Curriculum Vitae
Leonel Romero
Assistant Professor

Department of Marine Sciences
University of Connecticut, Avery Point
Groton, CT 06340

leonel.romero@uconn.edu
858-232-6442

Education

Ph.D. in Oceanography — 2008
Scripps Institution of Oceanography

B.S. in Physics — 2002
University of California, San Diego

Professional Experience

Assistant Professor — Sept. 2020 - present
Department of Marine Sciences, University of Connecticut

Associate Researcher — July. 2020 - Sep. 2020
Earth Research Institute, University of California, Santa Barbara

Assistant Researcher — Oct. 2015 - Jun. 2020
Earth Research Institute, University of California, Santa Barbara

Lecturer — 2015, 2016
Department of Geography, University of California, Santa Barbara

Project Scientist — 2011- 2015
Earth Research Institute, University of California, Santa Barbara

Postdoctoral Scholar — 2008-2011
Scripps Institution of Oceanography

Graduate Student Researcher — 2003-2008
Scripps Institution of Oceanography

Research Interests:

Upper ocean processes, surface waves, wave-current interactions, air-sea interaction, and coastal circulation

Field Research Experience:

Inner-Shelf Dispersion Experiment (ISDEX) — 2016, 2017
Field experiments of coastal circulation and submesoscale processes using tracer dye, and surface drifters, with supporting in situ and airborne remote sensing measurements in the Gulf of Mexico

Experiment in the Gulf of Mexico — Oct. 2011
Airborne measurements of surface waves across the Loop Current front

High-Resolution Air-Sea Interaction DRI (HiRes) — Jun. 2010
Airborne observations of surface waves near sea surface temperature fronts in Northern California

Gulf of Tehuantepec Experiment (GOTEX) — Feb. 2004
Airborne observations of fetch-limited waves

Teaching

Undergraduate-level Teaching — Winter 2015, 2016
University of California, Santa Barbara
Lecturer - Upper division class
Geography 165 Waves and Tides in the Ocean

Undergraduate-level Teaching — 2001-2002
University of California, San Diego
Teaching Assistant - Led laboratory class and experiments
Physics 1AL and 2BL

Graduate-level Teaching — 2004-2006
Scripps Institution of Oceanography
Laboratory Assistant - Developed and led laboratory experiments
SIO 202A Wave Physics

Journal Reviewer (last five years): Journal of Physical Oceanography, Journal of Geophysical Research, Geophysical Research Letters, Ocean Modelling, Ocean Dynamics, Marine Pollution Bulletin, and Ocean Engineering.

Professional Memberships

American Geophysical Union and American Meteorological Society.

Peer-Reviewed Journal Articles

Romero, L., D., Hypolite, and J.C. McWilliams, 2020: Submesoscale Current Effects on Surface Waves. *Ocean Model*. 153, 101662.

Romero, L., 2019: Distribution of surface wave breaking fronts. *Geophys. Res. Lett.*, 46, 10,463-10,474.

Romero, L., J. C. Ohlmann, E Pallàs-Sanz, N. M. Statom, P. Pérez-Brunius, and S. Maritorena, 2019: Observations of relative dispersion over the inner-shelf. *J. Phys. Oceanogr.,* 49, 2447-2468.

Large, W. G., E. G. Patton, A. K. DuVivier, P. P. Sullivan, and **L. Romero**, 2019: Similarity theory in the surface layer of large-eddy simulations of the wind, wave and buoyancy forced Southern Ocean. *J. Phys. Oceanogr*.. 49, 2165-2187.

Liu, Q., W. E. Rogers, A. V. Babanin, I. R. Young, **L. Romero**, S. Zieger, and C. Guan, 2019: Observation-based source terms in the third-generation wave model WAVEWATCH III: updates and verification. *J. Phys. Oceanogr*., 49, 489-517.

Ohlmann, J. C., **L. Romero**, E Pallàs-Sanz, P. Perez-Brunius, 2019: Anisotropy in Coastal Ocean Relative Dispersion Observations. *Geophys. Res. Lett.*, 46, 879–888.

Romero, L., L. Lenain, and W. K. Melville, 2017: Observations of Surface-Wave-Current Interaction. *J. Phys. Oceanogr.*, 47, 615-632.

Romero, L., D. A. Siegel, J. C. McWilliams, Y. Uchiyama and C. Jones, 2016: Characterizing Storm Water Dispersion and Dilution from Small Coastal Streams, *J. Geophys. Res.*, 121, 2015JC011323.

Romero, L., Y. Uchiyama, C. Ohlmann, J. C. McWilliams, and D. A. Siegel, 2013: Simulations of nearshore particle-pair dispersion in Southern California, *J. Phys. Oceanogr*., 44, 1862-1879.

Sullivan, P. P., **L. Romero**, J. C. McWilliams, and W. K. Melville, 2012: Transient Evolution of Langmuir Turbulence in Ocean Boundary Layers Driven by Hurricane Winds and Waves, *J. Phys. Oceanogr.*, 42, 1959–1980.

Romero, L., W. K. Melville, and Jessica M. Kleiss, 2012: Spectral Energy Dissipation due to Surface-Wave Breaking, *J. Phys. Oceanogr.*, 42, 1421-1444.

Romero, L. and W. K. Melville, 2011: Spatial Statistics of the Sea Surface in Fetch-Limited Conditions, *J. Phys. Oceanogr.*, 41, 1821-1841.

Romero, L. and W. K. Melville, 2010: Numerical Modeling of Fetch-Limited Waves in the Gulf of Tehuantepec, *J. Phys. Oceanogr.*, 40, 466-486.

Romero, L. and W. K. Melville, 2010: Airborne Observations of Fetch-Limited Waves in the Gulf of Tehuantepec, *J. Phys. Oceanogr.*, 40, 441-465.

Gille, S. T., and **L. Romero**, 2003: Statistical Behavior of ALACE Floats at the Surface of the Southern Ocean, *J. Atmos. Ocean. Tech.*, 20, 1633-1640.

Presentations

Romero, L.: Surface wave breaking and related air-sea fluxes. Ocean and Climate Physics Seminar, Lamont-Doherty Earth Observatory at Columbia University, virtual, 2020.

Romero, L.: Submesoscale Current Effects on Waves. NOAA Coastal Ocean Seminar Series at the Coastal Marine Modeling Branch of the Coast Survey Development Lab (CSDL/CMMB), virtual, 2020.

Romero, L., D., Hypolite, and J.C. McWilliams: Submesoscale Current Effects on Waves (poster). U.S. Climate Variability and Predictability Program (CLIVAR) - Surface Currents in the Coupled Ocean-Atmosphere System Workshop, La Jolla, 2020.

Romero, L.: Distribution of Surface Wave Breaking Fronts (talk). Ocean Sciences Meeting, San Diego, 2020.

Romero, L.: Surface wave breaking and related air-sea fluxes. Climate Meeting, Earth Research Institute, Santa Barbara, 2019.

Romero, L., J. C. Ohlmann, E Pallàs-Sanz, N. M. Statom, P. Pérez-Brunius, and S. Maritorena: Observations of relative dispersion over the inner-shelf (talk). Seventh Lagrangian Analysis and Prediction of Coastal and Ocean Dynamics, Venice, Italy, 2019

Romero, L.: Spectral distribution of surface wave breaking fronts. Climate, Atmospheric Science and Physical Oceanography Seminar, Scripps Institution of Oceanography. La Jolla, CA, 2019.

Romero, L., C. Ohlmann, E. Pallàs-Sanz, P. Perez-Brunius, and N. Aguilar-Tepole: Observations of relative dispersion over the inner-shelf (talk). Reunión Anual Unión Geofísica Mexicana, Puerto Vallarta, 2018.

Romero, L., C. Akan, J. C. McWilliams, Y. Uchiyama: Numerical Modeling of Surface Waves in Southern California: Current Effects on Waves (talk). Waves in Shallow Environment, Tel Aviv, Israel, 2018.

Romero, L., C. Ohlmann, E. Pallàs-Sanz, J. C. McWilliams, C. Akan, Y. Uchiyama, Nick Statom**:** Observations and Modeling of Wave-Current Interactions (talk). Planetary Boundary Layers in Atmospheres, Oceans, and Ice on Earth and Moons, Kavli Institute for Theoretical Physics, Santa Barbara, California, 2018.

Romero, L., C. Ohlmann, E. Pallàs-Sanz, and N. Aguilar-Tepole: Lagrangian observations of two- and three-dimensional coastal flows: submesoscale fronts, vertical velocities and Langmuir circulation (poster). Ocean Sciences Meeting, Portland, 2018.

Romero, L., C. Ohlmann, E. Pallàs-Sanz, and N. Aguilar-Tepole: Observations of coastal circulation and dispersion over the inner-shelf (talk). Reunión Anual Unión Geofísica Mexicana, Puerto Vallarta, 2017.

Romero, L., D. A. Siegel, J. C. McWilliams, Y. Uchiyama and C. Jones: Characterizing Storm Water Dispersion and Dilution from Small Coastal Streams (talk). Ocean Sciences Meeting, New Orleans, 2016.

Romero, L., Y. Uchiyama, J. C. McWilliams, C. Ohlmann, and D. A. Siegel: Anisotropic Relative Dispersion near the Southern California Coast (talk). Sixth Lagrangian Analysis and Prediction of Coastal and Ocean Dynamics, Winter Harbor, ME, 2015.

Romero, L., Y. Uchiyama, J. C. McWilliams, and D. A. Siegel: Inner Shelf Dispersion and Dilution of Creek Runoff (talk). 61st Annual Eastern Pacific Ocean Conference, Mt. Hood, OR, 2014.

Romero, L., Y. Uchiyama, C. Ohlmann, J. C. McWilliams, and D. A. Siegel: Nearshore Anisotropic Relative Dispersion in Southern California (poster). Ocean Sciences Meeting, Hawaii, 2014.

Romero, L., Y. Uchiyama, C. Ohlmann, J. C. McWilliams, and D. A. Siegel: Simulations of nearshore particle-pair dispersion in Southern California (talk). 60th Annual Eastern Pacific Ocean Conference, Fallen Leaf Lake, CA, 2013.

Romero, L., Y. Uchiyama, C. Ohlmann, J. C. McWilliams, and D. A. Siegel: Coastal Dispersal in the Southern California Bight (poster). Long Term Ecological Research All Scientists Meeting, Estes Park, 2012.

Romero, L., L. Lenain, W. K. Melville, E. Terrill and S. Y. Kim. Wave-Current Interaction near a SST Front (talk). Ocean Sciences Meeting, Salt Lake City, 2012.

Romero, L., W. K. Melville, and J. M. Kleiss. Spectral Energy Dissipation due to Surface-Wave Breaking (talk). 12th International Workshop on Wave Hindcasting and Forecasting and 3rd Coastal Hazards Symposium, Wailokoa, HI, 2011.

Romero, L. and W. K. Melville. Observations and Modeling of Linear and Nonlinear Spatio-Temporal Surface Wave Statistics (talk). Paper presented at the ASME 29th International Conference on Ocean, Offshore and Arctic Engineering, Shanghai, China, 2010.

Romero, L. and W. K. Melville. Spatial Wave Statistics in Fetch-Limited Conditions (talk). Waves in Shallow Environment Meeting, Brest, France, 2010.

Romero, L. and W. K. Melville. Observations and Numerical Modeling of Surface Waves (talk). American Meteorological Society Meeting, Phoenix, AZ, 2009.

Romero, L. and W. K. Melville. Observations and Numerical Modeling of Surface Waves (talk). Waves in Shallow Environment Meeting, Ensenada, Mexico, 2009.

Romero, L. and W. K. Melville. Airborne Observations of Wind-Wave Spectra in the Gulf of Tehuantepec (poster). Ocean Sciences Meeting, Orlando, FL, 2008.

Romero, L. and W. K. Melville. Airborne Observations of Fetch-limited Waves in the Gulf of Tehuantepec (talk). First International Meeting of Students in Physical Oceanography, Ensenada, Mexico, 2007.

Romero, L., J. M. Kleiss, and W. K. Melville. Airborne Observations and Wind-Wave Modeling in the Gulf of Tehuantepec (talk). Waves in Shallow Environment Meeting, Lorne, Australia, 2007.

Romero, L. and W. K. Melville. Airborne Observations of Surface Waves in the Gulf of Tehuantepec (talk). Unión Geofísica Mexicana, Puerto Vallarta, Mexico, 2006.

Romero, L., J. M. Kleiss, and W. K. Melville. Extreme Waves in the Gulf of Tehuantepec (poster). Ocean Sciences Meeting, Honolulu, HI, 2006.

Romero, L., J. M. Kleiss, and W. K. Melville. Numerical Prediction of Wind Waves and Related Air-Sea Fluxes (poster). American Meteorological Society Meeting, Atlanta, GA, 2006.

Romero, L. and W. K. Melville. Airborne Observations & Numerical Simulation of Deep-Water Waves (talk). American Geophysical Union Fall Meeting, San Francisco, CA, 2005.

Romero, L. and W. K. Melville. Observations of Directional Wavenumber Spectra during GOTEX (talk), Waves in Shallow Environment Meeting (WISE), Explorer of the Seas, Royal Caribbean Cruise Lines in the Caribbean, 2005.