

4th Latin American Symposium on Water Waves

Montevideo, Uruguay

October 19-21, 2022



4th LatWaves

Program.

Day 1, Wednesday 19

8:30 – 9:00	Opening	
Session 1	Wave Modelling/Coastal Waves	<i>Chair: Francisco Ocampo Torres</i>
K1: 9:00 – 9:30	<i>Keynote: Alexander Babanin (U. of Melbourne, Australia) and 7 others</i>	Observation-Based Physics in the Third-Generation Wave Forecast Models WAVEWATCH-III, SWAN and WAM
O1: 9:30 – 9:50	<i>Carolina Billet (SHN, Argentina) and 3 others</i>	Shoreline variation and wave energy fluxes at southern beaches of Mar del Plata, Argentina
O2: 9:50 – 10:10	<i>Matías Eder (UNC, Argentina) and 6 others</i>	Study of the coastal dynamics of Union Beach, Chubut province, Argentina.
O3: 10:10 – 10:30	<i>Rodrigo Alonso (Udelar, Uruguay) and S. Solari.</i>	Automatic calibration and uncertainty quantification in waves dynamical downscaling.
		<i>Coffee break</i>
Session 2	Wave-current Interactions	<i>Chair: Erick Rogers</i>
K2: 11:15 – 11:45	<i>Keynote: Nelson Violante-Carvalho (UFRJ, Brazil)</i>	Eddy Dipoles in the Brazil Current and their Effects on Surface Wave Spectra.
O4: 11:45 – 12:05	<i>Pedro Veras Guimaraes (UFPR, Brazil) and 8 others.</i>	Relative current effect on short wave growth.
O5: 12:05 – 12:25	<i>Roger M. Moreira (UFF, Brazil), J.T.A Chacaltana and N. Violante-Carvalho</i>	Nonlinear wave-current interactions in deep water: Vorticity effects.
O6: 12:25 – 12:45	<i>Alexander Soloviev (NSU, USA) and C.W. Dean.</i>	Langmuir circulation model including wave breaking turbulence and Ramp like structures.
		<i>Lunch (Rodelú restaurant)</i>
Session 3	Wave-structure (natural and artificial) interactions	<i>Chair: Jesús Portilla</i>
K3: 14:15 – 14:45	<i>Keynote (Remote): Andrés Osorio and Juan David Osorio (UNAL, Colombia)</i>	Hydrodynamic of waves and natural structures (mangroves, corals and sea grass).

O7: 14:45 – 15:05	<i>Lucas Bindelli (INA, Argentina) and 4 others</i>	Hydraulic studies for the pre-design of coastal protection works in Las Toninas, Argentina.
O8: 15:05 – 15:25	<i>Camilo Cabrera. (UNAL, Colombia), J.D. Osorio and A. Osorio.</i>	Implementation of a CFD model to study the physical processes around an artificial reef structure
O9: 15:25 – 15:45	<i>Wilson Guachamín (EPN, Ecuador)</i>	Application of wave partitioning in the design and installation of marine structures

Coffee break

Session 4	Wave Dynamics/Field experiments	<u>Chair: Francisco Pedocchi</u>
K4: 16:30 – 17:00	<u>Keynote: Erick Rogers (NRL, USA).</u>	Wave ice experiments in the Southern Ocean.
O10: 17:00 – 17:20	<i>Eduardo Palenque (UMSA, Bolivia) and A. Babanin</i>	An experimental test of the wind-wave interaction models
O11: 17:20 – 17:40	<i>Leandro Farina (UFRGS, Brazil), L.G. Biolchi and H. Perotto</i>	The effect of seamounts in the Northeast Brazil on Surface waves
O12: 17:40 – 18:00	<i>Rodrigo Mosquera (UdelaR, Uruguay) and F. Pedocchi.</i>	Near bed cohesive sediment dynamics under waves and currents.

Day 2, Thursday 20

Session 5	Air-sea Interactions/Measurements/Laboratory Experiments	<u>Chair: Rodrigo Mosquera</u>
K5: 9:00 – 9:30	<u>Keynote: Francisco Ocampo Torres (CEMIE-OCÉANO, México)</u>	Ocean surface wave modulation processes under atmospheric fronts conditions.
O13: 9:30 – 9:50	<i>Renato Arruk (Nortek, Brazil)</i>	Accurate surface-wave measurements from below – principles and guidance.
O14: 9:50 – 10:10	<i>Juan Pablo Ramírez (UNAL, Colombia) and 8 others</i>	Turbulent analysis of the effects of the roughness of a coral specimen under steady flow conditions.
O15: 10:10 – 10:30	<i>Carlos Herrera (CICESE, México) and 4 others.</i>	Error analysis in the currents measured by a moving buoy.

Coffee break

Session 6 (Promoted by REMAR)	Marine Energy	<u>Chair: Walter Dragani</u>
K6: 11:15 – 11:45	<i>Rodrigo Alonso (UdelaR, Uruguay), J. Villemur and 5 others</i>	Wave Energy studies in Uruguay.
O16: 11:45 – 12:05	<i>Alejandro Haim (UTN, sede BA, Argentina) and 20 others.</i>	Wave Energy - Argentine technology for the generation of electric power
O17: 12:05 – 12:25	<i>Juan Rueda (Univalle, Colombia) and Gabriel Quintero</i>	Analysis of the tidal energy potential in the Pacific Colombian coast through coupled double-way hydrodynamic modeling: Buenaventura study case
O18: 12:25 – 12:45	<i>Emiliano Gorr (UABC, México) and 4 others</i>	Marine eco-parks driven by wave energy: techno-economic feasibility in Baja California

Lunch (Rodelú restaurant)

Session 7	Non-linear Waves Dynamics	<u>Chair: Rodrigo Alonso</u>
K7: 14:15 – 14:45	<u>Keynote (Remote): Miguel Onorato (Università di Torino, Italy).</u>	Rogue Waves.
O19: 14:45 – 15:05	<i>Karl Burr (UFABC, Brazil)</i>	Weakly nonlinear fully dispersive water wave model.
O20: 15:05 – 15:25	<i>Roger Moreira (UFF, Brazil), J.T.A Chacaltana and N. Violante-Carvalho</i>	Benjamin-Feir instabilities triggered by shear currents.
O21: 15:25 – 15:45	<i>Maura Brunetti (U.of Geneva, Suiza)</i>	Freezing of nonlinear waves over an uneven bottom

Coffee break

Session 8	Wave-Modelling	<u>Chair: Nelson Violante - Carvalho</u>
K8: 16:30 – 17:00	<u>Keynote: Luigi Cavaleri (ISMAR, Italy)</u>	Wind wave modelling: where we are, where to go
O22: 17:00 – 17:20	<i>Paula Espinosa (UNAL, Colombia), A. Osorio, J.D Osorio.</i>	Quantification of wave dissipation on a coral reef: Case Study San Andrés Island, Colombia.
O23: 17:20 – 17:40	<i>Cristhian Valladares (EPN, Ecuador) and J. Portilla</i>	Wave model evaluation at spectral level
O24: 17:40 – 18:00	<i>Leandro Fernández. (UCD, Ireland), C. Calvino and F. Dias</i>	Assessing different parametrizations to describe wind generation and dissipation using WAVEWATCH III model

19:00: Conference Dinner at Club de Pesca Ramírez

Day 3, Friday 21

Session 9	Wave Forecasting	<u>Chair: Monica Fossati</u>
K9: 09:00 – 9:30	<u>Keynote (Remote): Jean Bidlot (ECMWF, UK)</u>	Role of ocean waves in numerical weather predictions.
O25: 9:30 – 9:50	<i>Leandro Farina (UFRGS, Brazil) and F Minuzzi</i>	A deep learning approach for forecasting significant wave height.
O26: 9:50 – 10:10	<i>Deanna Spindler (NOAA, USA)</i>	An overview of the NCEP operational wave models.
O27: 10:10 – 10:30	<i>Todd Spindler (NOAA, USA), and J. Sienkiewicz</i>	The Application of the Extreme Forecast Index and the Shift Of Tails at the Ocean Prediction Center for the Forecasting of Extreme Wind and Wave Conditions.

Coffee break

Session 10	Wave Climate/Remote Sensing.	<u>Chair: Fernanda Maciel</u>
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K10: 11:15 – 11:45	<i>Keynote: Jesús Portilla (EPN, Ecuador)</i>	Characterization of the spatial structure of individual ocean wave field based on long-term wave spectra data.
O28: 11:45 – 12:05	<i>Walter Dragani (SHN, Argentina) and 3 others.</i>	Detection of pure swell in the Outer Río de la Plata, Argentina.
O29: 12:05 – 12:25	<i>Yuri Brasil. UFRJ (Brazil) and 5 others.</i>	Wave spectrum extraction from complex SAR images using a quasilinear approach.
O30: 12:25 – 12:45	<i>César Esparza (UC, Chile) and R. Cienfuegos</i>	Projections of Extreme Sea Levels at Cartagena Bay, Chile towards the end 21 st Century under RCP 8.5 emission scenario.

Lunch (Rodelú restaurant)

Session 11	Extreme waves	<i>Chair: Luigi Cavaleri</i>
K11: 14:15 – 14:45	<i>Keynote: Frederic Dias (University College Dublin, Ireland)</i>	Coastal boulder deposition.
O31: 14:45 – 15:05	<i>Giorgio Bellotti (Roma Tre University, Italy)</i>	Evaluation of Tsunamis amplification at coastal areas using a modal decomposition method
O32: 15:05 – 15:25	<i>Luciana Bertotti (ISMAR, Italy) and L. Cavaleri</i>	Venice 29 Oct 2018 and 12 Nov 2019: how randomness in meteorological events control the output we care about.
O33: 15:25 – 15:45	<i>Rúben Montoya (UdeM, Colombia)(Remote)</i>	New methodology for the construction of wind and wave series in hurricane conditions, based on on-site data

Discussion Panel: 16 30 – 18:00 Looking for synergies in Latin America to advance Metocean research

Moderators: Rodrigo Alonso and Alexander Babanin

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