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## CURRICULUM VITAE

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### 1. ACADEMIC DEVELOPMENT

<b>STUDIES</b>			
<b>Degree</b>	<b>Bachelor</b>	<b>Master</b>	<b>PhD</b>
<b>Title</b>	Civil Engineering	Hydraulic Engineering	Civil Engineering
<b>Speciality</b>	Hydraulics	Coastal Engineering	Coastal and Maritime Engineering
<b>University or Institute</b>	Engineering Faculty, UNAM [1] Mexico City, Mexico	IHE [2], Delft, The Netherlands	ETS ICCP [3], University of Cantabria, Santander, Spain
<b>Duration</b>	November 1985 - September 1990	October 1992 - May 1994	October 1995 – June 1999
<b>Thesis</b>	Calibration of the Numerical Model for Analysis and Design of Water Network Systems	Design of Rock Cover for Underwater Pipelines	Tidal Propagation in Shallow Estuaries
<b>Supervisors</b>	Dr. Rafael Carmona Paredes	Prof. Dr. Ir. E.W. Bijker Dr. Ir. J. van der Meer Ir. Wim Klomp Ir. H.J. Verhagen	Prof. Raul Medina Prof. Iñigo J. Losada
<b>Examination date</b>	February 8 <sup>th</sup> , 1991	May 25 <sup>th</sup> , 1994	June 4 <sup>th</sup> , 1999
<b>Distinctions</b>	<ul style="list-style-type: none"> <li>• Average: 9.92 over 10</li> <li>• ‘Gabino Barreda’ Medal for the best career average</li> <li>• Honoric Mention to the Professional Examination sustained.</li> </ul>	<ul style="list-style-type: none"> <li>• Master of Sciences Degree with Distinction</li> <li>• Hydraulic Engineering Diploma with Distinction</li> </ul>	<ul style="list-style-type: none"> <li>• Mark: Outstanding <i>cum laude</i></li> </ul>

- [1] UNAM National Autonomous University of Mexico  
 [2] IHE International Institute for Infrastructural, Hydraulic and Environmental Engineering  
 [3] ETS ICCP Civil Engineering Faculty  
 [4] IMTA Mexican Institute for Water Technology  
 [5] GIOC Coastal & Ocean Research Group  
 [6] CHC-NRC Canadian Hydraulics Centre, National Research Council of Canada  
 [7] IH Cantabria Environmental Hydraulics Institute of Cantabria, Spain  
 [8] CCOB Cantabria Coastal and Ocean Basin, Spain  
 [9] HWRL O.H. Hinsdale Wave Research Laboratory  
 [10] OSU Oregon State University

<b>SPECIALIZATION COURSES</b>		
<b>Course</b>	<b>Institute</b>	<b>Dates</b>
Computing and Programming BASIC	Iberoamerican University, Mexico	August - October 1985
Basic German	Foreign Languages Teaching Centre, UNAM [1], Mexico	November 1987 - April 1988
Fluid Mechanics	Postgraduate Studies Division, Engineering Faculty, UNAM [1], Mexico	May - October 1991
Transit Phenomena (Water Hammer)	Engineering Faculty, UNAM [1], Mexico	October - November 1991
Programming and Use of the PHOENICS System	Federal Power Commission, Mexico	July 1992
International Course in Hydraulic Engineering, Branch Coastal Eng.	IHE [2], Delft, The Netherlands	October 1992 - September 1993
The International Dredging Seminar	IHE [2] and The International Association of Dredging Companies, Delft, The Netherlands	March 1993
OSF/1 (Open Software Foundation) System Administration	Digital Equipment, Mexico	May 1995
Advanced Study Course on hydro- and morphodynamic processes in coastal seas	EC MAST Programme Renesse, The Netherlands	July 1998
FLUENT and GAMBIT basic training course	Fluent.Inc Training Team Bilbao, Spain	March 2003
Qualisys System training course	IH Cantabria [7], Spain	January 2011
FARO Laser Scanner and FARO Scene training course	IH Cantabria [7], Spain	December 2011
Geomagic training course	IH Cantabria [7], Spain	March 2012

<b>SEMINARS and WORKSHOPS</b>		
<b>Seminar</b>	<b>Institute</b>	<b>Dates</b>
Short Seminar on Beach Nourishment	ETS ICCP [3], Santander, Spain By Ir. Ronald de Heer (IHE-Delft)	September 1996
Atmospheric Long Waves	ETS ICCP [3], Santander, Spain By Sebastiá Monserrat (Universidad de las Islas Baleares)	June 1997
Rip Currents and Nearshore Evolution	ETS ICCP [3], Santander, Spain By M.C. Haller (University of Delaware)	June 1997
Nonlinear Evolution of Shear Instabilities of the Longshore Current	ETS ICCP [3], Santander, Spain By Tuba Özkan-Haller (University of Delaware)	June 1997
Short Seminar on Non-Linear Waves	ETS ICCP [3], Santander, Spain By Prof. Philip L.-F. Liu (Cornell University)	June 1997
Low Frequency Motions in the Surf Zone	ETS ICCP [3], Santander, Spain By Tuba Özkan-Haller (University of Delaware)	June 1997
Short seminar on Shoreline protection and morphologic processes	ETS ICCP [3], Santander, Spain Prof. Per Bruun	September 1998
The typical <i>Galerna</i> of the Cantabrian Sea	ETS ICCP [3], Santander, Spain By Eduardo Arasti Barca (Centro Meteorológico Territorial de Cantabria y Asturias)	1999
Hydrodynamics in the Swash Zone	ETS ICCP [3], Santander, Spain By Dr. Sandro Longo (Parma University, Italy)	2000
Waves in Channels	ETS ICCP [3], Santander, Spain By Prof. Robert A. Dalrymple (University of Delaware)	May 2000
Instabilities in Nearshore Flows	ETS ICCP [3], Santander, Spain By Prof. Robert A. Dalrymple (University of Delaware)	May 2000

<b>SEMINARS and WORKSHOPS (Cont)</b>		
<b>Seminar</b>	<b>Institute</b>	<b>Dates</b>
Advances in Boussinesq Wave Theory for Application	ETS ICCP [3], Santander, Spain By Prof. Robert A. Dalrymple (University of Delaware)	May 2000
Wave Propagation and Sediment Transport in Coastal Zone	ETS ICCP [3], Santander, Spain By Prof. Philip L.-F. Liu (Cornell University)	January 2001
The American Society of Civil Engineers (ASCE)	ETS ICCP [3], Santander, Spain By Prof. Nobuhisa Kobayashi (University of Delaware)	May 2001
Rapidly Installable Breakwaters	ETS ICCP [3], Santander, Spain By Prof. Nobuhisa Kobayashi (University of Delaware)	May 2001
Prediction Damages to Shorelines and Coastal Structures	ETS ICCP [3], Santander, Spain By Prof. Nobuhisa Kobayashi (University of Delaware)	May 2001
Clear Lake and Lake Tahoe: The sub-surface weather	ETS ICCP [3], Santander, Spain By Dr. Francisco Rueda-Valdivia (University of California, Davis)	July 2001
Statically Stable Berm Breakwaters	ETS ICCP [3], Santander, Spain By Sigurdur Sigurdarson (Reykjavik, Iceland, Port Authority)	June 2002
Tidal Velocity Asymmetry and Sediment Transport	ETS ICCP [3], Santander, Spain By J. van de Kreeke (Rosenstiel School of Marine and Atmospheric Science, University of Miami)	June 2002
Numerical methods for mathematical models in fluid-solid interactions	ETS ICCP [3], Santander, Spain By Carlos Conca (Universidad de Chile)	February 2003
Fixed-structure wave power plants. A review. R&D requirements	ETS ICCP [3], Santander, Spain By Antonio Falção (Instituto Superior Técnico de Lisboa)	March 2003
Evidence for increasing winter cyclone activity over the North Pacific –1948/49 –1997/98	ETS ICCP [3], Santander, Spain Nick Graham (Scripps Institute, University of California)	April 2003
Changes in winter wave climate over the Eastern North Pacific: Results from a 50-year hindcast with the WAVEWATCH-III Model	ETS ICCP [3], Santander, Spain By Nick Graham (Scripps Institute, University of California)	April 2003
Quantitative imaging techniques and their applications in environmental fluid mechanics	ETS ICCP [3], Santander, Spain By Prof. Edwin A. Cowen (Cornell University)	June 2003
Regional wave modelling	ETS ICCP [3], Santander, Spain By Nick Graham (Scripps Institute, University of California)	October 2003
Numerical model for sail analysis	ETS ICCP [3], Santander, Spain By Pablo Pérez del Castillo	January 2004
GENESIS/T Formulation of upgrades	ETS ICCP [3], Santander, España Hans Hanson (University of Lund)	June, 2004
The Prestige disaster	ETS ICCP [3], Santander, Spain By Michel Girin (CEDRE, IFREMER)	March 2005
The use of sand by-passing systems in the management of a urban beach: The case of CapeBreton (France)	ETS ICCP [3], Santander, Spain By Vincent Mazeiraud (SOGREAH)	March 2005
Restoring the maritime character of Mont Saint-Michel	ETS ICCP [3], Santander, Spain By Luc Hamm (SOGREAH)	March 2005
Workplace Hazardous Materials Information System	National Research Council, Ottawa, Canada By Ron Maisonneuve	December 2005

<b>SEMINARS and WORKSHOPS (Cont)</b>		
<b>Seminar</b>	<b>Institute</b>	<b>Dates</b>
Flickering techniques to assess damage on coastal structures	CHC-NRC [6], Ottawa, Canada By Kishan Tulsi (CSIR, South Africa)	April 2006
Davis and PIV Seminar	DLR, Goettingen, Germany Organised by LaVision, GmbH	November 2008
Simulation & Large-Scale Testing of Nearshore Wave Dynamics	O.H. Hinsdale Wave Research Laboratory, Oregon State University, USA	July 2009
Experimental Testing for Wave Energy Utilisation	Aalborg University, Denmark By Jens Peter Kofoed and Peter Frigaard	August 2009
Tsunamis: generation, propagation, and effects on coastlines and infrastructure	ETS ICCP [3], Santander, Spain By Ioan Nistor (University of Ottawa)	May 2010
UJNR-PEER Tsunami Modelling Workshop	Oregon State University	December 2014

<b>STAYS AND SHORT VISITS</b>		
<b>Visit</b>	<b>Institute</b>	<b>Dates</b>
Wave-structure Interaction Models (VOF Model)	Cornell University, USA	April and May 1999
Installing and testing of laboratory pressure gauges for submarine pipelines	National Civil Engineering Laboratory (LNEC), Lisboa, Portugal	February 2002
Implementation of the Coastal Modelling System (SMC) to Mexico: The Juluapan Inlet Project	Centro Universitario de Investigaciones Oceanológicas, Universidad de Colima, Campus El Ejido, Manzanillo, México	August 2003 to August 2004
Numerical modelling and analysis of flow measurements around and inside submerged rubble-mounds protecting submarine pipelines	National Civil Engineering Laboratory (LNEC), Lisboa, Portugal	September to December 2004
Simulation & Large-Scale Testing of Nearshore Wave Dynamics	O.H. Hinsdale Wave Research Laboratory, Oregon State University, USA	July 2009

<b>FOREIGN LANGUAGES KNOWLEDGE</b>				
	<b>English</b>	<b>Portuguese</b>	<b>German</b>	<b>Dutch</b>
Read:	99 %	50 %	2 %	2 %
Speaks:	99 %	20 %	2 %	2 %
Writes:	99 %	5 %	2 %	2 %

## 2. PROFESSIONAL EXPERIENCE

<b>EMPLOYMENTS &amp; POSTS</b>			
<b>Post</b>	<b>Company or Institute</b>	<b>Duration and Dates</b>	<b>Projects</b>
Assistant Researcher	Structures and Materials Department, Engineering Institute, UNAM [1]	Sept. 1988 - July 1989	Study of the seismic behaviour of masonry buildings. Damage assessment during the 1985 Earthquake, Mexico.
Assistant Researcher	Mechanics, Fluids and Thermics Department, Engineering Institute, UNAM [1]	July 1989 - Feb. 1991	Calibration of the numerical model for water network system's design and analysis. Studies of resonance, backwash discharge and energy losses in two aqueducts in Mexico.
Project Engineer	ALEPH, Ingenieros Consultores, SA de CV	Jan. 1991	Water supply, waste water and against-fire distribution network design in two Marinas.
Academic Technic (Assistant Researcher)	Mechanics, Fluids and Thermics Department, Engineering Institute, UNAM [1]	Feb. 1991 - Feb. 1992	Calibration of the numerical model for water network system's design and analysis. Studies of the characteristic curve and energy losses in two aqueducts. Development and study, as Project Head, of the characteristic curves of 5 centrifugal pumps.
Project Engineer	Oceanography Department, Federal Power Commission	February - Sept. 1992	Coastal evolution study at the Balsas River Delta. Performed dredging study at the Power station in Rosarito. Sedimentation study at the entrance of the Nuclear Power Plant Laguna Verde. Heat plume study at the Power stations Tuxpan and Altamira.
Assistant Researcher	Harbours, Coasts and Offshore Technology Division, Delft Hydraulics, The Netherlands	Sept. 1993 - May 1994	Study on the Design of Rock Protection for submarine pipelines and offshore structures. Physical and numerical tests performed. Development of a new damage assessment technique.
Project Engineer	Consultoria Yañez & Taylor, SA de CV	August - Oct. 1994	Supervision of the Dredging works for the Intercommunication channel at the Huizache-Caimanero lagoon, Mexico
Project Engineer	ALEPH, Ingenieros Consultores, SA de CV	October - December 1994	Technical Dictamination of the Hydraulic and maritime design for the Executive project of the Intracoastal channel in Tamaulipas, Mexico.
Hydraulic Specialist	Hydrometeorology Department, IMTA [4]	January - Sept. 1995	Development of rain estimating tools based on Remote Sensing Techniques (GOES 8 Weather Satellite and Automatic Weather Stations). Sponsored by UNDP.
Assistant Researcher	GIOC [5], University of Cantabria, Spain	October 1995 - June 1999	Participation in research projects of ports and beaches in Spain. Studies related with wave agitation, propagation, resonance, sediment transport, estuary hydrodynamics, beach stability, coastal dynamics, functionality and navigation in ports.
Assistant Researcher	GIOC [5], University of Cantabria, Spain	June 1999 - December 2002	Flow and stability, prototype research study of rock covers for submarine pipelines. Partially funded by European funds (FEDER) and the National Plan for Development and Research (I+D).
Assistant Researcher	GIOC [5], University of Cantabria, Spain	January 2002 - December 2004	Flow and structural behaviour research study of low crested structures. DELOS Project (Environmental Design of Low Crested Structures). Long-term evolution of tidal inlets. HUMOR Project (Human Interaction with Large Scale Coastal Morphological Evolution).

<b>EMPLOYMENTS &amp; POSTS (Cont)</b>			
<b>Post</b>	<b>Company or Institute</b>	<b>Duration and Dates</b>	<b>Projects</b>
Assistant Researcher	GIOC [5], University of Cantabria, Spain	January 2005 – April 2005	Hydrodynamics and coastal morphodynamics using long-term digital images (ARGUS). CoastView Project (Developing coastal video monitoring systems in support of coastal zone management).
Research Officer	CHC-NRC [6], Ottawa, Canada	April 2005 – June 2007	Technical expertise and leadership to a diverse range of physical modelling studies of coastal engineering projects, port and harbour developments, maritime and offshore structures
Head of the Hydraulic, Coastal and Offshore Laboratory	IH Cantabria [7], Spain	July 2007 – August 2014	Development and leadership to coastal, harbour and offshore engineering research projects with physical and numerical model techniques. Design, supervision and execution of physical model studies. Planning, management and organisation of the laboratory. Project design, supervision and management of the construction of the CCOB [8] and the new IHCantabria premises.
Director O.H. Hinsdale Wave Research Laboratory	OSU [10]	Since August 2014	Development and leadership to coastal, harbour and offshore engineering research projects with physical and numerical model techniques. Design, planning and supervision of physical model studies. Planning, management and organisation of the laboratory.

<b>FIELDWORK AND LABORATORY EXPERIENCE</b>	
<b>Company or Institute</b>	<b>Research Program</b>
Engineering Institute, UNAM [1]	<ul style="list-style-type: none"> <li>• Measurement of suction pressure resonance in the 4th and 5th pump stations at the Rio Colorado-Tijuana aqueduct.</li> <li>• Determination of the characteristic curve of the 2nd pump station at the Rio Colorado-Tijuana aqueduct.</li> <li>• Measurements of flow and pressure in a laboratory water network system for calibration of the numerical model. Hydromechanics Laboratory, UNAM [1]</li> <li>• Measurement of energy losses at the Chapala-Guadalajara aqueduct including pressure transient and water hammer.</li> <li>• Measurement of energy losses at the Cutzamala aqueduct.</li> <li>• Measurement of the backwash discharge at the Cutzamala water treatment plant.</li> <li>• Measurement of flow and pressure at the water network system of the University Cultural Centre for calibration of the numerical model, UNAM [1]</li> <li>• Determination of the characteristic curves of 5 pumps at the Hydromechanics Laboratory, UNAM [1].</li> </ul>
Federal Power Commission, Mexico	<ul style="list-style-type: none"> <li>• Extensive measurement of Temperature, Surface Currents and Levels at Tuxpan Power Plant to estimate the thermal plume development and calibration of the model PHOENICS.</li> </ul>
Delft Hydraulics, The Netherlands	<ul style="list-style-type: none"> <li>• Experimental study at the Schelde Flume to assess damage of submerged rock protections for underwater pipelines. Tests include the use of electromagnetic profilers, gauges and current meters. ‘de Voorst’ Laboratory facilities</li> </ul>
GIOC [5], University of Cantabria Santander, SPAIN	<ul style="list-style-type: none"> <li>• Measurement of water levels, temperature and conductivity at San Vicente de la Barquera estuary, including current velocities at the tidal inlet, for calibration of the hydrodynamic numerical model.</li> </ul>

**FIELDWORK AND LABORATORY EXPERIENCE (Cont)**

<p>GIOC [5], University of Cantabria Santander, SPAIN</p>	<ul style="list-style-type: none"> <li>• Extensive measurement of water levels, 3D velocities, temperature and conductivity at Santander estuary, including offshore measurements with a Döppler current profiler, to study the tidal wave propagation, long term water exchange and calibration of the hydrodynamic model.</li> <li>• Extensive measurements of water levels, currents and temperature at Berria and Usgo beaches, to study long wave propagation and its relationship with bottom profiles. Includes underwater deployment and the use of video images.</li> <li>• Supervision of the estratigraphic profiles campaign to assess sedimentation patterns at Santoña tidal marshes. Measurements of 3D-velocity profiles and bottom turbidity at Aviles Port entrance, to study sediment transport patterns.</li> <li>• Measurement of wave field, surface elevation, currents and bathymetry at the Santander outfall, to study the stability of experimental prototype cross-sections.</li> <li>• Stability tests for submarine rock covers and low crested structures. GIOC Laboratory. Use of wave gauges, ADV and Laser profiler.</li> <li>• Flow tests for outfall rock covers. GIOC Laboratory. Use of wave gauges, pressure around the pipeline, ADV, LDA and Laser profiler.</li> <li>• Flow tests for low crested structures for the DELOS project. GIOC Laboratory. Use of wave and pressure gauges, ADV, ADP, LDA, Digital Video, etc.</li> <li>• Tests of stability and reflection of rubble-mound breakwaters. GIOC Laboratory.</li> <li>• Measurement of short and long wave agitation at Lastres Port.</li> <li>• Measurement of velocity profiles (ADCP) at the Santander tidal inlet to calibrate digital images from ARGUS Cameras (CoastView Project)</li> </ul>
<p>CHC-NRC [6], Ottawa, CANADA</p>	<ul style="list-style-type: none"> <li>• Design and construction of the Junction Dam Spillway. Measurement of flow rates, water levels, 2D and 3D velocities (ADV) and dynamic pressures.</li> <li>• Construction of the Cat Island breakwater, Toronto. Measurement of incident wave heights, damage, overtopping and transmission.</li> <li>• Design and construction of the rock protection for the Busan-Geoje Fixed Link, Korea. Flow analysis and stability of the rock protection under wave and currents.</li> <li>• Physical model testing of stability and wave agitation at Jebel Ali New Container Terminal, Dubai, United Arab Emirates. 2D study on stability and overtopping of the North revetment and East Breakwater. 3D agitation and moored ship forces on the new container terminal. 3D stability, overtopping and transmission on the West Offshore breakwater, North revetment and West breakwater.</li> <li>• Physical model testing of flow and stability of the bottom protection of the Adriatic LNG Terminal, Italy. Measurement of three-dimensional flow for short-crested waves and current, surface elevation, 2D and 3D currents, dynamic pressures inside the scour protection and its stability, including mobile bed tests.</li> <li>• Physical model testing on the stability and constructability of the Antifer cube (BCR) detached breakwater for the Peru LNG Terminal. Tests of placement accuracy for the trunk and roundhead sections, scour protection and mobile bed studies.</li> <li>• Physical model studies of the morphodynamics and coastal protection schemes for Guapo Bay, Trinidad and Tobago.</li> <li>• Physical model studies on the stability of a berm breakwater for Mont-Louis Cove, Quebec, Canada.</li> <li>• Numerical modelling of non-linear multidirectional wave propagation for Cape Preston Causeway, Australia.</li> <li>• Determination in a wave flume of the Active Wave Absorption efficiency and applicability of the Maximum Entropy Method for directional waves on wave reflection analysis.</li> <li>• Study on the solitary wave generation in laboratory as Tsunamis.</li> <li>• Numerical modelling of wave propagation over submerged structures.</li> <li>• Upgrade of a non-linear (Boussinesq) numerical model for wave propagation in wave flumes and basins. Application of directional wave propagation over navigation channels.</li> </ul>

## FIELDWORK AND LABORATORY EXPERIENCE (Cont)

IH Cantabria [7], Spain	<ul style="list-style-type: none"> <li>• 3D Physical model studies on the morphodynamics of the Saidia Beach, Morocco.</li> <li>• Coastal morphodynamics numerical study of Mont-Louis Cove, Quebec.</li> <li>• 2D Physical model studies on the behaviour and performance of floating screens for marinas in rivers and estuaries.</li> <li>• 3D Physical model study on the tidal wave propagation in multi-connected estuaries.</li> <li>• 3D Physical model studies on the stability and performance of a new armour unit (Cubipods) on the roundhead of rubble-mound breakwaters.</li> <li>• Supervision and technical advice of 2D and 3D physical model studies of the Khalifa Port and Industrial Zone, Abu Dhabi (performed at Deltares, The Netherlands and CSIR, South Africa).2D Physical model studies on the stability and performance of a berm breakwater for Porto do Açú, Brazil.</li> <li>• 2D Physical model studies on the propagation of solitary waves as Tsunamis.</li> <li>• 3D Physical model studies on the detailed three-dimensional hydrodynamics around a semi-submerged cube.</li> <li>• 2D Physical model studies on the stability and performance of a new armour unit (Cubipods) of rubble-mound breakwaters.</li> <li>• Hydrodynamic assessment of tidal currents in the vicinity of a pier.</li> <li>• 2D Physical model studies on the stability and performance of a new armour unit (Blacastar) of rubble-mound breakwaters.</li> <li>• Quasi 3-D Physical model testing of breakwater for Ponta Negra, Brasil.</li> <li>• 2D Physical model studies on the stability and performance of a berm breakwater for Porto do Açú, Brazil (Revisited).</li> <li>• 2D Physical model testing of sponges as flume wave absorbers.</li> <li>• Measurement of wave and tidal parameters for calibration of an offshore wave buoy.</li> <li>• 3D Physical model studies of brine discharges into seawater using PIV-LIF techniques.</li> <li>• 3D Physical model studies on the performance of three wave energy harvesting concepts.</li> <li>• 2D and 3D Physical and Numerical studies on the design, performance assessment and optimisation of an offshore floating meteorological buoy.</li> <li>• Supervision and technical assessment of 3D physical model studies of two floating meteorological buoys (performed at Marin, The Netherlands).</li> <li>• 3D Physical model studies for confirmation of the stability of the Laredo Port roundhead</li> <li>• Physical model studies on the characterisation of a 3 inch heavy-duty valve</li> <li>• 3D physical model testing of the lowering of a caisson into water at the Tangier Med 2 developing project</li> <li>• 3D physical model testing of the floating wave energy device WEPTOS</li> <li>• 3D physical model testing of the stability and optimisation of a causeway</li> <li>• Physical model testing of two groins for a power plant at Langosteira Port, Spain</li> <li>• Physical model testing of a living forest under the action of waves and currents</li> <li>• 3D physical model testing of a fixed artificial forest of cylinders under waves and currents</li> <li>• 3D model testing of a GBF for offshore wind farms</li> <li>• Physical model testing of a gravity foundation for sustainable islands</li> <li>• Physical model studies of anchor forces and motions of floating devices for offshore renewable energy developments</li> <li>• Physical model testing of an underwater connector for offshore energy farms</li> <li>• Measurement of hydrodynamic parameters in the Santander Estuary</li> <li>• Physical model testing of a floating platform for offshore wind energy</li> <li>• 2D mobile bed testing on the interaction of randomly-placed cylinders with waves and currents</li> <li>• 2D and 3D Physical Model Testing of Saquarema Breakwater, Brazil</li> <li>• 3D physical model testing on the behaviour of single-layer Cubipods on roundheads subject to directional wave attack.</li> </ul>
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### FIELDWORK AND LABORATORY EXPERIENCE (Cont)

	<ul style="list-style-type: none"> <li>• Physical model testing on the stability and hydraulic behaviour of an open outlet system for Dunkerque LNG terminal</li> <li>• 3D Physical Model Testing of an Multi-OWC floating Wave Energy Converter</li> <li>• 3D Physical Model Testing of Wave-induced Non-linear Hydrodynamics in Sloping Beaches</li> <li>• 3D Physical Model Testing on the Wave Penetration and Hydraulic Stability of Marseille-Fos Harbour Entrance</li> </ul>
HWRL-OSU [9, 10]	<ul style="list-style-type: none"> <li>• Physical model testing of a floating WEC</li> <li>• Physical model testing of sediment transport over a sand bar (BARSED)</li> </ul>

### OTHER ACTIVITIES and EXPERIENCE

Oct. 85:	Volunteer for the Civil Engineers College of Mexico.
Since 1986:	Topographical surveys and construction quantification.
Since 1989:	C, PASCAL, BASIC and FORTRAN programmer. Windows Applications, Word Perfect, Harvard Graphics, AutoCad, Lotus, SuperCalc, etc.
Jul. 90:	Design of the drainage system for the Hipic training building in Las Lomas, Mexico.
Since 1990:	Experience on the use, calibration, installation and programming of several laboratory and field measuring equipment: conductive and capacitance wave gauges, pressure gauges, acoustic flow meters (ADV and ADCP), electromagnetic flow meters, laser anemometry (LDA, PIV), load cells, accelerometers, six-degree of freedom motion sensors (Qualisys Proeflex), electromagnetic profiler (PROVO), electromechanical profiler, laser profilers, digital image damage assessment techniques, multidirectional wave measurement, wave and tidal current field measurements, flow measurements (PortaFlow), acoustic surface elevation sensors.
Aug. - Oct. 91:	Development of a Unit Price program. Hydraulic, sanitary and electric quantification for a Medical Residence building.
Nov. 91 - Jan. 92:	Specialised studies for the Environmental Impact Assessment of Mayaluum, Cancun, for COPLAIN, Ingenieros Civiles, S.A. de C.V. <ul style="list-style-type: none"> <li>1. Behaviour model for the suction and recharge wells on the coastal aquifer.</li> <li>2. Behaviour model of the non-saturated strata and probability assessment of coastal aquifer pollution.</li> <li>3. Hydrodynamic behaviour model for the Marina of the project.</li> </ul>
Apr. - Sep. 92:	Intake, circulation and discharge design of the salt water system for the XCARET Aquarius, Cancun, Mexico.
Since Feb. 1993:	SCUBA Diver, Certificate CMAS-93-MEX
Oct. 93 - Mar. 94:	Experience on the use and management of the Schelde Flume (Delft Hydraulics)
Jul. 94:	Design and Analysis of the Chicbul-Cd. del Carmen Aqueduct. Static and dynamic flow studies. Design of the structures to overcome water hammer.
Dec. 94 - Jan. 95:	Wave propagation and agitation study for the International Ferry and Cruise Terminal at Punta Venado, Mexico.
Since Jan. 95:	Advanced user of specific numerical models of hydrodynamics, wave propagation and data assimilation: <ul style="list-style-type: none"> <li>• Ref/Dif, MSP, H2D, MOPLA, COPLA, SMC, MANOLO, Surfer, Grapher, Excel, Matlab.</li> </ul>
Oct. 95 to Mar. 2005:	Participation on the research and development projects with the GIOC [5], University of Cantabria, Santander, Spain: <ul style="list-style-type: none"> <li>• Wave propagation, port resonance, harbour performance, beach stability, coastal dynamics, estuarine hydrodynamics and morfodynamic studies.</li> </ul>
Since 1997:	Experience on the use and management of the Wave flumes and Wave basin, GIOC [5]
Since 1999:	Experience on the use and management of the DHI's Active Wave Absorption Control System (AWACS).
Since May 99:	Programmer and user of the COBRAS Model (Cornell Breaking Waves and Structures: a non-linear, 2DV, fully turbulent, VOF-type, numerical model - VARANS).
June 99 to Mar. 2005:	GIOC [5], University of Cantabria, LAN manager.
June 99 to Mar. 2005:	GIOC [5], University of Cantabria, Laboratory co-manager.
Since March 2003:	User of FLUENT and GAMBIT.

**OTHER ACTIVITIES and EXPERIENCE (Cont)**

Since April 2005:	Advanced user of the wave generation, data acquisition and laboratory analysis system NDAC and GEDAP.
Since May 2005:	Experience on the use and management of the Steel Wave Flume, Large Wave Flume, Coastal Basin, Large Area Basin and Multidirectional Wave Basin, CHC-NRC [6].
Since Jan. 2006:	Experience on the use and management of the CHC-NRC's Active Wave Absorption System (AWA).
Since March 2007:	User of CHC-NRC's EnSim, and WaveSim (2DH non-linear Boussinesq numerical model for wave propagation).
Since 2010:	Advanced user of the wave generation, data acquisition and laboratory analysis system Awasys and WaveSim.
Since Jan. 2011:	User of Qualisys Motion Tracking System.
Since Mar. 2011:	Design, experience on the use and management of the CCOB [8] and Wave-current-Tsunami Flume, IH-Cantabria [7].
Since Nov. 2011:	User of FARO Laser Scanner and related software FaroScene, FaroCloud and Geomagic.

### 3. PRODUCTION

TECHNOLOGY DEVELOPMENT AND IMPROVEMENT	
1989 - 1992:	Development and programming in C and PASCAL of an integrated system for water network systems, including static and dynamic models. Currently in use at the Mechanics, Fluids and Thermics Department, Engineering Institute, UNAM [1].
1992 - 1993:	Development and programming in C of an integrated system for soil settlement assessment. Currently in use at IHE [2], Delft Geotechnics, The Netherlands and the San Luis Potosi University, Mexico.
1994:	Development and programming in C of an integrated system for design of protections for offshore structures and submarine pipelines. Currently in use at Delft Hydraulics and Van Oord ACZ BV, The Netherlands.
1993 - 1994:	Development and programming in C of an integrated system for rock strata contact profiles and their descriptive parameters.
1995:	Development and programming in C of an integrated system for Satellite GOES 8 meteorological image visualisation and processing.
1996 - 1997:	Development and programming in C of an integrated system for harmonic signal processing.
1997:	Development and programming in C of an integrated system for simulation of long-term evolution of tidal inlets.
1997 - 2002:	Development of a methodology for optimum maintenance dredging of tidal inlets.
2000 - 2004:	Development of a methodology for simulation and transfer of oceanographic statistical properties.
2006:	Development of a model to compute pore velocities using laboratory measurement of dynamic pressures.
2007:	Upgrade and improvement of the Boussinesq non-linear numerical model for wave propagation WaveSim (CHC-NRC [6]).
Since 2008:	Development of new optical measuring devices and submerged cases for instrumentation.
2008 - 2012:	Design, construction, supervision and operation of the new Hydraulic, Coastal and Offshore Laboratory (CCOB [8], IH-Cantabria [7]).
2010:	Development of a submarine case for digital cameras.

### 3.1. PUBLICATIONS

#### 3.1.1. Technical Reports

1. **Analysis of the Resonance Possibility for the Pump Suctions of Stations 4 and 5 at the Rio Colorado-Tijuana Aqueduct.** Engineering Institute, UNAM [1]. Carmona P. Rafael, Rodal C. Eduardo, Samano G. Amador, Lomonaco T. Pedro. August 1990. 63 pg (in Spanish).
2. **Calibration of the Numerical Model for Water Network Systems. First Report:** Numerical Model and Experimental Facility. Engineering Institute, UNAM [1], Project 9124. Carmona P. Rafael, Lomonaco T. Pedro, Estrada S. Carlos. January 1991. 132 pg (in Spanish).
3. **Roughness Assessment and Performance Study of the Concrete Pipelines at the Cutzamala System. Third Report.** Engineering Institute, UNAM [1], Project 1102. Sanchez H. Alejandro, Carmona P. Rafael, Hernandez A. Juan Carlos, Lomonaco T. Pedro, Carmona P. German, Ruiz G. Emilio. July 1991. 24 pg (in Spanish).
4. **Calibration of the Numerical Model for Water Network System's Design and Analysis. Final Report:** Test Models and Computational Simulation. User's Manual. Engineering Institute, UNAM [1], Project 9124. Carmona P. Rafael, Lomonaco T. Pedro, Carmona P. Libia, Sanchez H. Alejandro, Castillo H. Gabriel. November 1991. 90 pg (in Spanish).
5. **Characteristic Curve Assessment of FYPASA's Pumps for the CFE (Federal Power Commission).** Engineering Institute, UNAM [1], Project 1129. Guevara G. Yunuen, Lomonaco T. Pedro, Sanchez H. Alejandro, Carmona P. Rafael, Carmona P. German, Hernandez A. Juan Carlos. February 1992. 31 pg (in Spanish).

6. **Littoral Dynamics Study for La Arena Beach (Vizcaya).** Fundacion Leonardo Torres Quevedo, University of Cantabria, Santander. July 1996. 73 pg (in Spanish).
7. **Basic Littoral Dynamic Study for the Basic Project of Refurbishment and Defence of the Sociedad Asturiana de Zinc, S.A. Facilities, in Arnao, T.M. de Castrejon, Asturias.** Fundacion Leonardo Torres Quevedo, University of Cantabria, Santander. July 1996. 73 pg (in Spanish).
8. **Performance Study and Improvement Alternatives Proposal for the Port of Castro Urdiales.** Medina S., Raul, Martin G., Francisco, Lomonaco T. Pedro. GIOC [5], University of Cantabria, Santander. July 1996. 173 pg (in Spanish).
9. **Hydrodynamic Study for the Santoña's Tidal Flats Recovering Project.** Medina S., Raul, Lomónaco T., Pedro, Lopez A., Cristina. Fundacion Leonardo Torres Quevedo, University of Cantabria, Santander. November 1996 (in Spanish).
10. **Performance Study and Improvement Alternatives Proposal for the Port of San Vicente de la Barquera.** Medina S., Raul, Lomonaco T., Pedro, Martin G., Francisco. GIOC [5], University of Cantabria, Santander. December 1996 (in Spanish).
11. **Study of the Navigation Channel of Navia's River. Phase I: Preliminary Study.** Losada R., Miguel, Medina S., Raul, Baquerizo A., Asuncion, Lomonaco T., Pedro. Fundacion Leonardo Torres Quevedo, University of Cantabria, Santander. April 1997 (in Spanish).
12. **Calibration of the Hydrodynamic Model for the Santander Estuary.** Lomonaco T., Pedro. GIOC [5], University of Cantabria, Santander. October 1997 (in Spanish).
13. **Measurement of Hydrodynamic and Sedimentary Parameters at Aviles Port.** López A., Cristina, Medina S., Raúl, Losada R., Miguel A., Vidal P., César, Martín G., Francisco, Lomónaco T., Pedro. GIOC [5], Fundación Leonardo Torres Quevedo, University of Cantabria, Santander. September 1998 (in Spanish).
14. **Hydrodynamic Study of Environmental Recovering of a Tidal Marsh on the Right Margin of the Rada Estuary.** Medina S. Raúl y Lomónaco, T. Pedro. GIOC [5], Fundación Leonardo Torres Quevedo, University of Cantabria, Santander. December 1998 (in Spanish).
15. **Environmental Study for the Enlargement Works of the Raos Port, Santander. 2<sup>nd</sup> Partial Report.** Grupo de Emisarios Submarinos y GIOC [5], Fundación Leonardo Torres Quevedo, University of Cantabria, Santander. June 1999 (in Spanish).
16. **Environmental impact study of the canalisation and dredging of the Urumea River from Puente de los Cuarteles to the river mouth. (Anex I Hydraulic and Sedimentary Study).** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Fernando Méndez I. October 1999 (in Spanish).
17. **Study on the effect of a diagonal quay wall construction in the Morphodynamics of San Vicente de la Barquera Estuary.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T. February 2000 (in Spanish).
18. **Technical Assistance for the Basic Project of Dique de la Osa Enlargement at Gijón. Report N°2 Impact of the works on the coastline.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. César Vidal P., Raúl Medina S., Mauricio González R. y Pedro Lomónaco T. May 2000 (in Spanish).
19. **Technical Assistance for the Basic Project of Gijón Port Enlargement. Marine Climate.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. César Vidal P., Raúl Medina S., Pedro Lomónaco T. y Fernando Méndez I. June 2000 (in Spanish).
20. **Enlargement Plan of the Port of Puerto del Rosario. Document N°1. Design Basic Procedures.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Nicolás Garcia, César Vidal P., Francisco Martín G. April 2001 (in Spanish).
21. **Basic Project of the Port Facilities at Arinaga. Document N°1. Design Basic Procedures.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Nicolás Garcia, César Vidal P., Francisco Martín G. September 2001 (in Spanish).

22. **Basic Project of the Port Facilities at Arinaga. Document N°2. Study of Alternatives and Document N°3. Port Facilities Design.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Nicolás Garcia, César Vidal P., Francisco Martín G. September 2001 (in Spanish).
23. **Enlargement Plan of the Port of Puerto del Rosario. Document N°2. Study of Alternatives.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Nicolás Garcia, César Vidal P., Francisco Martín G. February 2002 (in Spanish).
24. **Enlargement Plan of the Port of Puerto del Rosario. Document N°3. Port Facilities Design.** GIOC [5], Fundación Leonardo Torres Quevedo, Universidad de Cantabria, Santander. Raúl Medina S., Pedro Lomónaco T., Nicolás Garcia, César Vidal P., Francisco Martín G. March 2002 (in Spanish).
25. **Technical Assistance for the Inlet Improvement Project in Suances.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, César Vidal, Francisco L. Martín, Pedro Lomónaco and Maitane Olabarrieta. April 2002 (in Spanish).
26. **Sedimentation Study at Berria Tidal Marshes.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, César Vidal, Pedro Lomónaco and Eduardo García. October 2002 (in Spanish).
27. **Technical assistance for the new Marina at San Vicente de la Barquera. Part I: Structural and functional design.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, César Vidal, Francisco L. Martín, Pedro Lomónaco, Maitane Olabarrieta and Iñigo Cánovas. April 2003 (in Spanish).
28. **Technical assistance for the new Marina at San Vicente de la Barquera. Part II: Analysis of the influence of the new port on the sedimentary dynamics.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, César Vidal, Francisco L. Martín, Pedro Lomónaco, Maitane Olabarrieta and Iñigo Cánovas. April 2003 (in Spanish).
29. **Wave climate and Atmospheric long-wave resonance (Rissagues) for the new Port of Ciutadella (Part I).** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, Pedro Lomónaco, Pablo Agudelo and Sebastiá Montserrat. February 2004 (in Spanish).
30. **Hydrodynamic, transport and dispersion study in the coastal zone of Almeria.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina, Pedro Lomónaco and Maitane Olabarrieta. June 2004 (in Spanish).
31. **Functionality and downtimes study at San Vicente de la Barquera, Suances and Santoña tidal inlets.** GIOC [5], Universidad de Cantabria, Santander. Raúl Medina and Pedro Lomónaco. March 2005 (in Spanish).
32. **Hydraulic Model Study of a Proposed Spillway at Junction Dam Reservoir.** CHC-NRC [6], Ottawa, Canada. Pedro Lomonaco, Paul Knox and David Hnatiw. December 2005.
33. **Physical Model Study on the Stability of the Rock Protection for the Busan-Geoje Fixed Link Immersed Tunnel.** CHC-NRC [6], Ottawa, Canada. Pedro Lomonaco and Andrew Cornett. January 2006.
34. **Hydraulic Model Studies of the Jebel Ali New Container Terminal, Stage 1. 3D Studies of agitation and moored ship motions.** CHC-NRC [6], Ottawa, Canada. Andrew Cornett and Pedro Lomonaco. May 2006.
35. **Hydraulic Model Studies of the Jebel Ali New Container Terminal, Stage 1. 3D Study of the West Offshore Breakwater, North Revetment and West Breakwater.** CHC-NRC [6], Ottawa, Canada. Pedro Lomonaco and Andrew Cornett. August 2006.
36. **Hydraulic Model Studies of Erosion Protection for the Adriatic LNG Terminal.** CHC-NRC [6], Ottawa, Canada. Pedro Lomonaco. October 2006.
37. **Hydraulic Model Studies of BCR Breakwater Performance for the Peru LNG Terminal. Part I – Constructability Tests.** CHC-NRC [6], Canada. Pedro Lomonaco. April 2007.
38. **Hydraulic Model Studies of BCR Breakwater Performance for the Peru LNG Terminal. Part II – Confirmation Tests.** CHC-NRC [6], Canada. Pedro Lomonaco. April 2007.

39. **Long-Term Morphological Modelling of the Mont-Louis Cove, Canada.** IH-Cantabria [7], Spain. Pedro Lomónaco, Lucía Vega and Raúl Medina. November 2007.
40. **3D Physical Model Tests of Roundheads made of Cubipods (Cubipodsmorros).** IH-Cantabria [7], Spain. César Vidal, Pedro Lomónaco, Leonardo Migoya and David Gutiérrez Barceló. March 2008 (in Spanish).
41. **2D Physical Model Testing of Berm Breakwater for Porto do Açú, Brazil.** IH-Cantabria [7], Spain. Pedro Lomónaco. June 2008.
42. **2D Physical Model Tests of a new Wave Screen Model.** IH-Cantabria [7], Spain. César Vidal, Pedro Lomónaco, Leonardo Migoya and Javier Rubio. July 2008 (in Spanish).
43. **Confirmation 2D Physical Model Tests of Rubble-Mounds made of Cubipods.** IH-Cantabria [7], Spain. César Vidal, Pedro Lomónaco, Leonardo Migoya and Christian Klinghammer. July 2009 (in Spanish).
44. **Quasi 3-D Physical Model Testing of Breakwater for Ponta Negra, Brasil.** IH-Cantabria [7], Spain. Pedro Lomónaco. September 2009.
45. **2D Physical Model Tests on the Stability and Hydraulic Performance of Rubble-Mounds Protected with Blacstar Armour Units.** IH-Cantabria [7], Spain. Pedro Lomónaco, Leonardo Migoya, Christian Klinghammer and Luis Mallén. August 2009 (in Spanish).
46. **Physical Model Testing on the Performance of two Synthetic Sponges for Laboratory Wave Absorption.** IH-Cantabria [7], Spain. Pedro Lomónaco, Christian Klinghammer and Leonardo Migoya. October 2009 (in Spanish).
47. **Measurement campaign for the Measurement of Tidal Currents at the Solía Estuary.** IH-Cantabria [7], Spain. Pedro Lomónaco, Leonardo Migoya, Luis Mallén and Javier Rubio. March 2010 (in Spanish).
48. **Measurement campaign for the measurement of oceanographic parameters to calibrate the Buoy at Virgen del Mar of Red Vigia.** IH-Cantabria[7], Spain. Pedro Lomónaco. August 2010 (in Spanish).
49. **Tests to characterise a 6 inches valve.** IH-Cantabria[7], Spain. Pedro Lomónaco and Christian Klinghammer. May 2011 (in Spanish).
50. **Physical model tests on the confirmation of the stability of Laredo Marina main breakwater roundhead.** IH-Cantabria[7], Spain. Pedro Lomónaco and Andrés Mendoza. July 2011 (in Spanish).
51. **Physical model tests on the functionality and efficiency of the wave energy harvesting device Lilith (Phase 1 and 2).** IH-Cantabria[7], Spain. Pedro Lomónaco and Luis Mallén. September 2011 (in Spanish).
52. **Physical model tests on the functionality and efficiency of the wave energy harvesting device Lilith (Phase 3).** IH-Cantabria[7], Spain. Pedro Lomónaco and Christian Klinghammer. November 2011 (in Spanish).
53. **3D physical model testing of the lowering of a caisson into water at the Tangier Med 2 developing project.** IH-Cantabria[7], Spain. Pedro Lomónaco and Andrés Mendoza. November 2011.
54. **3D physical model testing of the floating wave energy device WEPTOS.** IH-Cantabria[7], Spain. Pedro Lomónaco, Álvaro Alvarez and Christian Klinghammer. December 2011.
55. **Characterisation tests of a Globe-type control valve, manually operated, 3 inches in diameter Class 600.** IH-Cantabria[7], Spain. Pedro Lomónaco and Laurent Tarrade. April 2012 (in Spanish).
56. **Physical model tests on the stability of the protection breakwaters of the water intake plant Gas natural – Fenosa at Punta Langosteira (A Coruña).** IH-Cantabria[7], Spain. Pedro Lomónaco and Andrés Mendoza. April 2012 (in Spanish).
57. **Physical model tests on the stability of the protection breakwaters of the water intake plant Gas natural – Fenosa at Punta Langosteira (A Coruña).** IH-Cantabria[7], Spain. Pedro Lomónaco and Andrés Mendoza. May 2012 (in Spanish).
58. **Hydraulic Model Studies for the Cerrejón P40 Phase 1 Causeway Expansion Project.** IH-Cantabria[7], Spain. Pedro Lomónaco, Christian Klinghammer, Andrés Mendoza and Alvaro Alvarez. May 2012.

59. **Hydraulic Model Studies of New Caissons for Sustainable Islands (IISIS).** IH-Cantabria [7], Spain. Pedro Lomónaco and Andrés Mendoza. February 2013 (in Spanish).
60. **Physical modelling of a submarine underwater connector.** IH-Cantabria [7]. Spain. Raúl Guanche, Cesar Vidal, Pedro Lomónaco, Alvaro Alvarez and Laurent Tarrade. March 2013 (in Spanish).
61. **Physical Model Analysis of a Gravity Based Foundation for Offshore Windmills.** IH-Cantabria[7], Spain. Cesar Vidal, Pedro Lomónaco, Alvaro Alvarez, Rubén Alonso and Lucía Meneses. March and September 2013 (in Spanish).
62. **Research and Development of a Wind Generation System for Deep Waters.** IH-Cantabria [7], Spain. Raul Guanche, Cesar Vidal, Pedro Lomónaco, Lucía Meneses, Javier Sarmiento, Víctor Ayllon, Christian Klinghammer, Alvaro Alvarez, Andrés Mendoza and Rubén Alonso. September 2013.
63. **Dunkerque LNG Terminal Open Outlet System Physical Model Study.** IH Cantabria [7], Spain. Pedro Lomónaco. May 2014.
64. **2D and 3D Physical model Testing of Saquarema Breakwater, Brazil.** IH Cantabria [7], Spain. Andrés Mendoza, Pedro Lomónaco and Leonardo Migoya. August 2014.
65. **3D physical model testing on the behaviour of single-layer Cubipods on roundheads subject to directional wave attack.** IH Cantabria [7], Spain. Pedro Lomónaco, Rubén Alonso, Álvaro Álvarez, José F. Salas and Álvaro Sainz. August 2014.

### 3.1.2. Journals and Congress Papers.

1. Carmona, R. and Lomonaco, P. **Calibration of the Numerical Model for Water Network Systems Design and Analysis.** International Association of Hydraulic Research (IAHR). XVI Congreso Latinoamericano de Hidráulica. Santiago, Chile. November 1994 (in Spanish).
2. Klomp, W. and Lomonaco, P. **Pipeline Cover Stability.** International Society of Offshore and Polar Engineers (ISOPE) Conference 1995. The Hague, The Netherlands. June 1995.
3. Lomonaco, P. and Klomp, W. **Design of Submarine Pipeline Protections.** IV Jornadas Españolas de Ingeniería de Costas y Puertos (IV Spanish Conference on Coastal and Port Engineering). Cadiz, Spain. May 1997 (in Spanish).
4. Lomonaco, P. and Klomp, W. **Pipeline Rock Cover Damage Assessment.** Behaviour of Offshore Structures (BOSS) Conference 1997. Delft, The Netherlands. July 1997.
5. Medina, R., Losada, M.A., Lomonaco, P. and Baquerizo, A. **Application of a long-term evolution model of tidal inlets to the design of a navigation channel. The Navia Inlet case.** 26<sup>th</sup> International Conference on Coastal Engineering (ICCE '98). Copenhagen, Denmark, June 1998.
6. Lomonaco, P., Medina, R. and Gonzalez, M. **Optimum design of access channels for ports in rivers and estuaries: the inlet long-term evolution.** International Association of Hydraulic Research (IAHR). XVIII Congreso Latinoamericano de Hidráulica. Oaxaca, México. October 1998 (in Spanish).
7. Lomonaco, P., Medina, R. and Losada, M.A. **A long-term evolution model for tidal inlets: application for the design of navigation channels.** V Jornadas Españolas de Ingeniería de Puertos y Costas (V Spanish Conference on Coastal and Port Engineering). La Coruña, Spain. September 1999 (in Spanish).
8. Lomonaco, P., Medina R. and Losada, I.J. **Non-linear tidal waves in channels: the role of cross-section geometry.** Physics of Estuaries and Coastal Seas (PECS 2000). Presented in PECS Conference, Norfolk, Virginia. October 2000.
9. Vidal, C., Lomónaco, P., Martín F.L. **Prototype Study of Hydrodynamics and Stability of Rock Protections for Sea Outfalls.** VI Jornadas Españolas de Ingeniería de Costas y Puertos (VI Spanish Conference on Coastal and Port Engineering). Palma de Mallorca, Islas Baleares (Spain). May 2001 (in Spanish).

10. Lara, J.L., Losada, I.J., Lomonaco, P and Revilla J.A. **Modelling waves breaking on the beach**. VI Jornadas Españolas de Ingeniería de Puertos y Costas (VI Spanish Conference on Coastal and Port Engineering). Palma de Mallorca, España. May 2001 (in Spanish).
11. Martin, F.L., Mendez, F.J., Vidal, C., Medina, R. and Lomonaco, P. **Determination of wave persistence regimes: application to the functionality of the enlargement works of Gijon port**. VI Jornadas Españolas de Ingeniería de Puertos y Costas (VI Spanish Conference on Coastal and Port Engineering). Palma de Mallorca, Spain. May 2001 (in Spanish).
12. Lomonaco, P., Medina, R. and Losada, I.J. **The influence of the estuary geometry on the tidal wave propagation: implications on the equilibrium morphology**. VI Jornadas Españolas de Ingeniería de Puertos y Costas (VI Spanish Conference on Coastal and Port Engineering). Palma de Mallorca, Spain. May 2001 (in Spanish).
13. Martinez, C.G., Martin, F.L. and Lomonaco, P. **Laboratory scale effects reduction by using numerical models**. VI Jornadas Españolas de Ingeniería de Puertos y Costas (VI Spanish Conference on Coastal and Port Engineering). Palma de Mallorca, Spain. May 2001 (in Spanish).
14. Lomonaco, P., Medina, R. and Losada, I.J. **A long-term evolution model of estuary morphology**. I Foro Nacional sobre Gestión Integral de Zonas Costeras. (I National Forum on Integrated Coastal Zone Management). Santander, Spain. October 2001 (in Spanish).
15. Vidal, C., Lomonaco, P., Martín, F.L. and Losada, I.J. **Prototype experiments on stability of rock protections of sea outfalls**. I Foro Nacional sobre Gestión Integral de Zonas Costeras. (I National Forum on Integrated Coastal Zone Management). Santander, Spain. October 2001 (in Spanish).
16. Martin, F.L., Martinez, C.G. and Lomonaco, P. **A New Procedure for the Scaling of Core Material in Rubble Mound Breakwaters Model Tests**. 28<sup>th</sup> International Conference on Coastal Engineering (ICCE 2002). Cardiff, United Kingdom. July 2002.
17. Vidal, C., Lomonaco, P. and Martin, F.L. **Prototype Analysis of Stability of Rubble Mound Protections for Submarine Outfalls**. 28<sup>th</sup> International Conference on Coastal Engineering (ICCE 2002). Cardiff, United Kingdom. July 2002.
18. Mendez, F.J., Medina R. and Lomonaco, P. **Statistical Analysis of Directional Sea State Persistence**. 28<sup>th</sup> International Conference on Coastal Engineering (ICCE 2002). Cardiff, United Kingdom. July 2002.
19. Vidal, C., Cembrero, P., Lomonaco, P., Revilla, J.A., Pantaleon, M., Medina, R., Alvarez, C. and Juanes, J.A. **Transient loads in outfalls under heavy wave conditions: risk of depression and buckling**. 2<sup>nd</sup> International Conference on Marine Waste Water Discharges (MWWD 2002). Istanbul, Turkey. September 2002. *Selected to be published on the IAHR web-site.*
20. Lomonaco, P., Vidal, C., Revilla, J.A. and Losada, I.J. **Flow and pressure distributions around rubble mound protected pipelines**. 2<sup>nd</sup> International Conference on Marine Waste Water Discharges (MWWD 2002). Istanbul, Turkey. September 2002. *Selected to be published on the IAHR web-site.*
21. Vidal, C., Lomonaco, P., Revilla, J.A., Martin, F.L. and Medina, R. **Stability of rubble mound protections for submarine outfalls: prototype and laboratory experiments**. 2<sup>nd</sup> International Conference on Marine Waste Water Discharges (MWWD 2002). Istanbul, Turkey. September 2002.
22. Lomónaco, P., Gyssels, P., Medina, R. y Vidal C. **Application of a box model to the Plencia tidal inlet**. VII Jornadas Españolas de Ingeniería de Puertos y Costas (VII Spanish Conference on Coastal and Port Engineering). Almería, Spain. May 2003 (in Spanish).
23. Olabarrieta, M., Medina, R. y Lomónaco, P. **Effect of wave-current interaction on tidal propagation in estuaries**. VII Jornadas Españolas de Ingeniería de Puertos y Costas (VII Spanish Conference on Coastal and Port Engineering). Almería, Spain. May 2003 (in Spanish).
24. Medina, R., Vidal, C., Losada, I.J., Méndez, F.J., Castanedo, S., Osorio, A., Lomónaco, P., Martín, F.L. y Martínez, C.G. **Hydrodynamic studies for the forecast, protection and evaluation of the Prestige oil spill at the Cantabrian coasts**. VII Jornadas Españolas de Ingeniería de Puertos y Costas (VII Spanish Conference on Coastal and Port Engineering). Almería, Spain. May 2003 (in Spanish).



25. Agudelo, P., Marcos, M., Medina, R., Lomonaco, P., Monserrat S. and Vidal, C. **Oscillatory regime of “Rissagas” in Ciudadela Cove, Menorca.** VII Jornadas Españolas de Ingeniería de Puertos y Costas (VII Spanish Conference on Coastal and Port Engineering). Almería, Spain. May 2003 (in Spanish).
26. Garcia, N., Medina, R., Lomonaco, P. et Gonzalez, M. **Impact du port sur la plage de Gijón.** Revue Française de Génie Civil, Numéro spécial “Génie Côtier”, 2003, No. 9, vol. 7, pp. 1117-1137. ISBN 2-7462-0808-3, ISSN 1279-5119. (in French).
27. Lomonaco, P., Vidal, C., Losada, I.J. and Mendez, F.J. **Wave height, pressure and velocity CDF's around rubble mound protections for submarine outfalls.** Coastal Structures 2003 Conference. Portland, Oregon, August 2003.
28. Lomonaco, P., Medina, R., Gyssels, P. and Vidal, C. **Application of a long-term morphologic evolution model to the Plencia tidal inlet and its adjacent beaches.** 3<sup>rd</sup> IAHR Symposium on River, Coastal and Estuarine Morphodynamics (RCEM 2003). Barcelona, Spain. September 2003.
29. Lomónaco, P., Vidal, C. Neves, G. and Losada I.J. **Flow measurement around and inside submerged rubble mounds under normal and oblique wave attack.** 29<sup>th</sup> International Conference on Coastal Engineering (ICCE 2004). Lisbon, Portugal. September 2004.
30. Garcia, N., Lara, J.L., Lomonaco P. and Losada I.J. **Flow at low-crested structures under breaking conditions.** 29<sup>th</sup> International Conference on Coastal Engineering (ICCE 2004). Lisbon, Portugal. September 2004.
31. Lomonaco, P., Vidal, C., Losada I.J., and Lara, J.L. **Numerical flow modelling of non-linear waves propagating over rubble-mound protected pipelines.** 3<sup>rd</sup> International Conference on Marine Waste Water Discharges (MWW 2004). Catania, Italy. September 2004.
32. Lomonaco, P., Vidal, C., Losada, I.J., Garcia, N. and Lara, J.L. **Flow measurements and numerical simulation on low-crested structures for coastal protection.** In Environmental Friendly Coastal Protection Structures. Ed. C. Zimmermann. NATO Publishing unit. Springer, The Netherlands.
33. Hanson H., Baquerizo, A., Falques, A., Lomonaco, P., and Payo, A. **Countour-line models as tools for long-term coastal evolution.** Special Issue of the High specialization course: Advances in operational oceanography and coastal engineering, December 2003, Universidad Pompeu Fabra. Organised by Real Academia Española de Ingeniería.
34. González, M., Medina, R., Osorio A., y Lomónaco, P. **The Spanish Coastal Modelling System.** International Association of Hydraulic Research (IAHR). XXI Congreso Latinoamericano de Hidráulica. Sao Paulo, Brasil. October 2004 (in Spanish).
35. Agudelo, P., Marcos, M., Lomonaco, P., Monserrat S. and Medina, R. **Evaluation of seiche regimes in Cuitadella Cove, Menorca (Spain).** 5<sup>th</sup> International Symposium on Ocean Wave Measurements and Analysis (WAVES 2005). Madrid, Spain. July 2005.
36. Lomónaco, P., Vidal, C., Migoya, L., Archetti, R. **Laboratory experiments on the assessment of wave-induced flow in low-crested and submerged rubble-mound breakwaters: experiments and data base decription.** VIII Jornadas Españolas de Ingeniería de Costas y Puertos (VIII Spanish Conference on Coastal and Port Engineering). Sitges, Barcelona (España).
37. Lomonaco, P. and Medina, R. **Harbor and Inlet Navigation-Sedimentation Interference: Morphodynamics and Optimum Design.** 12<sup>th</sup> Canadian Coastal Conference (CCC 2005), Dartmouth Nova Scotia, Canada. November 2005.
38. Marcos, M., Montserrat, S., Medina, R. y Lomonaco, P. **Response of a harbour with two connected basins to incoming long waves.** Applied Ocean Research 27 (2005) 209-215. [doi:10.1016/j.apor.2005.11.010](https://doi.org/10.1016/j.apor.2005.11.010)
39. Vidal, C., Medina, R. and Lomonaco, P. **Wave height parameter for damage description of rubble-mound breakwaters.** Coastal Engineering 53, 9, July 2006, 711-722. [doi:10.1016/j.coastaleng.2006.02.007](https://doi.org/10.1016/j.coastaleng.2006.02.007)
40. Olabarrieta, M., Medina, R. and Lomonaco, P. **Effect of the Wave-Current Interaction on the Tidal Wave Propagation in Estuaries.** Revista de Ingeniería del Agua (2006) Vol 12, No 4. (In Spanish).

41. Lomonaco, P. **Understanding communication, mistrust and pride in Coastal Engineering research and project developments.** Invited paper for the International Symposium “Water Education for a Changing World: Messages from Alumni in the field”, UNESCO-IHE, Delft, The Netherlands. June 2007, 124-128.
42. Lomonaco, P., Medina, R. and Losada, I.J. **Conceptual Model of Long-Term Evolution of Estuary Morphology.** Revista Ingeniería del Agua (2007) Vol 14, No 1. (in Spanish).
43. Lomonaco, P., Vidal, C., Losada, I.J., Medina, R. and Klinghammer, C. **Design of a Multidirectional Wave and Current Basin for Shallow, Intermediate and Deep Waters.** 2<sup>nd</sup> International Conference on the Application of Physical Modelling to Port and Coastal Protection – Coastlab08. July 2008.
44. Baker, S., Nistor, I., Cornett, A. and Lomonaco, P. **Physical and Numerical Modelling of Wave Transformation over a Submerged Rubble-Mound Structure.** Poster presented in the 31<sup>st</sup> International Conference on Coastal Engineering – ICCE2008. September 2008.
45. Misra, S., Driscoll, A., Lomonaco, P., Cornett, A., Kirby, J., Sayao, O. and Yavary, M. **Surface Gravity Wave Interactions with Deep-draft Navigation Channels – A Physical and Numerical Case Study.** Paper presented in the 31<sup>st</sup> International Conference on Coastal Engineering – ICCE2008. September 2008.
46. Vidal, C., Lomónaco, P., Medina, R. and Losada, I.J. **Design of a Multidirectional Wave and Current Basin for Shallow, Intermediate and Deep Waters.** X Jornadas Españolas de Costas y Puertos (X Spanish Conference on Coastal and Port Engineering). Santander, Spain. May 2009. (in Spanish).
47. Bastón, Díaz, Olabarrieta, Lomónaco, Méndez, Medina. **Study on the Hydrodynamic Response of Semi-enclosed Coastal Systems Forced by Long Waves.** X Jornadas Españolas de Costas y Puertos (X Spanish Conference on Coastal and Port Engineering). Santander, Spain. May 2009. (in Spanish).
48. Sayao, O. and Lomonaco, P. **Wave Overtopping of Berm Breakwaters.** 33rd IAHR Congress - Water Engineering for a Sustainable Environment. Vancouver, Canada. August 2009.
49. Sayao, O. and Lomonaco, P. **On the Design of Quasi-static Berm Breakwaters.** ICE Coasts, Marine Structures and Breakwaters Conference. Edinburgh, Scotia. September 2009.
50. Lomonaco, P., Vidal, C., Medina J. R. and Gómez-Martin, M. E. **Evolution of damage on roundheads protected with Cubes and Cubipod armour units.** ICE Coasts, Marine Structures and Breakwaters Conference. Edinburgh, Scotia. September 2009.
51. Baston, S., Olabarrieta, M., Lomonaco, P., Mendez, F. and Medina, R. **Solitary Wave Propagation in semi-enclosed water bodies.** Revista Ingeniería del Agua (2010) Vol 17, No 1. (In Spanish).
52. Palomera, P., Ruiz-Mateo, A., Losada, I.J., Lara, J.L., Lloret, A., Castanedo, S., Álvarez, A., Méndez, F., Rodrigo, M., Camus, P., Vila, F., Lomónaco, P. and Antequera, M. **“MEDVSA”: A Methodology for the Design of Brine Discharges into the Seawater.** Desalination & Water Reuse (2010) Vol. 20/1.
53. Alvarez, A., Lomonaco, P., Klinghammer, C. and Mendoza A. **Measuring and Analyzing the Effects of Waves in an Experimental Basin Using PXI Express.** National Instruments Case Studies (2012) Web Page: <http://sine.ni.com/cs/app/doc/p/id/cs-14631>
54. Sopelana, J., Lopez Mera, F., Rocha, M.J., Lomónaco, P., Peña, E., Sánchez-Tembleque, F., Urquijo, P., Rodríguez, J.A. **New Vertical Floating Barrier to Protect against Wind Waves and Ship Waves.** Proc. IEEE/OES (Ocean Engineering Society) OCEANS 2011, Santander, Spain.
55. Chen, Z., Hurdle, D., Kram, N., Lomónaco, P. and Cornett, A. **Design and testing of scour protection for Adriatic LNG GBS.** Proc. of the ASME 2011 30th International Conference on Ocean, Offshore and Arctic Engineering OMAE2011. Rotterdam, The Netherlands.
56. Baston, S., Olabarrieta, M., Lomonaco, P., Mendez, F.J. and Medina, R. **Tsunami response in semi-enclosed tidal basins using an aggregated model.** Journal of Hydraulic Engineering. Vol. 138, No. 8, August 1, 2012. ASCE, ISSN 0733-9429/2012/8-744–751.

57. Klinghammer, C., Lomonaco, P. and Higuera, P. **Design optimisation for a passive, multilayer mesh screen wave absorber for the CCOB**. Proc. 33<sup>rd</sup> International Conference on Coastal Engineering ICCE2012. Santander, Spain.
58. Diaz-Hernandez, G., Lomonaco, P., Armesto, J.A. and Mendoza, A.P. **Numerical validation of physical modelling of wave propagation, transformation and dissipation towards a harbour facility: a new benchmark case**. Proc. 33<sup>rd</sup> International Conference on Coastal Engineering ICCE2012. Santander, Spain.
59. Lomonaco, P., Mendoza, A., Alvarez, A., Berger, E. and Mazet M. **3D physical model testing of the lowering of a caisson into water at the Tangier Med 2 Developing Project**. Proc. of the 4<sup>th</sup> International Conference on the Application of Physical Modelling to Port and Coastal Protection COASTLAB2012. Ghent, Belgium.
60. Mendoza, A. and Lomonaco, P. **Stability confirmation tests of a rubble-mound breakwater**. Proc. of the 4<sup>th</sup> International Conference on the Application of Physical Modelling to Port and Coastal Protection COASTLAB2012. Ghent, Belgium.
61. Alvarez, A., Klinghammer, C., Lomonaco, P., Kofoed J.P., Larsen, T. **3D physical model testing of a floating wave energy device**. Proc. of the 4<sup>th</sup> International Conference on the Application of Physical Modelling to Port and Coastal Protection COASTLAB2012. Ghent, Belgium.
62. Klinghammer, C., Alvarez, A. and Lomonaco, P. **3D Physical Modelling of a Wave-Energy Converter in the Cantabria Coastal & Ocean Basin**. XII Jornadas Españolas de Costas y Puertos (XII Spanish Conference on Coastal and Port Engineering). Cartagena, Spain. May 2013. (in Spanish).
63. Lomonaco, P., Mendoza A., Berger, E. and Mazet, M. **Assessment of Cables and Fenders Loads in the Lowering of a Quadrilobe Caisson for the Tangier Med 2 Developing Project**. XII Jornadas Españolas de Costas y Puertos (XII Spanish Conference on Coastal and Port Engineering). Cartagena, Spain. May 2013. (in Spanish).
64. Mendoza, A., Lomonaco, P., Alvarez, A., Sarmiento J., Martinez, M. and Vidal C. **Physical Model Testing of a Gravity Based Structures for Artificial Sustainable Offshore Islands**. 5<sup>th</sup> International Conference on the Application of Physical Modelling to Port and Coastal Protection COASTLAB2014. Varna, Bulgaria.
65. Garnier, R., Coco, G., Lomonaco, P., Dalrymple, R., Alvarez, A., Gonzalez, M., Medina, R. **Laboratory Experiments of Rip Current Generation**. American Geophysical Union (AGU) Fall Meeting. San Francisco, CA, Dec. 14-18, 2014.
66. Coco, G., Guza, R., Garnier, R., Lomonaco, P., Lopez de San Roman, B., Dalrymple, R., Xu, Munan. **Patterns in the waves**. American Geophysical Union (AGU) Fall Meeting. San Francisco, CA, Dec. 14-18, 2014.
67. Liu, P. L-F, Chang, C-W, Mei, C.C., Lomonaco, P., Martin, F.L., Maza, M. **Periodic water waves through an aquatic forest**. Coastal Engineering 96, February 2015, 100-117.  
[doi:10.1016/j.coastaleng.2014.11.002](https://doi.org/10.1016/j.coastaleng.2014.11.002)
68. Lomonaco, P., Sayao, O., Mendoza, A. **On Permeable Rubble Mound Coastal Structures**. To be presented in Coastal Sediments 2015, San Diego, CA. May 2015.

#### 4. HUMAN RESOURCES FORMATION

<b>TEACHING</b>	
Dec. 90:	Guest Lecturer of Basic Hydraulics at the Engineering Faculty, UNAM [1].
Oct. 91 - Apr. 92:	Numerical Methods Professor at the Engineering Faculty, UNAM [1].
Aug. 95:	Guest Lecturer of Maritime Hydraulics at the Postgraduate Studies Division of the Engineering Faculty, UNAM [1] (Campus Morelos).
Feb. 97 – Feb. 04:	Guest Lecturer of Estuarine Dynamics at ETS ICCP [3], University of Cantabria, Santander.
Dec. 98 – Dec. 04:	Guest Lecturer of Long Waves at ETS ICCP [3], University of Cantabria, Santander.
Oct. 99 – Dec. 04:	Guest Lecturer of Coastal Engineering at ETS ICCP [3], University of Cantabria, Santander.
Sept. 2003:	Lecturer of Breakwater design and Wave analysis at the IV Port Engineering Iberoamerican Course, Santander, Spain
September 2004:	Lecturer ICCE Pre-conference short course: Human Interaction with Large Scale Coastal Morphological Evolution
May 2005:	Lecturer of the Coastal Modelling System course (SMC). Manzanillo, Mexico.
Sept. 05 – Jan. 06	Part-time professor of the post-graduate course: Water resources software applications: from river to coastal areas. University of Ottawa, Canada.
Septo. 06 – Jan. 07:	Part-time professor of the post-graduate course: Numerical Modelling in Coastal and River Engineering. University of Ottawa, Canada
September 2007:	Lecturer of Physical Modelling and Laboratory Techniques at the VIII Port Engineering Iberoamerican Course, Santander, Spain
May 2008:	Lecturer of Physical Modelling and Laboratory Techniques at the IX Port Engineering Iberoamerican Course, Santander, Spain
Since October 2007:	Lecturer of Experimental Methods at ETS ICCP [3], University of Cantabria, Santander.
May 2009:	Lecturer of Physical Modelling and Laboratory Techniques at the X Port Engineering Iberoamerican Course, Santander, Spain
<b>FORMED PERSONEEL</b>	
Since 1985:	Senior Individual Lecturer of Physics, Mathematics and Calculus, level High School and College.
Since Aug. 1990:	Senior Lecturer of C, AutoCad, Harvard Graphics and other Computing Systems, professional level.
Dec. 1999:	Lecturer of the Course on use and management of the SMC / Mopla and TIC. Dirección General de Costas, Ministerio de Medio Ambiente. Madrid, Spain.
May 2005:	Lecturer, Coastal Modelling System (SMC) / MOPLA and TIC. Posgraduate Division, University of Colima, Manzanillo, Mexico.

### SUPERVISED THESIS

January 2001:	Análisis del impacto en la dinámica litoral provocado por las obras de ampliación del Puerto del Musel, Gijón. (Analysis of the littoral dynamics impact due to the enlargement of the Port of Musel, Gijon). Master Thesis presented by Nicolás Garcia. Supervised by Raúl Medina and Pedro Lomónaco. University of Cantabria, Spain (in Spanish).
May 2001:	Ricerca su modello fisico della stabilita' idraulica di scogliere sommerse. (Physical model research on hydraulic stability of submerged rubble-mounds). Bachelor Thesis presented by Gianpaolo Sassi. Supervised by Leo Franco and Pedro Lomónaco. Università degli studi "Roma Tre", Italy (in Italian).
September 2001:	Estudio de agitación, actual y en el proyecto de ampliación, para el puerto de Puerto del Rosario. (Present and projected enlargement, agitation study of the port of Puerto del Rosario). Master Thesis presented by Philippe Saussol. Supervised by Raúl Medina and Pedro Lomónaco. University of Cantabria, Spain (in Spanish).
October 2001:	Estudio experimental del comportamiento de presiones dinámicas alrededor de tuberías submarinas protegidas con escollera. (Experimental study of the dynamic pressure behaviour around protected submarine pipelines). Scientific report on Marine Sciences and Technology, presented by Mario Weber. Supervised by Pedro Lomónaco (University of Cantabria) and Andreas Kortenhaus (TU Braunschweig) (in Spanish).
November 2001:	Modelling of flow in vertical porous structures solving the Reynolds-averaged Navier-Stokes equations (RANS) using the Volume of Fluid method (VOF). Master of Science Thesis, presented by Stefan Leschka. Supervised by Iñigo J. Losada, Pedro Lomónaco and Javier López Lara. University of Cantabria, Spain and TU Braunschweig, Germany.
September 2002:	Estudio de la evolución en el largo plazo de la desembocadura de Plentzia y de las playas adyacentes. (Long-term evolution study for the Plentzia inlet and the adjacent beaches). Master Thesis presented by Paolo Gyssels. Supervised by Raul Medina and Pedro Lomonaco. University of Cantabria, Spain (in Spanish).
October 2003:	Estudio hidrodinámico para la erradicación de la <i>Baccharis Halimifolia</i> en el estuario de Oyambre, Cantabria. (Hydrodynamic study to eliminate the <i>Baccharis Halimifolia</i> in the estuary of Oyambre, Cantabria). Master Thesis presented by Marta Asensi Garcia-Hernan. Supervised by Pedro Lomonaco. University of Cantabria, Spain (in Spanish).
March 2007:	Stability of low-crested and submerged structures with RANS Modelling. PhD Thesis, Fernando Lopez Mera. Supervised by Cesar Vidal and Pedro Lomonaco. University of Cantabria, Spain.
2008-2009:	Marina Port of Luanco. Master Thesis by Lara Ruiz. Supervised by Pedro Lomonaco. University of Cantabria, Spain.
2009-2010:	Physical and Numerical Model Design of Passive Wave Absorbers for the CCOB. Master Thesis by Christian Klinghammer. Supervised by Pedro Lomonaco. University of Cantabria, Spain.
2010-2011:	Methodology to analyse the behaviour and performance of three wave energy devices. Master Thesis by Luis Mallen. Supervised by Pedro Lomonaco. University of Cantabria, Spain.
2010-2011:	Physical and numerical study of a breakwater roundhead. Master Thesis by Andres Mendoza. Supervised by Pedro Lomonaco. University of Cantabria, Spain.
2012-2013:	Assessment of scour around monopiles under oscillatory flow using a 3D Laser Scanner. Master Thesis by Katherine Figueroa. Supervised by Pedro Lomonaco. University of Cantabria, Spain
2012-2013:	Evaluation of the methodology for application of numerical models in physical testing. Master Thesis by Cristina Madrid. Supervised by Pedro Lomonaco. University of Cantabria, Spain
2013-2014:	Numerical wave propagation in the Cantabria Coastal and Offshore Basin. Master Thesis by Alvaro Sainz. Supervised by Pedro Lomonaco. University of Cantabria, Spain.

## 5. DISTINCTIONS

<b>AWARDS</b>	
Sep. 91:	'Gabino Barrera' Silver Medal for the First Place of the 1986 Civil Engineering Class.
Nov. 91:	'Diario de México' Medal for the Best Student of Mexico in Civil Engineering, Class 1986.
June 2001:	Finalist of the 'Modesto Viguera' 1999 Award with the paper "Metodología para la optimización del plan de dragado de los aterramientos en las desembocaduras" (Methodology for the optimisation of the dredging plans due to tidal inlet siltation).
<b>FELLOWSHIPS</b>	
Sep. 88 - Jul. 89:	Student fellowship awarded by the Engineering Institute, UNAM [1], to work for the project: 'Seismic behaviour of masonry buildings'.
Jul. 89 - Feb. 90:	Student fellowship awarded by the Engineering Institute, UNAM [1], to work for the project: 'Calibration of the numerical model for water network system's design and analysis'.
Feb. 90 - Feb. 91:	Thesis fellowship awarded by the Engineering Institute, UNAM [1], to work for the project: 'Calibration of the numerical model for water network system's design and analysis'.
Oct. 92 - May. 94:	Complete Master fellowship awarded by the National Council of Science and Technology (CONACYT) to study at IHE [2], Delft, The Netherlands.
Oct. 95 - Dec. 98:	Complete PhD fellowship (MUTIS) awarded by the Spanish International Cooperation Agency (AECI) to study at the ETS ICCP [3], University of Cantabria, Santander, Spain.
<b>PROFESSIONAL and ACADEMIC RECOGNITION</b>	
1988:	Diploma on academic achievement. Third place on Civil Engineering. UNAM [1]
1990:	Diploma on academic achievement. First place on Civil Engineering. UNAM [1]
September 2002:	Chairman on the 2 <sup>nd</sup> International Conference on Marine Waste Water Discharges (MWWD 2002). Istanbul, Turkey.
September 2003:	Chairman on the 3 <sup>rd</sup> IAHR Symposium on River, Coastal and Estuarine Morphodynamics (RCEM 2003). Barcelona, Spain.
May 2004:	Invited participant to the NATO Advanced Research Workshop on Environmental Friendly Coastal Protection Structures, Varna, Bulgaria.
September 2004:	Chairman on the 29 International Conference on Coastal Engineering (ICCE 2004). Lisboa, Portugal.
September 2004:	Chairman on the 3 <sup>rd</sup> International Conference on Marine Waste Water Discharges (MWWD 2004). Catania, Italy.
Since 2002:	Journal reviewer Ingeniería del Agua, Spain.
Since 2006:	Journal reviewer Coastal Engineering Journal, Japan.
Since 2006:	Paper reviewer of the International Society of Offshore and Polar Engineers (ISOPE).
June 2007:	Guest lecturer to the International Symposium "Water for a changing world: Enhancing Local Knowledge and Capacity", UNESCO-IHE, Delft The Netherlands

<b>SOCIETY MEMBER</b>	
Since Nov. 1990:	Civil Engineering College of Mexico (CICM)
Since Feb. 1991:	Alumni Society of the Engineering Faculty (SEFI), UNAM [1]
Apr 2005 - Jun 2007	Professional Institute of the Public Service of Canada.