

CURRICULUM VITAE

PERSONAL INFORMATION

Name : Rodrigo Vicente Campos Caba
Identity number : 16.970.505-4
Birth date : June 10th, 1988
Nationality : Chilean
City of birth : Quilpué
Profession : Ocean engineer
Language : Spanish. Communicative ability in English, no certified
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I. EDUCATIONAL & TRAINING

2022 (ongoing) **ALMA MATER STUDIORUM UNIVERSITY OF BOLOGNA, BOLOGNA, ITALY**
PhD student in the Department of Physics and Astronomy and Research Center for Environmental Sciences (CIRSA).

- Programme: Future Earth, Climate Change and Societal Challenges
- Thesis title: ML-based framework for met-ocean coastal downscaling.

2020 **UNIVERSITY OF CANTABRIA, SANTANDER, SPAIN**
Master's degree in Coasts and Ports, Specialty of coastal dynamics.

2016 **UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE**
Ocean engineer.

II. ACADEMIC EXPERIENCE

2021 **UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE**
Academic of Coastal Geology course.

2021 **PONTIFICAL CATHOLIC UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE**
Academic of Ocean Engineering course.

2015 **UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE**
Coastal Engineering and Hydraulic Modeling courses tutor.

III. WORK EXPERIENCE

2020 - 2021

UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE

Professional in charge of the Coastal Processes Laboratory

- Physical modeling: analysis of runup on beaches and overtopping on coastal protection structure due to wave action, tracer dispersion analysis by simulation of currents.
- Numerical wave modeling for analysis of overtopping in coastal protection structure using the CFD model IH2VOF.
- Coordinator of scientific and academic activities in the laboratory.
- Maintenance and verification of the correct operation of the equipment, within which are the precision rails of the wave generator, acoustic doppler velocimeter, laser distance meter, among others.

2017-2019

SKYRING MARINE SPA., VIÑA DEL MAR, CHILE

Works and process engineer

- Field measurements of hydrographic, oceanographic and topographic conditions along the coast in Chile. It mainly includes single and multibeam bathymetries, side scan sonar, waves and currents measured by ADCP, sea level records, wind stations and topographic surveys.
- Processing of measured data in the field and subsequent preparation of technical reports, for clients both in the public and private sectors.
- Wave studies applying the SWAN (Sea WAVes Nearshore) numerical model.
- Support in underwater inspections with ROV (Remote Operated Vehicle).
- Minor ship skipper (valid license).

2016 – 2017

UNIVERSITY OF VALPARAISO, VALPARAISO, CHILE

Trainee engineer

- Responsible for numerical wave modeling with SWAN model and processing of results, for a research project "Evaluation of energy resources by waves on Easter Island and Robinson Crusoe Island", developed for Fundación Chile.
- Analysis of extreme wave conditions in Chile, applying SWAN model and records of historical damage by storm waves.

2014

REGIONAL DEPARTMENT OF PORT WORKS, CONCEPCION, CHILE

Practicing engineer

Development of a technical and economic proposal for the expansion of the maritime breakwater of the Tirúa River, Biobío Region.

IV. PARTICIPATION IN SCIENTIFIC PUBLICATIONS

- 2022 Araya, K., Munoz, M., Dezileau, L., Maldonado, A., **Campos-Caba, R.**, Rebolledo, L., Cardenas, P. & Salamanca, M. *Extreme sea surges, tsunamis and pluvial flooding events during the last ~1000 years in the semi-arid wetland, Coquimbo, Chile*. *Geosciences*, 12(3), 135.
- 2017 Winckler, P., Contreras-López, M., **Campos-Caba, R.**, Beyá, J. & Molina, M. *El temporal del 8 de agosto de 2015 en las regiones de Valparaíso y Coquimbo, Chile Central*. *Lat. Am. J. Aquat. Res.*, 45(4): 622-648, 2017.

V. WORKS IN CONGRESSES AND SEMINARS

- 2017 Ibaceta, R., Díaz, H., Winckler, P., Catalán, P., Agredano, R., Molteni, F. y **Campos-Caba, R.** *Evolución morfológica de playas en la escala de tormentas. Aplicación del modelo XBeach en la playa de Reñaca*. XXIII Chilean Congress of Hydraulic Engineering (SOCHID). Valparaiso, Chile.
- 2017 **Campos-Caba, R.** *Análisis de marejadas históricas y recientes en las costas de Chile*. Completion seminar research project "An Atlas of Waves for Chile" (Conicyt/Fondef-IDeA IT13120006). Valparaiso, Chile.
- 2016 **Campos-Caba, R.**, Beyá, J. y Molina, M. *Propuesta de escala de intensidad de daños de marejadas*. VII International Seminar on Port Engineering and Operation. San Antonio, Chile.
- 2016 Molina, M., **Campos-Caba, R.**, Winckler, P. y Beyá, J. *Assessment of wave energy resource in Easter Island and Robinson Crusoe Island*. Second workshop on wave and tidal energy, Valdivia, Chile.
- 2015 **Campos-Caba, R.**, Beyá, J. y Mena, M. (2015). *Cuantificación de los daños históricos por marejadas en las costas de Chile*. XXII Chilean Congress of Hydraulic Engineering (SOCHID). Santiago, Chile.
- 2015 Molina, M., **Campos-Caba, R.**, Manosalva, D., Becerra, D. y Gálvez, B. (2015). *Efectos de las marejadas del 6 y 8 de agosto de 2015 en 3 playas de la bahía de Valparaíso*. XXII Chilean Congress of Hydraulic Engineering (SOCHID). Santiago, Chile.

VI. RECOGNITIONS

- 2019 **CAROLINA FOUNDATION, SPAIN**
Scholarship to study in the Master of Coasts and Ports at the University of Cantabria, Spain.
- 2017 **UNIVERSITY OF VALPARAISO, CHILE**
Outstanding academic career. Degree ceremony Faculty of Engineering, Valparaiso, Chile.
- 2015 **UNIVERSITY OF VALPARAISO, CHILE**
Best student at the Ocean Engineering School in the first semester of 2014. Valparaiso, Chile.

VII. COMPUTATIONAL SKILLS

PROGRAMMING

- MatLAB

WAVE AND CURRENT MODELING

- Sea WAVes Nearshore (SWAN)
- IH2VOF
- Coastal Modeling System IHCantabria

PROCESSING OF HYDROGRAPHIC AND TOPOGRAPHIC INFORMATION

- AutoCAD
- Global Mapper
- Surfer
- Hypack
- PDS2000

VIII. REFERENCES

PATRICIO WINCKLER, PhD. In Civil Engineering, MSc.

Academic and researcher

Ocean Engineering School, University of Valparaiso

Marine Observation Center for studies of Risks of the Coastal Environment (COSTAR)

National Research Center for Integrated Management of Natural Disasters (CIGIDEN).

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