

Steven L. Morey
Curriculum Vitae

Present Position

Senior Research Scientist
Center for Ocean - Atmospheric Prediction Studies
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Previous Positions

Associate Research Scientist, Florida State University, 2007 - 2013
Assistant Scholar/Scientist, Florida State University, 2002 - 2007
Research Associate, Florida State University, 2000 - 2002

Education

Florida State University, Ph.D., Oceanography, 1999
Florida State University, MS, Oceanography, 1997
University of Missouri – Columbia, BS, Mathematics, 1995
University of Missouri – Columbia, BS, Computer Science, 1995

Peer-Reviewed Publications

- [1] **Morey, S.L.**, E. Kvaleberg, and J.J. O'Brien (2017). Formation of wintertime cold-core filaments and eddies on a continental shelf and role in cross-shelf exchange. *J. Mar. Res.*, In Review.
- [2] **Morey, S.L.**, M. Koch, Y. Liu, and S.-K. Lee (2017). Florida's Oceans and Marine Habitats in a Changing Climate. In *Florida's Climate: Changes, Variations and Impacts*. In Review.
- [3] Hiester, H.R., **S.L. Morey**, D.S. Dukhovskoy, E.P. Chassignet, V.H. Kourafalou, and C. Hu (2016). A topological approach for quantitative comparisons of ocean model fields to satellite ocean color data. *Methods in Oceanography*, 17, 232-250, doi:10.1016/j.mio.2016.09.005.
- [4] Özgökmen, T.M., E.P. Chassignet, C. Dawson, D. Dukhovskoy, G. Jacobs, J. Ledwell, O. Garcia-Pinada, I. MacDonald, **S.L. Morey**, M. Olascoaga, A.C. Poje, M. Reed, and J. Skancke (2016), Over what area did the oil and gas spread during the 2010 Deepwater Horizon oil spill?, *Oceanography*, *Oceanography*, 29(3), 96-107, doi:10.5670/oceanog.2016.74.
- [5] Nguyen, T.-T., **S.L. Morey**, D.S. Dukhovskoy, and E.P. Chassignet (2015), Non-local impacts of the Loop Current on cross-slope near-bottom flow in the northeastern Gulf of Mexico, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL063304.
- [6] Dukhovskoy, D.S., R.R. Leben, E.P. Chassignet, C. Hall, **S.L. Morey**, and R. Nedbor-Gross (2015), Characterization of the uncertainty of Loop Current metrics using a multidecadal numerical simulation and altimeter observations, *Deep Sea Res. Part 1*, 100, 140-158.
- [7] Todd, A.C., **S.L. Morey**, and E.P. Chassignet (2014), Circulation and cross-shelf transport in the Florida Big Bend, *J. Mar. Res.*, 72, 445-475.
- [8] Zavala-Hidalgo, J., R. Romero-Centeno, A. Mateos-Jasso, **S.L. Morey**, and B. Martinez-Lopez (2014), The response of the Gulf of Mexico to wind and heat flux forcing: What has been learned in recent years?, *Atmosfera*, 27(3), 317-334.
- [9] Nedbor-Gross, R., D.S. Dukhovskoy, M.A. Bourassa, **S.L. Morey** and E.P. Chassignet (2014), Investigation of the relationship between the Yucatan Channel transport and Loop Current area in a multi-decadal numerical simulation, *Marine Technology Society Journal*, 48, 15-26, doi:10.4031/MTSJ.48.4.8.
- [10] **Morey, S.L.**, and D.S. Dukhovskoy (2013), A downscaling method for simulating deep current interactions with topography – Application to the Sigsbee Escarpment, *Ocean Modelling*, 69, 50-63, doi:10.1016/j.ocemod.2013.05.008.

- [11] Garcia-Pineda, O., I. MacDonald, C. Hu, J. Svejksky, M. Hess, D. Dukhovskoy, and **S.L. Morey** (2013), Detection of floating oil anomalies from the Deepwater Horizon oil spill with synthetic aperture radar, *Oceanography*, 2, doi:10.5670/oceanog.2013.38.
- [12] Rudzin, J.E., **S.L. Morey**, M.A. Bourassa, and S.R. Smith (2013), The influence of Loop Current position on winter sea surface temperatures in the Florida Straits, *Earth Interactions*, 17, doi:10.1175/2013EI000521.1.
- [13] **Morey, S.L.**, and D.S. Dukhovskoy (2012), Analysis methods for characterizing salinity variability from multivariate time series applied to the Apalachicola Bay estuary, *J. Atmos. Ocean. Tech.*, 29, doi:10.1175/JTECH-D-11-00136.1.
- [14] Harris, R., C. Pollman, D. Hutchinson, W. Landing, D. Axelrad, **S. Morey**, D. Dukhovskoy, and K. Vijayaraghavan (2012), A screening model analysis of mercury sources, fate, and bioaccumulation in the Gulf of Mexico, *Environmental Research*, 119, 53-63.
- [15] Harris, R., C. Pollman, W. Landing, D. Evans, D. Axelrad, D. Hutchinson, **S. Morey**, D. Rumbold, D. Dukhovskoy, D. Adams, K. Vijayaraghavan, C. Holmes, D. Atkinson, T. Myers, and E. Sunderland (2012), Mercury in the Gulf of Mexico: Sources to receptors, *Environmental Research*, 119, 42-52.
- [16] Dukhovskoy, D.S., and **S.L. Morey** (2011), Simulation of the Hurricane Dennis storm surge and considerations for vertical resolution, *J. Natural Hazards*, doi:10.1007/s11069-010-9684-5.
- [17] Gouillon, F., **S.L. Morey**, D.S. Dukhovskoy, and J. J. O'Brien (2010), Forced tidal response in the Gulf of Mexico, *J. Geophys. Res.*, doi:10.1029/2010JC006122.
- [18] **Morey, S.L.**, D.S. Dukhovskoy, and M.A. Bourassa (2009), Connectivity between variability of the Apalachicola River flow and the biophysical oceanic properties of the northern West Florida Shelf, *Cont. Shelf Res.*, doi:10.1016/j.csr.2009.02.003.
- [19] Dukhovskoy, D.S., **S.L. Morey**, J.J. O'Brien, P.J. Martin, and C. Cooper (2009), Application of a vanishing quasi-sigma vertical coordinate for simulation of high-speed deep currents over the Sigsbee Escarpment in the Gulf of Mexico, *Ocean Modelling*, doi:10.1016/j.ocemod.2009.02.009.
- [20] Yu, P., **S.L. Morey**, and J.J. O'Brien (2009), A reduced-space adjoint variational data assimilation method for three-dimensional ocean models, *Ocean Modelling*, doi:10.1016/j.ocemod.2009.01.006.
- [21] Dukhovskoy, D. S., **S. L. Morey**, and J. J. O'Brien (2009), Generation of baroclinic topographic waves by a tropical cyclone impacting a low-latitude continental shelf, *Continental Shelf Res.*, doi:10.1016/j.csr.2008.01.007.
- [22] Kennedy, A.J., M.L. Griffin, **S.L. Morey**, S.R. Smith, and J.J. O'Brien (2007), Effects of El Niño-Southern Oscillation on sea-level anomalies along the Gulf of Mexico coast, *J. Geophys. Res.*, doi:10.1029/2006JC003904.
- [23] **Morey, S.L.**, S. Baig, M.A. Bourassa, D.S. Dukhovskoy, and J.J. O'Brien (2006), Remote forcing contribution to storm-induced sea level rise during Hurricane Dennis, *Geophys. Res. Lett.* 33, doi: 10.1029/2006GL027021.
- [24] **Morey, S. L.**, M. A. Bourassa, D. S. Dukhovskoy, and J. J. O'Brien (2006), Modeling studies of the upper ocean response to a tropical cyclone, *Ocean Dynamics*, doi:10.1007/s10236-006-0085-y.
- [25] Henson, J. I., F. Muller-Karger, D. Wilson, **S. L. Morey**, G. A. Maul, M. Luther, and C. Kranenburg (2006), Strategic geographic positioning of sea level gauges to aid in early detection of tsunamis in the Intra-Americas Sea, *Science of Tsunami Hazards*, 25(3), 173-207.
- [26] Dukhovskoy, D. S., **S. L. Morey**, and J. J. O'Brien (2006), Influence of multi-step topography on barotropic waves and consequences for numerical modeling, *Ocean Modelling*, 14, doi:10.1016/j.ocemod.2006.03.002.
- [27] Zavala-Hidalgo, J., B. Martinez-Lopez, A. Gallegos-Garcia, **S. L. Morey**, and J. J. O'Brien (2006), Seasonal upwelling on the western and southern shelves of the Gulf of Mexico, *Ocean Dynamics*, doi: 10.1007/s10236-006-0072-3.
- [28] Zavala-Hidalgo, J., **S.L. Morey**, J.J. O'Brien, and L. Zamudio (2006), On the Loop Current eddy shedding variability, *Atmosfera*, 19(1), 41-48.

- [29] Zamudio, L., H. E. Hurlburt, E. J. Metzger, **S. L. Morey**, J. J. O'Brien, C. E. Tilburg, and J. Zavala-Hidalgo (2006), Interannual variability of Tehuantepec eddies, *J. Geophys. Res.*, *111*, C05001, doi:10.1029/2005JC003182.
- [30] **Morey, S. L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2005), The seasonal variability of continental shelf circulation in the northern and western Gulf of Mexico from a high-resolution numerical model, in *Circulation of the Gulf of Mexico: Observations and Models*, *Geophys. Mongr. Ser. 161*, edited by W. Sturges and A. Lugo-Fernandez, AGU, Washington, D. C., doi:10.1029/161GM16.
- [31] **Morey, S. L.**, M. A. Bourassa, X. J. Davis, J. J. O'Brien, and J. Zavala-Hidalgo (2005), Remotely sensed winds for episodic forcing of ocean models, *J. Geophys. Res.*, *110*(C10), C10024, doi: 10.1029/2004JC002338.
- [32] **Morey, S. L.**, P. J. Martin, J. J. O'Brien, A. A. Wallcraft, and J. Zavala-Hidalgo (2003), Export pathways for river discharged fresh water in the northern Gulf of Mexico, *J. Geophys. Res.*, *108*(C10), 3303, doi: 10.1029/2002JC001674.
- [33] **Morey, S. L.**, W. W. Schroeder, J. J. O'Brien, and J. Zavala-Hidalgo (2003), The annual cycle of riverine influence in the eastern Gulf of Mexico basin, *Geophys. Res. Lett.*, *30*(16), 1867, doi: 10.1029/2003GL017348.
- [34] Zavala-Hidalgo, J., **S. L. Morey**, and J. J. O'Brien (2003), Cyclonic eddies northeast of the Campeche Bank from altimetry data, *J. Phys. Ocean.*, *33*, 623-629.
- [35] Mizoguchi, K., **S. L. Morey**, J. Zavala-Hidalgo, N. Sugimotohara, S. Häkkinen, and J. J. O'Brien (2003), Convective activity in the Labrador Sea: Preconditioning associated with decadal variability in subsurface ocean, *J. Geophys. Res.*, *108*(C10), 3330, doi: 10.1029/2002JC001735.
- [36] Zavala-Hidalgo, J., **S. L. Morey**, and J. J. O'Brien (2003), Seasonal circulation on the western shelf of the Gulf of Mexico using a high-resolution numerical model, *J. Geophys. Res.*, *108*(C12), 3389, doi:10.1029/2003JC001879.
- [37] **Morey, S. L.**, and J. J. O'Brien (2002), The spring transition from horizontal to vertical thermal stratification on a mid-latitude continental shelf, *J. Geophys. Res.*, *107*(C8), 3097, doi: 10.1029/2001JC000826.
- [38] Leonardi, A. P., **S. L. Morey**, and J. J. O'Brien (2002), Interannual variability in the eastern subtropical North Pacific Ocean, *J. Phys. Ocean.*, *32*, 1824-1837.
- [39] Murray, C. P., **S. L. Morey**, and J. J. O'Brien (2001), Interannual variability of upper ocean vorticity balances in the Gulf of Alaska, *J. Geophys. Res.*, *106*, 4479-4493.
- [40] **Morey, S. L.**, J. F. Shriver, and J. J. O'Brien (1999), The effects of Halmahera on the Indonesian Throughflow, *J. Geophys. Res.*, *104*, 23,281-296.

Reports and Other Publications

- Morey, S.L.**, and D.S. Dukhovskoy (2016), A High-Resolution Ocean Current Database from a Nested Modeling System for the Gulf of Mexico. Technical Report CTR 12803, DeepStar, Houston, TX, 35pp.
- Morey, S.L.**, and D.S. Dukhovskoy (2014), Development and Evaluation of Forecasting Techniques for Topographically Trapped Waves along the Sigsbee Escarpment. Technical Report CTR 11801, DeepStar, Houston, TX, 75 pp.
- Morey, S.L.**, and D.S. Dukhovskoy (2012), Characteristics of Deep Currents over the Sigsbee Escarpment and Central Slope, Technical Report CTR10802, DeepStar, Houston, TX, 30pp.
- Morey, S.L.**, and D.S. Dukhovskoy (2010), Simulation and Analysis of Intense Currents along the Sigsbee Escarpment, DeepStar CTR9801 Final Report, 48pp.
- Morey, S.L.**, D.S. Dukhovskoy, and C. Cooper (2010), Measurements and modeling of topographically trapped waves along the Sigsbee Escarpment, 2010 Offshore Technology Conference, OTC 20694.
- Morey, S.L.** (2008), The physical oceanographic environment impacting northern Gulf of Mexico deepwater coral communities, in *Proceedings: Twenty-Fourth Gulf of Mexico Information Transfer Meeting*, U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA, OCS Study MMS 2008-012, 158-162.

- Morey, S.L.**, D.S. Dukhovskoy, and J.J. O'Brien (2007), Development of a Model of Strong Currents over the Sigsbee Escarpment, DeepStar CTR8802 Final Report, 37 pp.
- Morey, S.L.**, M.A. Bourassa, D.S. Dukhovskoy, and J.J. O'Brien (2006), Modeling the impacts of remote forcing on hurricane storm surge, in *Research Activities in Atmospheric and Ocean Modeling*, World Meteorological Organization.
- Dukhovskoy, D.S., **S.L. Morey**, and J.J. O'Brien (2006), Baroclinic topographic waves on the Nicaragua Shelf generated by tropical cyclones, in *Research Activities in Atmospheric and Ocean Modeling*, World Meteorological Organization.
- Gouillon, F., D.S. Dukhovskoy, **S.L. Morey**, and J.J. O'Brien (2006), Modeling tides in a semi-enclosed basin: A case study of the Gulf of Mexico, in *Research Activities in Atmospheric and Ocean Modeling*, World Meteorological Organization.
- Yu, P., **S.L. Morey**, and J.J. O'Brien (2006), Development of new techniques for assimilating satellite altimetry data into ocean models, in *Research Activities in Atmospheric and Ocean Modeling*, World Meteorological Organization.
- Dukhovskoy, D. S., **S.L. Morey**, and J.J. O'Brien (2005), Topographic Rossby waves in a z-level ocean model, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 35, Edited by J. Cote, pp. 03.05-03.06, World Meteorological Organization, Geneva, Switzerland.
- Morey, S. L.**, M. A. Bourassa, D. Dukhovskoy, and J.J. O'Brien (2005), Modeling the oceanic response to air-sea fluxes associated with a tropical storm, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 35, Edited by J. Cote, pp. 08.03-08.04, World Meteorological Organization, Geneva, Switzerland.
- Yu, P., **S. L. Morey**, and J. Zavala-Hidalgo (2004), New mapping method to observe propagating features, *Sea Technology*, 45(5), 20-24.
- Morey, S. L.**, and J.J. O'Brien (2004), Vertical resolution impacts on modeled Gulf of Mexico Loop Current Eddies, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 34, Edited by J. Cote, pp. 03.17-03.18, World Meteorological Organization, Geneva, Switzerland.
- Kvaleberg, E., **S.L. Morey**, and J.J. O'Brien (2004), The influence of Coriolis on instability wavelengths, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 34, Edited by J. Cote, pp. 08.11-08.12, World Meteorological Organization, Geneva, Switzerland.
- Yu, P., **S.L. Morey**, and J.J. O'Brien (2004), Development of a reduced space adjoint data assimilation technique for numerical simulation of oceanic circulation, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 34, Edited by J. Cote, pp. 08.21-08.22, World Meteorological Organization, Geneva, Switzerland.
- Zavala-Hidalgo, P. Yu, **S. L. Morey**, M. A. Bourassa, and J. J. O'Brien (2003), A new interpolation method for high frequency forcing fields, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 33, Edited by J. Cote, pp. 03.21-03.22, World Meteorological Organization, Geneva, Switzerland.
- Kvaleberg, E., **S. L. Morey**, and J. J. O'Brien (2003), Modeling frontal instabilities in the Gulf of Mexico, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 33, Edited by J. Cote, pp. 08.08-08.09, World Meteorological Organization, Geneva, Switzerland.
- Morey, S.L.**, M. A. Bourassa, X. Jia, J. J. O'Brien, and J. Zavala-Hidalgo (2002), Impacts of satellite scatterometer – derived wind forcing on the West Florida Shelf ocean circulation, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 32, Edited by H. Ritchie, pp. 08.18-08.19, World Meteorological Organization, Geneva, Switzerland.
- Zavala-Hidalgo, J., **S. L. Morey**, and J. J. O'Brien (2002), A numerical study of the circulation on the western shelf of the Gulf of Mexico, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 32, Edited by H. Ritchie, pp. 08.31-08.32, World Meteorological Organization, Geneva, Switzerland.
- Morey, S.L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2001), High-resolution ocean modeling of the Gulf of Mexico, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 31, World Meteorological Organization, Geneva, Switzerland.

Morey, S.L., and J. J. O'Brien (2000), An application of the Sigma Z-Level Model to the West Florida Shelf spring transition, in *Research Activities in Atmospheric and Ocean Modeling*, Report No. 30, World Meteorological Organization, Geneva, Switzerland.

Presentations and Conference Proceedings

- Morey, S.L.** (2017). Eddy genesis by cooling on a shelf and role in cross-shelf transport. Gordon Research Conference on Coastal Ocean Dynamics, Biddeford, ME.
- Morey, S.L.** (2017). Coastal upwelling index databases derived from satellite winds. 2017 International Ocean Vector Winds Science Team Meeting, La Jolla, CA.
- Morey, S.L.**, N. Wienders, D.S. Dukhovskoy (2017), Observations of vertical dependence of currents near the ocean surface from satellite-tracked drifters, 2017 Aquatic Sciences Meeting, Honolulu, HI.
- Morey, S.L.** (2016), Variability of Upwelling along the World's Coastal Oceans Inferred from Satellite Scatterometer-Derived Winds. Invited Lecture, FSU Department of Geography, Dec. 2, 2016.
- Morey, S.L.**, D.S. Dukhovskoy, H. Hiester, O. Garcia-Pineda, and I. MacDonald (2015), Application of a topological metric for assessing numerical ocean models with satellite observations, 2015 AGU Fall Meeting, San Francisco.
- Morey, S.L.**, and D.S. Dukhovskoy (2015), Near-Bottom Response to Tropical Cyclones in Regions with Steep Bathymetry. 2015 Gulf of Mexico Oil Spill & Ecosystem Science Conference. Houston, TX.
- Dukhovskoy, D., O. Garcia, I. MacDonald, **S.L. Morey.**, and J. Ubnoske (2015). Topological Approach for Objective Evaluation of Surface Oil Drift Simulation. 2015 Gulf of Mexico Oil Spill & Ecosystem Science Conference. Houston, TX.
- Morey, S.L.** (2014), Spatio-temporal variability in coastal upwelling/downwelling from scatterometer winds, 2014 AGU Fall Meeting, OS51D-06, San Francisco.
- Nguyen, T.-T., E. Chassignet, **S.L. Morey**, and D.S. Dukhovskoy (2014), Upwelling and downwelling induced by mesoscale circulation in the DeSoto Canyon region, 2014 AGU Fall Meeting, San Francisco.
- Morey, S.L.** (2014), Hurricanes – An Oceanographic Perspective, FSU Coastal and Marine Laboratory Conservation Lecture Series, Invited Talk, St. Teresa, FL.
- Morey, S.L.**, and D.S. Dukhovskoy (2014), Simulations and observations of the deep ocean response to tropical cyclone forcing, 2014 Ocean Sciences Meeting, Honolulu, HI.
- Morey, S.L.**, and D.S. Dukhovskoy (2014), Material transport induced by tropical cyclone forcing over the DeSoto Canyon region, 2014 Gulf of Mexico Oil Spill and Ecosystem Science Conference, Mobile, AL.
- Dukhovskoy, D., E. Chassignet, and **S. Morey** (2014), Analysis of deep currents in the Gulf of Mexico from the 1/25° HYCOM, 2014 Gulf of Mexico Oil Spill and Ecosystem Science Conference, Mobile, AL.
- Morey, S.L.** (2013), Understanding variability of global coastal upwelling using satellite scatterometer winds, 13th International Conference on Estuarine and Coastal Modeling, San Diego.
- Morey, S.L.**, and D.S. Dukhovskoy (2013), Deep ocean response to tropical cyclone forcing, AGU Meeting of the Americas, Cancun, Mexico.
- Morey, S.L.** (2013), Global coastal upwelling/downwelling estimates from SeaWinds, 2013 International Ocean Vector Winds Science Team Meeting, Kona, HI.
- Morey, S.L.**, D.S. Dukhovskoy, and E. Chassignet (2013), Deep currents near steep bathymetry from a numerical simulation of DeSoto Canyon, 2013 Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans.
- Dukhovskoy, D., E. Chassignet, and **S.L. Morey**, Deep-layer mesoscale circulation and deep currents in the Gulf of Mexico from the 1/25° HYCOM, 2013 Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans.

- Chassignet, E., D. Dukhovskoy, C. Hall, R. Leben, **S.L. Morey**, R. Nedbor-Gross, Interannual variability of the Gulf of Mexico loop current and eddies from models and satellite observations, 2013 Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans.
- Zavala-Hidalgo, J., R. Romero-Centeno, E. Osorio-Tai, F. ArellanoGuerrero, **S.L. Morey**, and E. Chassignet (2013), Reconstruction of the Deepwater Horizon oil spill, 2013 Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans.
- Morey, S.L.** (2012), Hydrodynamic modeling in support of potential oil spills in southeast Florida – FSU Modeling Overview, FIO Workshop on Hydrodynamic Modeling in Support of Potential Oil Spills in SE Florida, Miami.
- Morey, S.L.** (2012), High-resolution modeling of the DeSoto Canyon region for simulating upper and deep ocean dynamics, 2012 Deep-C All-Hands Meeting, Tallahassee.
- Morey S.L.** (2012), Spatial variability of upwelling on a continental shelf inferred from scatterometry, Invited Talk, IEEE International Geoscience and Remote Sensing Symposium, Munich, Germany.
- Morey, S.L.** (2012), Spatial variability of upwelling on a shelf with complex geometry inferred from scatterometry, 2012 International Ocean Vector Winds Science Team Meeting, Utrecht, Netherlands.
- Morey, S.L.**, and D.S. Dukhovskoy (2012), Simulations of deep currents along the Sigsbee Escarpment using a multi-model nesting approach, 2012 Ocean Sciences Meeting, Salt Lake City.
- Dukhovskoy, D.S., and **S.L. Morey** (2012), Dynamics of intense near-bottom currents along the Sigsbee Escarpment, northern Gulf of Mexico, 2012 Ocean Sciences Meeting, Salt Lake City.
- Todd, A.C., E.P. Chassignet, and S.L. Morey (2012), Circulation dynamics and larval transport mechanisms in the Florida Big Bend region, 2012 Ocean Sciences Meeting, Salt Lake City.
- Rudzin, J.E., S.L. Morey, M.A. Bourassa, and S.R. Smith (2012), Influence of atmospheric cold air outbreaks on upper ocean thermal variability of the Florida Straits, 2012 Ocean Sciences Meeting, Salt Lake City.
- Vogel, M.J., **S.L. Morey**, and D.S. Dukhovskoy (2012), An investigation of fine-scale spatial variability of near-bottom currents along the Sigsbee Escarpment, 2012 Ocean Sciences Meeting, Salt Lake City.
- Garcia Pineda, O.G., I.R. MacDonald, and **S.L. Morey**, Remote sensing overview of BP oil discharge from satellite SAR data, 2012 Ocean Sciences Meeting, Salt Lake City.
- Dukhovskoy, D.S., and **S.L. Morey** (2011), Uncertainties in storm surge and coastal inundation modeling, Abstract NH13A-1370, 2011 Fall Meeting, AGU, San Francisco.
- MacDonald, I.R., O. Garcia-Pineda, **S.L. Morey** (2011), Natural and unnatural oil layers on the surface of the Gulf of Mexico detected and quantified in synthetic aperture radar images with Texture classifying neural network algorithms, Abstract OS34A-06, 2011 Fall Meeting, AGU, San Francisco.
- Morey, S.L.** (2011), A multi-model nesting approach for simulating deep ocean dynamics and topographic interactions, Oceans 2011, Kona, HI.
- Morey, S.L.**, D. Dukhovskoy, E. Chassignet, I. MacDonald, and O. Garcia (2011), Oil spill model validation and parameter estimation using remotely sensed data, Gordon Research Conference on Coastal Ocean Modeling, South Hadley, MA.
- Dukhovskoy, D., **S.L. Morey**, E. Chassignet, I. MacDonald, and O. Garcia (2011), Objective evaluation of oil spill models using SAR imagery, NGI Annual Conference, Mobile, AL.
- Morey, S.L.** (2011), Wind-driven cross-shelf transport on a shelf with curvature described from scatterometry and in situ observations, 2011 International Ocean Vector Winds Science Team Meeting, Annapolis, MD.
- Morey, S.L.**, D. Dukhovskoy, E. Chassignet, I. MacDonald, and O. Garcia (2011), Objective evaluation of oil spill models using SAR imagery, ASLO Aquatic Sciences Meeting, San Juan, PR.
- Morey, S.L.**, and D.S. Dukhovskoy (2010), Influence of variations in river flow on the Apalachicola Bay estuary and offshore marine environment, Florida Climate Institute Kickoff Meeting, Tallahassee, FL.
- Morey, S.L.**, A.C. Todd, D.S. Dukhovskoy, and M. A. Bourassa (2010), Variability of wind-driven transport in the Florida Big Bend region, 2010 ROMS/TOMS Workshop, Honolulu, HI.

- Morey, S.L.**, M.A. Bourassa, and A.C. Todd (2010), Interannual variability of synoptic scale winds over the northern west Florida shelf from SeaWinds and ASCAT, 2010 International Ocean Vector Winds Meeting, Barcelona, Spain.
- Morey, S.L.**, and D.S. Dukhovskoy (2010), Ocean impacts of interannual variability in the Apalachicola River Discharge, SECOM 2010, Tallahassee, FL.
- Morey, S.L.**, A.J. Kennedy, S.R. Smith, M.L. Griffin, and J.J. O'Brien (2010), Interannual variability of extreme sea level anomalies along the U.S. Gulf of Mexico coastline, Sea Level Rise 2010 Conference, Corpus Christi, TX.
- Morey, S.L.**, and D.S. Dukhovskoy (2010), Modeling the dynamics of energetic deep currents along the Sigsbee Escarpment, *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract PO45E-05.
- Chassignet, E., **S.L. Morey**, D.S. Dukhovskoy, and M.A. Bourassa (2010), Use of a coastal ocean-atmospheric modeling and observing system to examine the variability of transport across the northern west Florida shelf, *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract PO21E-08.
- Dukhovskoy, D.S., and **S.L. Morey** (2010), On the uncertainty of storm surge prediction: Lessons learned from nested simulation of a storm surge in the northeastern Gulf of Mexico, *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract PO35A-10.
- Todd, A.C., **S.L. Morey**, and E. Chassignet (2010), Understanding circulation dynamics and larval transport mechanisms in the Florida Big Bend region using a high-resolution coastal ocean model, *Eos Trans. AGU*, 91(26), Ocean Sci. Meet. Suppl., Abstract PO35A-09.
- Harris, R., C. Pollman, W. Landing, **S.L. Morey**, D. Dukhovskoy, and D. Axelrad (2010), Development of a dynamic mercury cycling model for the Gulf of Mexico, 2010 Goldschmidt Conference, Knoxville, TN.
- Morey, S.L.** (2009), Apalachicola river variability and impacts on the offshore marine environment, Invited Seminar, Center for Water and Air Quality, Florida A&M University.
- Morey, S.L.**, D. Dukhovskoy, A. Todd, and M. Bourassa (2009), Applications and future requirements of satellite vector winds for coastal and shelf studies, Invited Talk, 2009 Scatterometry and Climate Meeting, Arlington, VA.
- Morey, S.L.**, A. Todd, D. Dukhovskoy, and M. Bourassa (2009), Interannual variability of synoptic scale wind forcing over the West Florida Shelf, Gordon Research Conference on Coastal Oceanography, New London, NH.
- Morey, S.L.**, M.A. Bourassa, and D.S. Dukhovskoy (2009), Role of nearshore winds in connecting variability of river discharge with offshore bio-optical properties, 16th Conference on Air-Sea Interaction, American Meteorological Society, Phoenix, AZ.
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- Dukhovskoy, D.S., and **S.L. Morey** (2008), Generation of baroclinic topographic waves by a tropical cyclone impacting a low-latitude continental shelf, 2008 Ocean Sciences Meeting, Orlando, FL.
- Morey, S.L.**, and D.S. Dukhovskoy (2007), Modeling the impact of variability in the Apalachicola River discharge on the northeastern Gulf of Mexico, Gordon Research Conference on Coastal Ocean Modeling, New London, NH.
- Morey, S.L.**, C. Cooper, D.S. Dukhovskoy, and J.J. O'Brien (2007), Modeling intense near-bottom currents along the Sigsbee Escarpment, *Eos Trans. AGU*, 88(23), Jt. Assem. Suppl., Abstract OS53B-04.

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- Dukhovskoy, D.S., M.A. Bourassa, **S.L. Morey**, and J.J. O'Brien (2007), Modeling studies of the ocean response to a tropical cyclone, The Seventh Workshop on Decadal Climate Variability, Waikoloa, Hawaii.
- Morey, S.L.** (2007), The physical oceanographic environment impacting northern Gulf of Mexico deepwater coral communities, 24th Annual Gulf of Mexico Information Transfer Meeting, Minerals Management Service, Kenner, Louisiana.
- Morey, S.L.**, D.S. Dukhovskoy, and J.J. O'Brien (2006), Contribution of a remote forcing mechanism to hurricane storm surge, 13th International Biennial Conference on Physics of Estuaries and Coastal Seas, Astoria, Oregon.
- Dukhovskoy, D.S., **S.L. Morey, S.L.**, and J.J. O'Brien (2006), Modeling topographically trapped waves in the shelf seas, 13th International Biennial Conference on Physics of Estuaries and Coastal Seas, Astoria, Oregon.
- Morey, S.L.** (2007), Seasonal distributions of riverine water in the Gulf of Mexico and impacts on chlorophyll variability, Invited Seminar, Dept. of Marine Science, University of South Carolina.
- Morey, S.L.**, M.A. Bourassa, D.S. Dukhovskoy, and J.J. O'Brien (2006), Modeling the ocean response to air-sea fluxes during tropical cyclones, Caribbean Climate Symposium, Mayaguez, Puerto Rico.
- Dukhovskoy, D.S., **S.L. Morey**, and J.J. O'Brien (2006), The long-wave response of low-latitude shelves to tropical cyclones, Caribbean Climate Symposium, Mayaguez, Puerto Rico.
- Morey, S.L.**, M.A. Bourassa, D.S. Dukhovskoy, and J.J. O'Brien (2006), Numerical simulations of the upper ocean response to tropical cyclones, *Eos Trans. AGU*, 87(36), Ocean Sci. Meet. Suppl., Abstract OS15E-05.
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- Morey, S.L.**, M.A. Bourassa, D.S. Dukhovskoy, and J.J. O'Brien (2006), Satellite scatterometer-derived air-sea fluxes for numerical modeling of the upper ocean response to tropical cyclones, 14th Conference on Interaction of the Sea and Atmosphere, American Meteorology Society, Atlanta, GA.
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- Morey, S. L.**, J. J. O'Brien, and J. Zavala-Hidalgo (2005), Redistribution of riverine water along the continental shelves of the northern and western Gulf of Mexico, *Eos Trans. AGU*, 86(18), Jt. Assem. Suppl., Abstract OS22A-06.
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- Morey, S. L.**, M. A. Bourassa, D. Dukhovskoy, J. J. O'Brien, and J. Zavala-Hidalgo (2004), Modeling the ocean response to air-sea fluxes during energetic episodic atmospheric events, 12th International Biennial Conference on Physics of Estuaries and Coastal Seas, Merida, Mexico.
- Morey, S. L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2003), Mesoscale eddy sensitivity to vertical resolution in a numerical model, *Eos. Trans. AGU*, 84(52), 2004 Ocean Sciences Meeting Supplement, Abstract OS22C-03, Portland, OR.

- Morey, S. L.**, J. J. O'Brien, and J. Zavala-Hidalgo (2003), Impacts of vertical resolution on a numerical model of the Gulf of Mexico, MTS/IEEE Oceans 2003, San Diego, CA.
- Zavala-Hidalgo, J., M. A. Bourassa, **S. L. Morey**, J. J. O'Brien, and P. Yu (2003), A new temporal interpolation method for high-frequency vector wind fields, MTS/IEEE Oceans 2003, San Diego.
- Morey, S. L.**, J. J. O'Brien, and J. Zavala-Hidalgo (2003), Continental slope effects on Gulf of Mexico Loop Current Eddies, *Oceanography*, 16(2), p. 52, The Oceanography Society 2003 Meeting, New Orleans, LA.
- Morey, S. L.**, J. J. O'Brien, W. W. Schroeder, and J. Zavala-Hidalgo (2003), Fresh water export and riverine influences in the northern Gulf of Mexico, 2003 EGS–AGU–EGU Joint Assembly, Nice, France.
- Zavala-Hidalgo, J., **S. L. Morey**, J. J. O'Brien, and L. Zamudio (2003), On the interaction of cyclonic eddies with the Loop Current evolution, 2003 EGS–AGU–EGU Joint Assembly, Nice, France.
- Morey, S. L.**, J. J. O'Brien, W. W. Schroeder, and J. Zavala-Hidalgo (2002), Seasonal variability of the export of river discharged freshwater in the northern Gulf of Mexico, MTS/IEEE Oceans 2002, Biloxi, MS.
- Zavala-Hidalgo, J., **S. L. Morey**, and J. J. O'Brien (2002), On the formation and interaction of cyclonic eddies with the Loop Current using NCOM and a suite of observations, MTS/IEEE Oceans 2002, Biloxi, MS.
- Morey, S. L.**, M. A. Bourassa, X. Jia, J. J. O'Brien, W. W. Schroeder, and J. Zavala-Hidalgo (2002), Modeling the oceanic response to episodic wind forcing over the West Florida Shelf, 11th International Biennial Conference on Physics of Estuaries and Coastal Seas, Hamburg, Germany.
- Schroeder, W. W., **S. L. Morey**, and J. J. O'Brien (2002), Seasonal variability in the near-surface salinity field of the northern and eastern Gulf of Mexico, 11th International Biennial Conference on Physics of Estuaries and Coastal Seas, Hamburg, Germany.
- Leonardi, A. P., **S. L. Morey**, and J. J. O'Brien (2002), Interannual variability in the eastern subtropical North Pacific Ocean, *Eos. Trans. AGU*, 83(22), Western Pacific Geophysics Meeting Supplement, Abstract OS42A-05, Wellington, New Zealand.
- Morey, S. L.**, M. A. Bourassa, X. Jia, J. J. O'Brien, and J. Zavala-Hidalgo (2002), Numerical simulations of the Gulf of Mexico forced by QuikSCAT – derived winds, *Eos. Trans. AGU*, 83(4), Ocean Sciences Meeting Supplement, Abstract OS32D-155, Honolulu, HI.
- Zavala-Hidalgo, J., **S. L. Morey**, and J. J. O'Brien (2002), Circulation on the western shelf of the Gulf of Mexico, *Eos. Trans. AGU*, 83(4), Ocean Sciences Meeting Supplement, Abstract OS41Q-11, Honolulu, HI.
- Schroeder, W. W., **S. L. Morey**, and J. J. O'Brien (2002), Variability of surface salinity in the northern Gulf of Mexico as a consequence of the seasonal redistribution of river-discharged fresh water, *Eos. Trans. AGU*, 83(4), Ocean Sciences Meeting Supplement, Abstract OS51E-03, Honolulu, HI.
- Bourassa, M. A., **S. L. Morey**, J. Zavala-Hidalgo, and J. J. O'Brien (2001), Tropical cyclone forcing in the Gulf of Mexico, 11th Conference on Satellite Meteorology and Oceanography.
- Morey, S. L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2001), Simulations of the Gulf of Mexico using the Navy Coastal Ocean Model, Joint Assemblies of the International Association for Physical Sciences of the Oceans / International Association for Biological Oceanography, Mar del Plata, Argentina.
- Morey, S. L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2001), Eddy pair induced jets as an export mechanism for LATEX shelf water in the western Gulf of Mexico, Gordon Research Conference on Coastal Ocean Circulation, New London, NH.
- Morey, S. L.**, J. Zavala-Hidalgo, and J. J. O'Brien (2001), Along-shelf and cross-shelf fronts in the western Gulf of Mexico, *Oceanography*, 14(1), p. 39, The Oceanography Society 2001 Meeting, Miami, FL.
- Morey, S. L.**, and J. J. O'Brien (2000), The spring transition of thermal stratification on a mid-latitude continental shelf, American Geophysical Union 2000 Fall Meeting, San Francisco, CA.
- Murray, C. P., **S. L. Morey**, and J. J. O'Brien (2000), Interannual variability of upper ocean vorticity balances in the Gulf of Alaska, American Geophysical Union 2000 Ocean Sciences Meeting, San Antonio, TX.

Awards and Honors

1995-1998 National Defense Science and Engineering Graduate Fellowship
2008 DOI/NASA William T. Pecora Award (as member of the QuikSCAT Mission Team)

Professional Organizations

American Geophysical Union
American Society of Limnology and Oceanography

Service Activities

Gulf of Mexico Coastal Ocean Observing System Regional Association Modeling Task Team Member
Gulf of Mexico Alliance Water Quality Team Member
FSU Academic Diving Control Board Member (Chair, 2012-2016)
FSU High Performance Computing Advisory Panel
Navy Research Laboratory Global Ocean Forecast System 3.1 Validation Test Panel
Reviewer for numerous journals and funding agencies

Academic Activities

Doctoral Co-Directive Status, Department of Earth, Ocean and Atmospheric Science, FSU
Ph.D. Committee, E. Kvaleberg, F. Gouillon, A. Todd, T. Shropshire, Florida State University
M.S. Committee, T. Nguyen, R. Nedbor-Gross, N. Crocke, R. Richardson, Florida State University
Senior Honors Thesis Committee, J. Rudzin, Florida State University

Research Funding

NASA Rapid Response – Ultra-Thin Surface Drifter Observations for SPURS-2, P.I., NASA, 2017.
Development of New Drifter Technology for Observing Currents at the Ocean Surface, P.I.,
NOAA/CIMAS, 2016-2017.
Synthesis of Historical Observations using Novel Model Approaches to Improve Understanding and
Predictability of Deep Gulf of Mexico Circulations, P.I., National Academy of Science Gulf Research
Program, 2015-2017.
A Deepwater Ocean Current Hindcast for the Northwestern Gulf of Mexico, P.I., DeepStar, 2015-2016
Increasing our Understanding of the Interaction between Physical and Ecological Processes in the Gulf of
Mexico and Caribbean, P.I., NOAA/NGI, 2014-2016
Hi-Res Environmental Data for Enhanced Ultra-Deep Water Operation Safety, co-P.I. (FSU P.I), Fugro
GEOS/RPSEA, 2014-2016.
Development and Evaluation of Forecasting Techniques for Topographically Trapped Waves along the
Sigsbee Escarpment, P.I. DeepStar, 2012-2014
Weathering and Advection Model for Oil Spill Tracking (WAMOST), co-P.I., BOEM, 2012-2015
Scatterometer-Derived Stress and Ocean Modeling, co-P.I., NASA/JPL, 2010-2019
NGI-BP Earth System Modeling, co-P.I., NOAA/NGI, 2011
Uncertainty Quantification of Oil Spill Transport, co-P.I., NOAA/NGI, 2011
Characteristics of Deep Currents over the Sigsbee Escarpment and Central Slope, P.I., Deepstar, 2010-2012
A Super-Regional Testbed to Improve Models of Environmental Processes on the U.S. Atlantic and Gulf of
Mexico Coasts – Shelf Hypoxia, co-P.I. (FSU P.I.), NOAA/NGI, 2010-2011
A Coordinated Modeling Approach in Support of Oil Spill Tracking, Co-P.I., Florida Institute of
Oceanography, 2010-2011
Landfalling Hurricane Wind and Storm Surge Behavior, Co-P.I., FL Dept. of Financial Serv., 2009-2011
Simulation and Analysis of Intense Currents along the Sigsbee Escarpment, P.I., Deepstar, 2008-2010
Development of a Southeastern United States Real-Time High Resolution Coupled Ocean Atmospheric
Modeling System, Co-P.I., Florida Dept. of Environmental Protection, 2008
Ocean Vector Winds Science Team, Co-P.I., NASA, 2006 – 2010

Analysis of the Variability of Apalachicola Bay Water Properties in Response to Variations in the Apalachicola River Discharge Rate, P.I., Florida Dept. of Environmental Protection, 2006 – 2007
Development of a Model of Strong Currents near the Sigsbee Escarpment, P.I., DeepStar, 2006 – 2007
Characterization of Gulf of Mexico Deepwater Hard Bottom Communities with Emphasis on *Lophelia* Coral, Co-P.I., Minerals Management Service, 2004 – 2006
Validation of a Gulf of Mexico Loop Current Forecast Model, Co-P.I. (FSU P.I.), DeepStar, 2004

Field Experience

FSU Academic Diving Program Science Diver 2007-Present (over 70 logged dives from the *R/V Seminole*, *R/V Apalachee*, and FSU small boats)

Chief Scientist, Surface drifter deployment cruise (NOAA-funded), Gulf of Mexico, January, 2017

R. V. Seward-Johnson II / Johnson Sea-Link Submersible, Gulf of Mexico, July, 2004

NOAA Ship *Ka'imimoana*, Pacific Ocean, August – September, 1996