEP'S GLOBAL-SCALE WAVE ENSEMBLE AVERAGES USING NEURAL NETWORKS. ***Ocean Modelling***, 149, 101617. https://doi.org/10.1016/j.ocemod.2020.101617

▷ Campos, R.M., Alves, J.H.G.M., Penny, S.G., Krasnopolsky, V., 2020. GLOBAL ASSESSMENTS OF THE NCEP ENSEMBLE FORECAST SYSTEM USING ALTIMETER DATA. ***Ocean Dynamics***, 70, 405–419. https://doi.org/10.1007/s10236-019-01329-4

▷ Campos, R.M., Alves, J.H.G.M, Guedes Soares, C., Parente, C.E., Guimaraes, L.G., 2019. REGIONAL LONG-TERM EXTREME WAVE ANALYSIS USING HINDCAST DATA FROM THE SOUTH ATLANTIC OCEAN. ***Ocean Engineering***, 179, 202-212. https://doi.org/10.1016/j.oceaneng.2019.03.023

▷ Campos, R.M., Krasnopolsky, V., Alves, J.H.G.M, Penny, S.G., 2019. NONLINEAR WAVE ENSEMBLE AVERAGING IN THE GULF OF MEXICO USING NEURAL NETWORKS. *AMS -* ***Journal of Atmospheric and Oceanic Technology***, 36, 113-127. https://doi.org/10.1175/JTECH-D-18-0099.1

▷ Campos, R.M., Alves, J.H.G.M, Penny, S.G., Krasmopolsky, V., 2018. ASSESSMENTS OF SURFACE WINDS AND WAVES FROM NCEP ENSEMBLE FORECAST SYSTEM. *AMS -* ***Weather and Forecasting***, 33, 1533-1546. https://doi.org/10.1175/WAF-D-18-0086.1

▷ Campos, R.M., Alves, J.H.G.M, Guedes Soares, C., Guimaraes, L.G., Parente, C.E., 2018. EXTREME WIND-WAVE MODELING AND ANALYSIS IN THE SOUTH ATLANTIC OCEAN. ***Ocean Modelling***, 124, 75–93. https://doi.org/10.1016/j.ocemod.2018.02.002

▷ Campos, R.M., Guedes Soares, C., 2018. SPATIAL DISTRIBUTION OF OFFSHORE WIND STATISTICS ON THE COAST OF PORTUGAL USING REGIONAL FREQUENCY ANALYSIS. ***Renewable Energy***, 123, 806-816. https://doi.org/10.1016/j.renene.2018.02.051

▷ Campos, R.M., Guedes Soares, C., 2016. ASSESSMENT OF THREE WIND REANALYSES IN THE NORTH ATLANTIC OCEAN. ***Journal of Operational Oceanography***, 10, 30-44. http://dx.doi.org/10.1080/1755876X.2016.1253328

▷ Campos, R.M., Guedes Soares, C., 2016. COMPARISON AND ASSESSMENT OF THREE WAVE HINDCASTS IN THE NORTH ATLANTIC OCEAN. ***Journal of Operational Oceanography***, 9, 26-44. http://dx.doi.org/10.1080/1755876X.2016.1200249

▷ Campos, R.M., Guedes Soares, C., 2016. COMPARISONS OF HIPOCAS AND ERA WIND AND WAVE REANALYSES IN THE NORTH ATLANTIC OCEAN. ***Ocean Engineering***, 112, 320–334. http://dx.doi.org/10.1016/j.oceaneng.2015.12.028

▷ Campos, R.M., Camargo, R., HARARI, Joseph, 2010. CHARACTERIZATION OF EXTREME SEA LEVEL EVENTS IN SANTOS AND THEIR CORRESPONDENCE WITH THE NCEP MODEL REANALYSIS IN THE SOUTHWEST OF THE SOUTH ATLANTIC OCEAN. ***Revista Brasileira de Meteorologia***. v 25, n.2, 175-184. http://dx.doi.org/10.1590/S0102-77862010000200003

▷ Kaiser, J., Nogueira, I.C.M., Campos, R.M., Parente, C.E., Martins, R.P., Belo, W.C., 2022. EVALUATION OF WAVE MODEL PERFORMANCE IN THE SOUTH ATLANTIC OCEAN: A STUDY ABOUT PHYSICAL PARAMETERIZATION AND WIND FORCING CALIBRATION. ***Journal of Ocean Dynamics***, *72, 137–150, https://doi.org/10.1007/s10236-021-01495-4*

▷ Gramcianinov, C.B., Campos, R.M., Camardo, R., Guedes Soares, C., 2021. RELATION BETWEEN CYCLONE EVOLUTION AND FETCH ASSOCIATED WITH EXTREME WAVE EVENTS IN THE SOUTH ATLANTIC OCEAN. ***Journal of Offshore Mechanics and Arctic Engineering***, *143(6): 061202, https://doi.org/10.1115/1.4051038.*

▷ Gramcianinov, C.B., Campos, R.M., Camardo, R., Hodges, K.I., Guedes Soares, C., Silva Dias, P.L., 2020. ANALYSIS OF ATLANTIC EXTRATROPICAL STORM TRACKS CHARACTERISTICS IN 41 YEARS OF ERA5 AND CFSR/CFSv2 DATABASES. **Ocean Engineering**, 216, 108111. https://doi.org/10.1016/j.oceaneng.2020.108111

▷ Gramcianinov, C.B., Campos, R.M., Guedes Soares, C., Camardo, R., 2020. EXTREME WAVES GENERATED BY CYCLONIC WINDS IN THE WESTERN PORTION OF THE SOUTH ATLANTIC OCEAN. **Ocean Engineering**, 213, 107745. https://doi.org/10.1016/j.oceaneng.2020.107745

Thesis and Dissertation

▷ Campos, R.M., 2014. SPATIAL EXTREME WAVE ANALYSIS USING NUMERICAL MODELING. PhD Thesis, co-tutorship: IST University of Lisbon (Portugal) and COPPE Federal University of Rio de Janeiro (Brazil).

▷ Campos, R.M., 2009. ANÁLISE DOS EXTREMOS DE ONDA NO RIO DE JANEIRO ASSOCIADOS A CICLONES EXTRATROPICAIS NO ATLÂNTICO SUL. MSc Thesis, COPPE/UFRJ, Rio de Janeiro, RJ, Brazil.

Book Chapters, Technical Notes, and Expanded abstracts at International Conferences (most relevant)

▷ ISSC. 2018. Proceedings of 20th International Ship and Offshore Structures Congress; IOS Press BV. Edited by Mirek Kaminski and Philippe Rigo. ISBN 978-1-61499-862-4 (online), Library of Congress Control Number: 2018945814. Committee I.1 Environment Report: Thomas Fu, Alexander Babanin, Abderrahim Bentamy, Ricardo Campos, Sheng Dong, Odin Gramstad, Geert Kapsenberg, Wengang Mao, Ryuji Miyake, Alan John Murphy, Fredhi Prasetyo, Wei Qiu, and Luis Sagrillo.

— Campos, R.M., Guedes Soares, C., 2020. ASSESSMENT AND DISCUSSION OF HURRICANE LORENZO METOCEAN FORECAST. 5th International Conference on Maritime Technology and Engineering, MARTECH, 16-19 November 2020, Lisbon, Portugal.

— Gramcianinov, C.B., Campos, R.M., Camardo, R., Guedes Soares, C., 2020. DISTRIBUTION AND CHARACTERISTICS OF EXTREME WAVES GENERATED BY EXTRATROPICAL CYCLONES IN THE NORTH ATLANTIC OCEAN. 5th International Conference on Maritime Technology and Engineering, MARTECH, 16-19 November 2020, Lisbon, Portugal.

— Campos, R.M., Guedes Soares, C., 2019. GLOBAL ASSESSMENTS OF SURFACE WINDS AND WAVES FROM AN ENSEMBLE FORECAST SYSTEM USING SATELLITE DATA. *Proceedings of the 38th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2019-96627. June 9-14, 2016, Glasgow, Scotland, UK. https://doi.org/10.1115/OMAE2019-96627

— Campos, R.M., D'Agostini, A., Cruz, L.M., França, B., Guedes Soares, C., 2019. EXTREME WIND AND WAVE PREDICTABILITY FROM OPERATIONAL FORECASTS AT THE DRAKE PASSAGE. *Proceedings of the 38th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2019-96626. June 9-14, 2016, Glasgow, Scotland, UK. https://doi.org/10.1115/OMAE2019-96626

— Campos, R.M., Krasnopolsky, V., Alves, J.H.G.M, Penny, S.G., 2017. IMPROVING NCEP'S PROBABILISTIC WAVE HEIGHT FORECASTS USING NEURAL NETWORKS: A PILOT STUDY USING BUOY DATA. National Oceanic and Atmospheric Administration, Office Note 490, http://doi.org/10.7289/V5/ON-NCEP-490

— Gramcianinov, C.B., Campos, R.M., Camardo, R., Guedes Soares, C., 2020. EXTRATROPICAL CYCLONES ASSOCIATED WITH EXTREME WAVES IN THE ATLANTIC OCEAN IN ERA5 AND CFSR/CFSv2. *Proceedings of the 39th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2020, 3 - 7 August, 2020, Fort Lauderdale, USA.

— Gramcianinov, C.B., Campos, R.M., Camardo, R., Guedes Soares, C., 2020. RELATION BETWEEN CYCLONE EVOLUTION AND FETCH ASSOCIATED WITH EXTREME WAVE EVENTS IN THE SOUTH ATLANTIC OCEAN. *Proceedings of the 39th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2020, 3 - 7 August, 2020, Fort Lauderdale, USA.

— Islam,H., Campos, R.M., Ferreira,T.R.S., Guedes Soares, C., 2020. HYDRODYNAMIC ASSESSMENT OF A BIOFOULED WAVE BUOY IN COASTAL ZONE. *Proceedings of the 39th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2020, 3 - 7 August, 2020, Fort Lauderdale, USA.

— Alves, J.H.G.M., Campos, R.M., Guedes Soares, C., Parente, C.E, 2017. IMPROVING SURFACE WIND DATABASES FOR EXTREME WIND-WAVE SIMULATION AND ANALYSIS IN THE SOUTH ATLANTIC OCEAN. National Oceanic and Atmospheric Administration, Office Note 491, http://doi.org/10.7289/V5/ON-NCEP-491

— Campos, R.M., Guedes Soares, C, 2016. A HYBRID MODEL TO FORECAST SIGNIFICANT WAVE HEIGHTS. In: Guedes Soares, C., Garbatov, Y., Sutulo, S., Santos, T.A. (Eds.), *Maritime Technology and Engineering*. Taylor and Francis Group, CRC Press, London, pp. 473–479, ISBN 978-1-138-03000-8, DOI: 10.1201/b21890-138. http://www.crcnetbase.com/doi/pdfplus/10.1201/b21890-138

— Campos, R.M., Guedes Soares, C., 2016. ESTIMATING EXTREME WAVES IN BRAZIL USING REGIONAL FREQUENCY ANALYSIS. *Proceedings of the 35th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2016-54461. June 19-24, 2016, Busan, South Korea. doi:10.1115/OMAE2016-54461

— Campos, R.M., Guedes Soares, C., 2016. REGIONAL FREQUENCY ANALYSIS OF WIND SPEED ON THE COAST OF PORTUGAL. *RENEW-2016: 2nd International Conference on Renewable Energies Offshore*. 24 - 26 October 2016, Lisbon, Portugal.

— Campos, R.M., Alves, J.H.G.M, Parente, C.E., 2013. Modelagem de Ondas Extremas no Oceano Atlântico Sul. *X OMAR-SAT*. Oct 15-18, 2013, Arraial do Cabo, Brazil.
→Awarded the "Prize Almirante Franco"

— Campos, R.M., Parente, C.E., CAMARGO, Ricardo de, 2012. Extrem Wave Analysis in Campos Basin (Rio de Janeiro - Brazil) associated with Extra-Tropical Cyclones and Anticyclones.*Proceedings of the 31st International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2012-83117. June 10-15, 2012, Rio de Janeiro, Brazil. doi:10.1115/OMAE2012-83117

— Campos, R.M., Guedes Soares, C., 2012. Comparison of two wind and wave data sets from the North Atlantic. In: *Maritime Technology and Engineering*. Taylor and Francis Group, London, p. 473-479.

— Bento, A.R., Goncalves, M., Campos, R.M., Guedes Soares, C., 2016. Comparison Between Two Forecast Systems Implemented With WAM and WAVEWATCH 3 for the North Atlantic. *Proceedings of the 35th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2016-54464. June 19-24, 2016, Busan, South Korea. doi:10.1115/OMAE2016-54464

— Pereira, H.P.P., Parente, C.E., Nascimento, F., Moraes, L. F., Campos, R.M., 2014. Improvement of Directional Wave Information and Quality Control Before Real-Time Telemetry of Heave-Pitch-Roll Metocean Buoys. *In: IEEE OCEANS 2014*, St. Johns. N.L., Canada.

— Bento, A.R., Martinho, P., Campos, R.M., Guedes Soares, C., 2011. Modelling Wave Energy Resources in the Irish West Coast. *Proceedings of the 30th International Conference on Ocean, Offshore and Arctic Engineering* - OMAE2011-50346, June 19-24, 2011, Rotterdam, Netherlands. DOI: 10.1115/OMAE2011-50346

Reviewer for:

Journal of Ocean Modelling; Journal of Ocean Dynamics; Journal of Ocean Engineering; Journal of Marine Science and Engineering; Journal of Operational Oceanography; Journal of Marine Science and Application; Journal of Applied Meteorology and Climatology; Natural hazards; ToMS; International Conference on Ocean, Offshore and Arctic Engineering; International Conference on Maritime Technology and Engineering; Maritime Technology and Engineering.

Recent conferences attended (most relevant)

— 11/2019, "2nd International Workshop on Waves, Storm Surges and Coastal Hazards", Melbourne / Australia
https://conference.eng.unimelb.edu.au/waves/
Oral Presentation: Assessment and Calibration of an Operational Wave Forecast for the Brazilian Coast.
Poster Presentation: Nonlinear Wave Ensemble Averaging using Neural Networks.

— 06/2019, "38th International Conference on Ocean, Offshore and Arctic Engineering", Glasgow / Scotland
https://event.asme.org/OMAE2019
Oral Presentation: Global Assessments of Surface Winds and Waves from an Ensemble Forecast System using satellite data.
Oral Presentation: Extreme Wind and Wave Predictability from Operational Forecasts at the Drake Passage.

— 04/2019, "1st NOAA Workshop on Leveraging AI in the Exploitation of Satellite Earth Observations & Numerical Weather Prediction", Maryland / USA
https://www.star.nesdis.noaa.gov/star/meeting_2019AIWorkshop.php
Oral Presentation: Nonlinear Wave Ensemble Averaging using Neural Networks.

— 11/2018, "NASA Goddard Workshop on Artificial Intelligence", Maryland / USA
https://asd.gsfc.nasa.gov/conferences/ai/
Poster Presentation: Nonlinear Wave Ensemble Averaging using Neural Networks.

— 09/2018, "American Meteorological Society Sectional Meeting Program", Delaware / USA
http://www.ams.org/meetings/sectional/2256_program.html
Oral Presentation: Nonlinear Wave Ensemble Averaging using Neural Networks.

— 06/2018, "10th International Workshop on Modeling the Ocean - IWMO2018", Santos / Brazil
https://ricamarg.wixsite.com/iwmo2018-santos
Oral Presentation: Nonlinear Wave Ensemble Averaging using Neural Networks.

– 06/2016, "35th International Conference on Ocean, Offshore and Arctic Engineering", Busan / Korea
https://www.asme.org/wwwasmeorg/media/resourcefiles/events/omae/programataglance2016.pdf
Oral Presentation: Estimating Extreme Waves in Brazil Using Regional Frequency Analysis.

– 07/2016, "3rd International Conference on Maritime Technology and Engineering", Lisbon / Portugal
http://www.centec.tecnico.ulisboa.pt/martech2016/
Oral Presentation: A hybrid model to forecast significant wave heights.

– 05/2016, "23rd WISE Meeting - Waves In Shallow Water Environment", Venice / Italy
http://www.ismar.cnr.it/events-and-news/events/international-conferences/wise-meeting-2016-cnr-ismar-venice-may-22-26-2016
Poster Presentation: Impact of Different Wind Fields and Wave Model Parametrizations on Extreme Events of Wave Height in Southern Brazil.

Research Projects Awarded, coordinated as Principal Investigator (PI)
Projects and proposals were idealized, written, and submitted by Ricardo Campos.

- Nov 2018 - Jul 2021. Portugal 2020 - EXWAV. (RD0504) - PTDC/EAM-OCE/31325/2017 , €239.660,62
  "Extreme wind and wave modeling and statistics in the Atlantic Ocean"
  http://www.centec.tecnico.ulisboa.pt/en/centec/projects.aspx?id=1&projectid=168

  Fundação para a Ciência e a Tecnologia (FCT, Portugal) &
  Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP, Brazil)

  AUTHORS: DR. RICARDO M. CAMPOS (PI) & PROF. CARLOS GUEDES SOARES (CO-PI).
  Dr. Mariana Bernardino, Dr. Claudia Lucas, Dr. Carolina Barnez, Prof. Ricardo de Camargo, and Prof. Pedro Dias.
  - Instituto Superior Técnico (CENTEC/IST) of University of Lisbon.
  - Instituto de Astronomia, Geofísica e Ciências Atmosféricas (IAG) of University of São Paulo.

- Jan 2020 - Dec 2021. Atlantic Interactions - WAVEFAI , €299.391,03
  "Operational Wave Forecast using Artificial Intelligence"
  http://www.atlanticinteractions.org/
  Fundação para a Ciência e a Tecnologia (FCT, Portugal):
  R&D Projects on the Occasion of the Celebrations of the V Centenary of the Circumnavigation Voyage.
  https://www.fct.pt/apoios/projectos/concursos/circumnavegacao/index.phtml.en

  AUTHORS: DR. RICARDO M. CAMPOS (CO-PI) & PROF. CARLOS GUEDES SOARES (PI).
  Dr. Mariana Bernardino, Dr. Jose Henrique Alves, Dr. Vladimir Krasnopolsky, Prof. Ricardo de Camargo, and Ronaldo Palmeira.
  - Instituto Superior Técnico (CENTEC/IST) of University of Lisbon. In partnership with:
  - National Centers for Environmental Prediction (NCEP/NOAA).
  - Instituto de Astronomia, Geofísica e Ciências Atmosféricas (IAG) of University of São Paulo.

International Collaboration and Research Groups

Member of the Waves Modelling team at NCEP/NOAA; *See the NOAA certificate letter attached at the end of this file*

Member of International Ship and Offshore Structures Congress - Technical Committee I.1, Environment.

Member of Oceanographic Observation and Modeling Network (REMO), coordinated by the Brazilian Navy and PETRO-BRAS https://www.rederemo.org/

- Aug 2018 - Jul 2020. CHM/Brazilian Navy & Rede de Modelagem e Observação Oceanográfica (REMO).
  "Atualização da Previsão de Ondas do CHM-Marinha do Brasil e Rede REMO".
  Operational Wind and Wave forecast system using WAVEWATCH III
  AUTHOR: DR. RICARDO M. CAMPOS.
  Dr. Renato Parkinson, Com. Leandro Machado, Ten Andressa Dagostini, Dr. Bruna Reis.

- Dec 2015. Thailand Government (led by Dr Henrique Alves from NCEP/NOAA). Implementation of an Operational Wave Forecast and Cyclone Tracking System for the Marine Meteorological Center, Thai Meteorological Department.

  The forecast system implemented gave support during the alert of Storm Pabuk (04/01/2019) and led to evacuation of 6100 people in Thailand.
  https://www.theguardian.com/world/2019/jan/04/thailand-braces-amid-fears-tropical-storm-pabuk-could-be-worst-in-a-generation

Honors and Awards

- **2017, DOCENTE EXCELENTE** "MODELING OF THE MARINE ENVIRONMENT" (MAM) 2016-2017, Instituto Superior Técnico - Universidade de Lisboa, Portugal. *Please see certificate attached at the end of this file*
- 2013, Prêmio Almirante Franco, X OMAR-SAT 2013. IEAPM, Marinha do Brasil.
- 2006, Best Junior Poster of Ocean-atmosphere Interaction, XIV Congresso Brasileiro de Meteorologia.

Languages

- English - Fluent (PEARSON PTE CERTIFICATE)
- Portuguese - Mother tongue

Additional Expertise and Outreach Activities:

- Programming: Python, Matlab, Shell script, Fortran, and Grads;
- processing large amounts of data in Linux/Unix shell environments;
- operational wave forecast systems;
- extreme value analysis and statistical modelling;
- satellite data processing, including altimeters and scatterometers;
- wave buoy data processing and spectral analysis;
- storm surge and sea level analysis;

Online Information

ORCID: https://orcid.org/0000-0002-9268-3552

https://scholar.google.com/citations?user=b25KlbUAAAAJ&hl=en&oi=sra

References

Dr. Avichal Mehra - Environmental Modeling Center, NCEP/NOAA
avichal.mehra@noaa.gov

Dr. Darin Figurskey - Operations Branch Chief at NOAA's National Weather Service
darin.figurskey@noaa.gov

Dr. Henrique Alves - Weather Program Office, NOAA Research (WPO/OAR)
henrique.alves@noaa.govdarin.figurskey@noaa.gov

Dr. Vladimir Krasnoposlky - Environmental Modeling Center, NCEP/NOAA
vladimir.krasnopolsky@noaa.gov

Ricardo Martins Campos
Miami Florida, USA - January 2022