

## CARTHE Publications Quarterly Report

### Quick Statistics

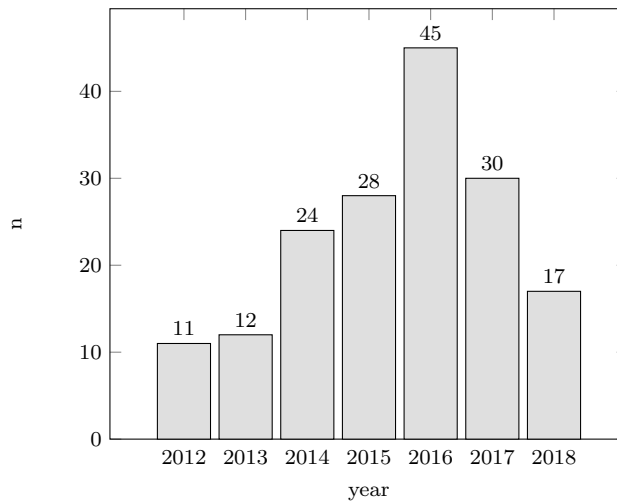
Total number of publications:	167
Total number of citations:	1737
Number of publications <i>In press</i> :	1
Number of publications <i>Accepted</i> :	6

### Citation Indices

Citation indices	All	Since 2010
Citations	1737	1706
h-index	19	19
i10-index	50	49

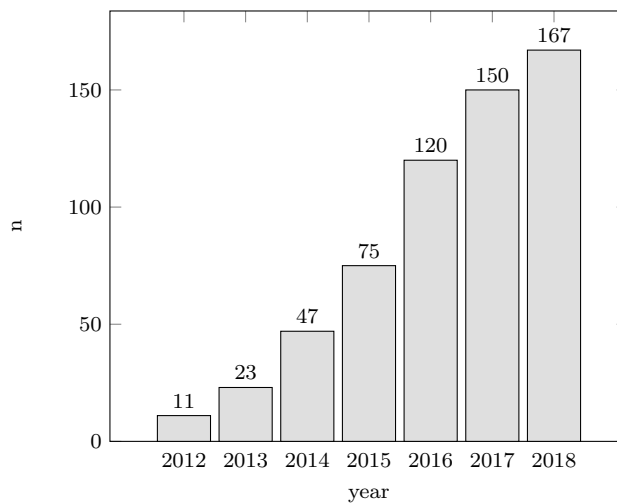
### Publications by Year

Year	n
2012	11
2013	12
2014	24
2015	28
2016	45
2017	30
2018	17
total	167



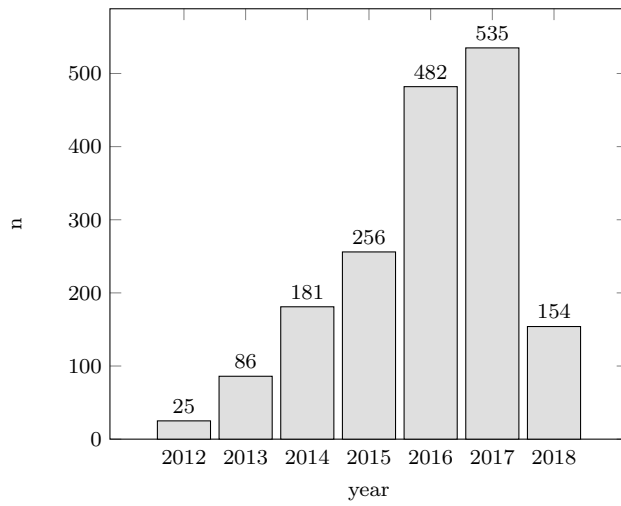
### Publications by Year - Cumulative

Year	n
2012	11
2013	23
2014	47
2015	75
2016	120
2017	150
2018	167
total	167



**Citations by Year**

Year	n
2012	25
2013	86
2014	181
2015	256
2016	482
2017	535
2018	154
Total	1719



**Publications by Journal**

Number of different journals: 52

n	Journal
26	Journal of Geophysical Research
20	Ocean Modelling
13	Geophysical Research Letters
10	Journal of Atmospheric and Oceanic Technology
8	Monthly Weather Review
8	Journal of Physical Oceanography
6	Nature.com/Scientific Reports
4	Proceedings of the National Academy of Sciences
4	Deep-Sea Research II
3	Journal of Fluid Mechanics
2	Water Resources Research
2	Transactions on Geoscience and Remote Sensing
2	Quarterly Journal of the Royal Meteorological Society
2	Physics of Fluids
2	Physica D
2	Optics Express
2	Oceanography
2	Ocean Dynamics
2	Nonlinear Processes in Geophysics
2	Marine Pollution Bulletin
2	Environmental Science and Technology
2	Continental Shelf Research
2	Computers and Fluids
2	Computational Geosciences

**Publications by Journal - continued**

---

n	Journal
1	Polar Science
1	Physics Letters A
1	Ocean Science
1	Ocean Science Discussions
1	New Journal of Physics
1	Limnology and Oceanography
1	Journal of the Atmospheric Sciences
1	Journal of Waterway, Port, Coastal, and Ocean Engineering
1	Journal of Turbulence
1	Journal of Marine Science and Engineering
1	Journal of Computational Physics
1	Journal of Coastal Research
1	International Journal of Computational Fluid Dynamics
1	ISPRS Journal of Photogrammetry and Remote Sensing
1	IEEE Journal of Oceanic Engineering
1	Harmful Algae
1	Fluids
1	Estuarine, Coastal and Shelf Science
1	Eos, Transactions AGU
1	Environmental Fluid Mechanics
1	Elementa: Science of the Anthropocene
1	Deep-Sea Research I
1	Deep Sea Research Part I
1	Communications in Nonlinear Science and Numerical Simulation
1	Chaos
1	Canadian Journal of Remote Sensing
1	Atmospheric Research
1	Annual Review of Marine Science

---

**Publications by BibTeX Type**

n	BibTeX Type
159	article
1	book
4	inbook
2	incollection
1	inproceedings

**Most Prolific Authors**

Total number of unique authors: 345

Showing those with 6 or more publications.

n	Author
46	Özgökmen
21	Haus
18	Poje
17	Olascoaga
17	Jacobs
17	Chen
16	Huntley
16	Beron-Vera
15	Laxague
15	Kirwan
14	Soloviev
13	Reniers
13	Lipphardt
13	Iskandarani
13	Haza
12	Bogucki
11	Novelli
11	Dawson
11	Curcic
10	Srinivasan
10	Smith
10	Ryan
10	Knio
9	Griffa
9	Boufadel
8	Wang
8	Thacker
8	Hogan
8	Geng
8	Dewar
8	Coelho
7	Wei
7	Mariano
7	Lee
7	Haller
6	Zhu
6	Matt
6	MacMahan
6	Judt

**BibTeX Citations****A**

Aizinger-etal-2013 [1]

**B**

Bachman-etal-2017 [2]

Barkin-etal-2017a [3]

Barkin-etal-2017b [4]

Benbow-etal-2017 [5]

Beron-Vera-2014 [6]

Beron-Vera-2015 [7]

Beron-Vera-LaCasce-2016 [8]

Beron-Vera-etal-2016 [9]

Beron-Vera-etal-2018 [10]

Berta-etal-2015 [11]

Berta-et-al-2016 [12]

Bogucki-etal-2012 [13]

Bogucki-Spiers-2013 [14]

Bogucki-etal-2015 [15]

Bogucki-Domaradzki-2015 [16]

Bogucki-etal-2018 [17]

Boufadel-etal-2018 [18]

Brouwer-etal-2015 [19]

**C**

Carrier-etal-2014 [20]

Carrier-etal-2016 [21]

Chang-etal-2018 [22]

Chanton-etal-2015 [23]

Chen-Curcic-2016 [24]

Choi-etal-2017 [25]

Chua-Xu-2017 [26]

Coelho-etal-2015 [27]

Curcic-etal-2016 [28]

**D**

D'Asaro-etal-2018 [29]

Dean-etal-2016 [30]

Deremble-2016 [31]

Dewar-etal-2015 [32]

Dewar-etal-2016 [33]

Dietrich-etal-2012 [34]

Dietrich-etal-2013 [35]

Dietrich-etal-2018 [36]

Donelan-etal-2012 [37]

Duran-etal-2018 [38]

**F**

Fabregat-etal-2015 [39]

Fabregat-etal-2016 [40]

Fabregat-etal-2016b [41]

Fabregat-etal-2017 [42]

Fabregat-etal-2017b [43]

Fiorentino-etal-2014 [44]

Frank-etal-2017 [45]

Fredj-etal-2016 [46]

Fujimura-etal-2016 [47]

**G**

Geng-etal-2015-a [48]

Geng-etal-2015-b [49]

Geng-etal-2016-a [50]

Geng-etal-2016-b [51]

Geng-etal-2016-c [52]

Geng-Boufadel-2017 [53]

Golshan-etal-2017 [54]

Golshan-etal-2018 [55]

Goncalves-etal-2016 [56]

Goni-etal-2015 [57]

Gough-etal-2016 [58]

Graham-etal-2017 [59]

**H**

Hajieghrary-etal-2016 [60]

Haller-Beron-Vera-2012 [61]

Haller-Beron-Vera-2013 [62]

Haller-Beron-Vera-2014 [63]

Halliwell-etal-2014 [64]

Hamilton-etal-2015 [65]

Haza-etal-2014 [66]

Haza-etal-2016 [67]

Haza-etal-2018 [68]

Howe-etal-2018 [69]

Huguenard-etal-2016 [70]

Huntley-etal-2015 [71]

**I**

Iskandarani-etal-2016a [72]  
Iskandarani-etal-2016b [73]

**J**

Jacobs-etal-2014-a [74]  
Jacobs-etal-2014-b [75]  
Jacobs-etal-2016 [76]  
Joye-etal-2014 [77]  
Joye-etal-2016 [78]  
Judt-Chen-2015 [79]  
Judt-etal-2016-a [80]  
Judt-etal-2016-b [81]  
Juha-etal-2017 [82]

**K**

Katz-Zhu-2017 [83]  
Kurata-etal-2016 [84]  
Kirwan-etal-2018 [85]

**L**

Laurindo-etal-2017 [86]  
Laxague-etal-2015 [87]  
Laxague-etal-2017 [88]  
Laxague-etal-2017b [89]  
Laxague-etal-2018 [90]  
Lee-Chen-2014 [91]  
Li-etal-2016 [92]  
Li-etal-2017 [93]  
Lumpkin-etal-2017 [94]  
Lund-etal-2018 [95]

**M**

Mandli-Dawson-2014 [96]  
Mariano-etal-2016 [97]  
Marques-Ozgokmen-2014 [98]  
Matt-etal-2014 [99]  
Mayo-etal-2014 [100]  
Maze-etal-2015 [101]  
Mensa-etal-2015 [102]  
Mensa-Timmermans-2017 [103]  
Mensa-etal-2018 [104]  
Miron-etal-2017 [105]  
Muscarella-etal-2015 [106]

**N**

Novelli-etal-2017 [107]

**O**

Olascoaga-Haller-2012 [108]  
Olascoaga-etal-2013 [109]  
Ortiz-Suslow-etal-2015 [110]  
Ozgokmen-Fischer-2012 [111]  
Ozgokmen-etal-2012 [112]  
Ozgokmen-etal-2014 [113]  
Ozgokmen-etal-2016 [114]

**P**

Panteleev-etal-2013 [115]  
Panteleev-etal-2015 [116]  
Pendergraft-Rosenheim-2014 [117]  
Poje-etal-2014 [118]  
Poje-etal-2017 [119]

**R**

Rascle-etal-2017 [120]  
Restrepo-etal-2014-a [121]  
Restrepo-etal-2014-b [122]  
Romero-etal-2016 [123]  
Rosenheim-etal-2016 [124]  
Rosenthal-etal-2017 [125]  
Roth-etal-2017 [126]

**S**

Sarafraz-Haus-2016 [127]  
Schroeder-etal-2012 [128]  
Shcherbina-etal-2018 [129]  
Sinha-etal-2015 [130]  
Siripatana-etal-2017 [131]  
Smith-etal-2016 [132]  
Soloviev-etal-2012-a [133]  
Soloviev-etal-2012-b [134]  
Soloviev-Lukas-2014 [135]  
Soloviev-etal-2014 [136]  
Soloviev-etal-2015 [137]  
Soloviev-etal-2016 [138]  
Soloviev-etal-2017 [139]  
Soloviev-etal-2017b [140]  
Sraj-etal-2013 [141]



Sraj-etal-2014 [142]  
Sulman-etal-2012 [143]  
Sulman-etal-2013-a [144]  
Sulman-etal-2013-b [145]  
Suzuki-Fox-Kemper-2016 [146]  
Suzuki-etal-2016 [147]

**T**

Thacker-etal-2015 [148]

**V**

Valle-Levinson-etal-2015 [149]

**W**

Walker-etal-2016 [150]  
Walker-etal-2017 [151]  
Wang-Ozgekmen-2015 [152]  
Wang-Ozgekmen-2016 [153]  
Wang-etal-2016a [154]

Wang-etal-2018 [155]  
Wang-Ozgekmen-2018 [156]  
Wei-etal-2013 [157]  
Wei-etal-2014 [158]  
Wei-etal-2016 [159]  
Winokur-etal-2013 [160]

**Y**

Yaremchuk-etal-2016 [161]  
Yaremchuk-Coelho-2015 [162]  
Yaremchuk-Martin-2014 [163]

**Z**

Zhao-etal-2016 [164]  
Zhu-Furst-2013 [165]  
Zhu-2015 [166]  
Zhu-etal-2016 [167]

## References

- [1] V. Aizinger, J. Proft, C. Dawson, D. Pothina, and S. Negusse. A three-dimensional discontinuous galerkin model applied to the baroclinic simulation of corpus christi bay. *Ocean Dynamics*, 63(1):89–113, 2013.
- [2] S.D. Bachman, B. Fox-Kemper, J.R. Taylor, and L.N. Thomas. Parameterization of frontal symmetric instabilities. i: Theory for resolved fronts. *Ocean Modelling*, 109:72–95, 2017.
- [3] R. Barkan, J.C. McWilliams, A.F. Shchepetkin, J. Molemaker, L. Renault, A. Bracco, and J. Choi. Submesoscale dynamics in the northern gulf of mexico. part i: Regional and seasonal characterization, and the role of river outflow. *Journal of Physical Oceanography*, 47(9):2325–2346, 2017.
- [4] R. Barkan, J.C. McWilliams, J. Molemakera, J. Choi, K. Srinivasan, A.F. Shchepetkin, and A. Bracco. Submesoscale dynamics in the northern gulf of mexico. part ii: Temperature-salinity relations and cross shelf transport processes. *Journal of Physical Oceanography*, 47(9):2347–2360, 2017.
- [5] Charlotte A. Benbow, Jamie H. MacMahan, and Edward B. Thornton. Analysis of surface foam holes associated with depth-limited breaking. *Journal of Coastal Research*, 33(6):1271–1282, 2017.
- [6] F.J. Beron-Vera. Flow coherence: Distinguishing cause from effect. In G. Ruiz Chavarria, editor, *Topics in Fluid Mechanics*, pages 81–89. Springer, 2014.
- [7] F.J. Beron-Vera, M.J. Olascoaga, G. Haller, M. Farazmand, J. Trinanes, and Y. Wang. Dissipative inertial transport patterns near coherent lagrangian eddies in the ocean. *Chaos*, 25(8):087412, 2015.
- [8] F.J. Beron-Vera and J. H. LaCasce. Statistics of simulated and observed pair separations in the gulf of mexico. *Journal of Physical Oceanography*, 46(7):2183–2199, 2016.
- [9] F.J. Beron-Vera, M.J. Olascoaga, and R. Lupkin. Inertia-induced accumulation of flotsam in the subtropical gyres. *Geophysical Research Letters*, 43(23):12228–12233, 2016.
- [10] Francisco J Beron-Vera, Alireza Hadjighasem, Qiong Xia, Maria J Josefina Olascoaga, and George Haller. Coherent lagrangian swirls among submesoscale motions. *Proceedings of the National Academy of Sciences*, 2018. accepted.
- [11] M. Berta, A. Griffa, M. Magaldi, T. Özgökmen, A. Poje, A. Haza, and J. Olascoaga. Improved surface velocity and trajectory estimates in the gulf of mexico from blended satellite altimetry and drifter data. *Journal of Atmospheric and Oceanic Technology*, 32(10):1880–1901, 2015.

- [12] M. Berta, A. Griffa, T. M. Özgökmen, and A.C. Poje. Submesoscale evolution of surface drifter triads in the gulf of mexico. *Geophysical Research Letters*, 43(22):11751–11759, 2016.
- [13] D. J. Bogucki, H. Luo, and J. A. Domaradzki. Experimental evidence of the kraichnan scalar spectrum at high reynolds numbers. *Journal of Physical Oceanography*, 42(10):1717–1728, 2012.
- [14] D. J. Bogucki and G. Spiers. What percentage of the oceanic mixed layer is accessible to marine lidar? global and the gulf of mexico prospective. *Optics Express*, 20(21):23997–24014, 2013.
- [15] D.J. Bogucki, K. Huguenard, B.K. Haus, T.M. Özgökmen, A. Reniers, and N. J. M. Laxague. Scaling laws for the upper-ocean temperature dissipation rate. *Geophysical Research Letters*, 42(3):839–846, 2015.
- [16] D.J. Bogucki and J. A. Domaradzki. Temperature gradient spectra and temperature dissipation rate in a turbulent convective flow. *Journal of Turbulence*, 16(12):1179–1198, 2015.
- [17] Darek J. Bogucki, Julian A. Domaradzki, and Paul von Allmen. Polarimetric lidar measurements of aquatic turbulence - laboratory experiment. *Optics Express*, 26(6):6806–6816, 2018.
- [18] Michel C. Bouffadel, Feng Gao, Lin Zhao, Tamay Özgökmen, Richard Miller, Thomas King, Brian Robinson, Kenneth Lee, and Ira Leifer. Was the deepwater horizon well discharge churn flow? Implications on the estimation of the oil discharge and droplet size distribution. *Geophysical Research Letters*, 2018. accepted.
- [19] R.L. Brouwer, M.A. de Schipper, P.F. Rynne, F.J. Graham, A. J.H.M. Reniers, and J.H. MacMahan. Surfzone monitoring using rotary wing unmanned aerial vehicles. *Journal of Atmospheric and Oceanic Technology*, 32(4):855–863, 2015.
- [20] M. Carrier, H. Ngodock, S. Smith, P. Muscarella, G. Jacobs, T. Özgökmen, B. Haus, and B. Lipphardt. Impact of assimilating ocean velocity observations inferred from lagrangian drifter data using the ncom-4dvar. *Monthly Weather Review*, 142(4):1509–1524, 2014.
- [21] Matthew J. Carrier, Hans E. Ngodock, Philip Muscarella, and Scott Smith. Impact of assimilating surface velocity observations on the model sea surface height using the ncom-4dvar. *Monthly Weather Review*, 144(3):1051–1068, 2016.
- [22] H. Chang, H.S. Huntley, A.D. Kirwan, Jr., B.L. Lipphardt, Jr., and M.H.M. Sulman. Transport structures in a 3d periodic flow. *Communications in Nonlinear Science and Numerical Simulation*, 61:84–103, 2018. in press.
- [23] Jeffrey Chanton, Tingting Zhao, Brad E. Rosenheim, Samantha Joye, Samantha Bosman, Charlotte Brunner, Kevin M. Yeager, Arne R. Diercks, and David Hollander. Using natural abundance radiocarbon to trace the flux of petrocarbon to the

- seafloor following the deepwater horizon oil spill. *Environmental Science and Technology*, 49(2):847–854, 2015.
- [24] Shuyi S. Chen and Milan Curcic. Ocean surface waves in hurricane ike (2008) and superstorm sandy (2012): Coupled model predictions and observations. *Ocean Modelling*, 103:161–176, 2016.
- [25] J. Choi, A. Bracco, R. Barkan, A. F. Shchepetkin, J.C. McWilliams, and J. Molemaker. Submesoscale dynamics in the northern gulf of mexico. part iii: Lagrangian implications. *Journal of Physical Oceanography*, 47(9):2361–2376, 2017.
- [26] Boon S. Chua and Liang Xu. *Representer-Based Variational Data Assimilation Systems: A Review*, pages 71–81. Springer, 2017.
- [27] E. Coelho, P. Hogan, G. Jacobs, P. Thoppil, H. Huntley, B. Haus, B. Lipphardt, Jr., A. D. Kirwan, Jr., E. H. Ryan, J. Olascoaga, G. Novelli, F. Beron-Vera, A. C. Haza, A. C. Poje, A. Griffa, T.M. Özgökmen, D. Bogucki, S. S. Chen, M. Curcic, M. Iskandarani, F. Judt, N. Laxague, A. J. Mariano, A.J.H.M. Reniers, C. Smith, A. Valle-Levinson, and M. Wei. Ocean current estimation using a multi-model ensemble kalman filter during the grand lagrangian deployment experiment (GLAD). *Ocean Modelling*, 87:86–106, 2015.
- [28] Milan Curcic, Shuyi S. Chen, and Tamay M. Özgökmen. Hurricane-induced ocean waves and stokes drift and their impacts on surface transport and dispersion in the gulf of mexico. *Geophysical Research Letters*, 43(6):2773–2781, 2016.
- [29] E. D’Asaro, A. Shcherbina, J.M. Klymak, J. Molemaker, G. Novelli, C.M. Guigand, A. Haza, B. Haus, E.H. Ryan, G.A. Jacobs and H.S. Huntley, N.J.M. Laxague, S. Chen and F. Judt, J.C. McWilliams, R. Barkan, A.D. Kirwan, Jr., A.C. Poje, and Tamay M. Özgökmen. Ocean convergence and dispersion of flotsam. *Proceedings of the National Academy of Sciences*, 115(6):1162–1167, 2018.
- [30] Cayla Dean, Alexander Soloviev, Amy Hirons, Tamara Frank, and Jon Wood. Biomixing due to diel vertical migrations of zooplankton: Comparison of computational fluid dynamics model with observations. *Ocean Modelling*, 98:51–64, 2016.
- [31] Bruno Deremble. Convective plumes in rotating systems. *Journal of Fluid Mechanics*, 799(7):27–55, 2016.
- [32] W.K. Dewar, J. Schoonover, T.J. McDougall, and W.R. Young. Semicompressible ocean dynamics. *Journal of Physical Oceanography*, 45(1):149156, 2015.
- [33] William K. Dewar, Joseph Schoonover, Trevor McDougall, and Rupert Klein. Semicompressible ocean thermodynamics and boussinesq energy conservation. *Fluids*, 1(2):9, 2016.
- [34] J.C. Dietrich, C.J. Trahan, M.T. Howard, J.G. Fleming, R.J. Weaver, S. Tanaka, L. Yu, R.A. Luettich, Jr., C.N. Dawson, G. Wells, J.J. Westerink, A. Lu, K. Vega, A. Kubach,

- K.M. Dresback, R.L. Kolar, C. Kaiser, and R.R. Twilley. Surface trajectories of oil transport along the northern coastline of the gulf of mexico. *Continental Shelf Research*, 41:17–47, 2012.
- [35] J.C. Dietrich, C.N. Dawson, J.M. Proft, M.T. Howard, G. Wells, J.G. Fleming, R.A. Luettich, Jr., J.J. Westerink, Z. Cobell, M. Vitse, H. Lander, B.O. Blanton, C.M. Szpilka, and J.H. Atkinson. *Real-Time Forecasting and Visualization of Hurricane Waves and Storm Surge Using SWAN+ADCIRC and FigureGen*, volume 156, pages 49–70. The IMA Volumes in Mathematics and its Applications, 2013.
- [36] Joel Casey Dietrich, Adnan Muhammad, Milan Curcic, Arash Fathi, Clint Dawson, Shuyi Chen, and Rick Luettich. Sensitivity of storm surge predictions to atmospheric forcing during hurricane isaac (2012). *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 144(1):04017035, 2018.
- [37] M. A. Donelan, M. Curcic, S. S. Chen, and A. K. Magnusson. Modeling waves and wind stress. *Journal of Geophysical Research*, 117(C11):C00J23, 2012.
- [38] Rodrigo Duran, Francisco J Beron-Vera, and Maria J Olascoaga. Extracting quasi-steady lagrangian transport patterns from the ocean circulation: An application to the gulf of mexico. *Nature.com/Scientific Reports*, 2018. accepted.
- [39] A. Fabregat, W.K. Dewar, T.M. Özgökmen, A.C. Poje, and N. Wienders. Numerical simulations of turbulent thermal, bubble and hybrid plumes. *Ocean Modelling*, 90:16–28, 2015.
- [40] A.T. Fabregat, A.C. Poje, T.M. Özgökmen, and W.K. Dewar. Effects of rotation on turbulent buoyant plumes in stratified environments. *Journal of Geophysical Research*, 121(8):5397–5417, 2016. Gulf Oil Spill special section.
- [41] A.T. Fabregat, B. Deremble, A.C. Poje, T.M. Özgökmen, and W.K. Dewar. Dynamics of multiphase turbulent plumes with hybrid buoyancy sources in stratified environments. *Physics of Fluids*, 28(9):095109, 2016.
- [42] A.T. Fabregat, A.C. Poje, T.M. Özgökmen, and W.K. Dewar. Numerical simulations of rotating bubble plumes in stratified environments. *Journal of Geophysical Research*, 122(8):6795–6813, 2017.
- [43] A. Fabregat, B. Deremble, N. Wienders, A. Stroman, A.C. Poje, T.M. Özgökmen, and W.K. Dewar. Rotating 2d point source plume models with application to deep water horizon. *Ocean Modelling*, 119:118–135, 2017.
- [44] L. Fiorentino, M.J. Olascoaga, and A.D.K.J. Reniers. Analysis of water quality and circulation of four recreational miami beaches through the use of lagrangian coherent structures. *Marine Pollution Bulletin*, 83(1):181–189, 2014.
- [45] D. Frank, J. R. Landel, S. B. Dalziel, and P. F. Linden. Anticyclonic precession of a plume in a rotating environment. *Geophysical Research Letters*, 44(18):9400–9407, 2017.

- [46] Erick Fredj, Daniel Carlson, Yael Amitai, Avi Gozolchiani, and Hezi Gildor. The particle tracking and analysis toolbox (PaTATO) for matlab. *Limnology and Oceanography*, 14(9):586–599, 2016.
- [47] Atsushi Fujimura, Alexander Soloviev, Shin Hyung Rhee, and Roland Romeiser. Coupled model simulation of wind stress effect on far wakes of ships in sar images. *Transactions on Geoscience and Remote Sensing*, 54(5):2543–2551, 2016.
- [48] X. Geng, M. C. Boufadel, K. Lee, S. Abrams, and M. Suidan. Biodegradation of subsurface oil in a tidally influenced sand beach: Impact of hydraulics and interaction with pore water chemistry. *Water Resources Research*, 51(5):3193–3218, 2015.
- [49] X. Geng and M. C. Boufadel. Impacts of evaporation on subsurface flow and salt accumulation in a tidally influenced beach. *Water Resources Research*, 51(7):55475565, 2015.
- [50] X. Geng, M. C. Boufadel, T. Özgökmen, T. King, K. Lee, Y. Lu, and L. Zhao. Oil droplets transport due to irregular waves: Development of large-scale spreading coefficients. *Marine Pollution Bulletin*, 104(1-2):279–289, 2016.
- [51] Xiaolong Geng, Zhong Pan, Michel C. Boufadel, Tamay Özgökmen, Kenneth Lee, and Lin Zhao. Simulation of oil bioremediation of a tidally-influenced beach: Spatiotemporal evolution of nutrient and dissolved oxygen. *Journal of Geophysical Research*, 121(4):2385–2404, 2016. Gulf Oil Spill special section.
- [52] Xiaolong Geng, Michel C. Boufadel, and Nancy Jackson. Evidence of salt accumulation in beach intertidal zone due to evaporation. *Nature.com/Scientific Reports*, 6:31486, 2016.
- [53] Xiaolong Geng and Michel C. Boufadel. Spectral responses of gravel beaches to tidal signals. *Nature.com/Scientific Reports*, 7:40770, 2017.
- [54] R. Golshan, A.E. Tejada-Martinez, M. Juha, and Y. Bazilevs. Les and rans simulation of wind- and wave-forced oceanic turbulent boundary layers in shallow water with wall modeling. *Computers and Fluids*, 142:96–108, 2017.
- [55] Roozbeh Golshan, Michel C. Boufadel, Victor A. Rodriguez, Xiaolong Geng, Feng Gao, Thomas King, Brian Robinson, and Andrs E. Tejada-Martnez. Oil droplet transport under non-breaking waves: An eulerian rans approach combined with a lagrangian particle dispersion model. *Journal of Marine Science and Engineering*, 6(1):7, 2018. Special Issue Marine Oil Spills 2018.
- [56] Rafael C. Gonçalves, Mohamed Iskandarani, Ashwanth Srinivasan, Carlisle Thacker, Eric Chassignet, and Omar M. Knio. A framework to quantify uncertainty in simulations of oil transport in the ocean. *Journal of Geophysical Research*, 121(4):2058–2077, 2016.

- [57] G. J. Goni, J. A. Trinanes, A. MacFadyen, D. Streett, M. J. Olascoaga, M. L. Imhoff, F. Muller-Karger, and M. A. Roffer. *Variability of the Deepwater Horizon Surface Oil Spill Extent and its Relationship to Varying Ocean Currents and Extreme Weather Conditions*, volume 2, pages 1–22. Springer, 2015.
- [58] M. K. Gough, A. J.H.M. Reniers, J. H. MacMahan, and S. D. Howden. Resonant near-surface inertial oscillations in the northeastern gulf of mexico. *Journal of Geophysical Research*, 121(4):2163–2182, 2016. Gulf Oil Spill special section.
- [59] Lindley Graham, Troy Butler, Scott Walsh, Clint Dawson, and Joannes J. Westerink. A measure-theoretic algorithm for estimating bottom friction in a coastal inlet: Case study of bay st. louis during hurricane gustav (2008). *Monthly Weather Review*, 145(3):929–954, 2017.
- [60] Hadi Hajieghrary, M. Ani Hsieh, and Ira B. Schwartz. Multi-agent search for source localization in a turbulent medium. *Physics Letters A*, 380(20):1698–1705, 2016.
- [61] G. Haller and F.J. Beron-Vera. Geodesic theory of transport barriers in two-dimensional flows. *Physica D*, 241(20):1680–1702, 2012.
- [62] G. Haller and F.J. Beron-Vera. Coherent lagrangian vortices: The black holes of turbulence. *Journal of Fluid Mechanics*, 731:R4, 2013.
- [63] G. Haller and F.J. Beron-Vera. Appendices for coherent lagrangian vortices: the black holes of turbulence.. *Journal of Fluid Mechanics*, 775:R3, 2014.
- [64] G. R. Halliwell, Jr., A. Srinivasan, V. Kourafalou, H. Yang, D. Willey, M. Le Henaff, and R. Atlas. Rigorous evaluation of a fraternal twin ocean osse system for the open gulf of mexico. *Journal of Atmospheric and Oceanic Technology*, 31(1):105–130, 2014.
- [65] B. Hamilton, C. Dean, N. Kurata, K. Vella, A. Soloviev, A. Tartar, M. Shivji, S. Matt, W. Perrie, S. Lehner, and B. Zhang. Surfactant associated bacteria in the sea surface microlayer: Case studies in the straits of florida and the gulf of mexico. *Canadian Journal of Remote Sensing*, 41(2):135–143, 2015.
- [66] A.C. Haza, T.M. Özgökmen, A. Griffa, A.C. Poje, and M.-P. Lelong. How does drifter position uncertainty affect ocean dispersion estimates? *Journal of Atmospheric and Oceanic Technology*, 31(12):2809–2828, 2014.
- [67] Angelique Haza, Tamay M Özgökmen, and Patrick J Hogan. Impact of submesoscales on surface material distribution in a gulf of mexico mesoscale eddy. *Ocean Modelling*, 107(11):28–47, 2016.
- [68] A. Haza, E. DAsaro, H. Chang, S. Chen, M. Curcic, C. Guigand, H.S. Huntley, G. Jacobs, G. Novelli, T.M. Özgökmen, A.C. Poje, E. Ryan, and A. Shcherbina. Drogue-loss detection of surface drifters during the lagrangian submesoscale experiment (LASER). *Journal of Atmospheric and Oceanic Technology*, 2018. accepted.

- [69] K.L. Howe, C.D. Dean, J. Kluge, A.V. Soloviev, A. Tartar, M. Shivji, S. Lehner, and W. Perrie. Relative abundance of bacillus spp., surfactant-associated bacterium present in a natural sea slick observed by satellite sar imagery over the gulf of mexico. *Elementa: Science of the Anthropocene*, 6(1:8):1–8, 2018. Special Collection: Special Feature: The sea surface microlayer.
- [70] K. D. Huguenard, D. J. Bogucki, D. G. Ortiz-Suslow, N. J. M. Laxague, J. H. MacMahanc, T. M. Özgökmen, B. K. Haus, A. J. H. M. Reniers, J. Hargrove, A.V. Soloviev, and H. Graber. On the nature of the frontal zone of the choctawhatchee bay plume in the gulf of mexico. *Journal of Geophysical Research*, 121(2):1322–1345, 2016. Gulf Oil Spill special section.
- [71] H.S. Huntley, B.L. Lipphardt, Jr., G. Jacobs, and A.D. Kirwan, Jr. Clusters, deformation, and dilation: Diagnostics for material accumulation regions. *Journal of Geophysical Research*, 120(10):6622–6636, 2015. Gulf Oil Spill special section.
- [72] M. Iskandarani, S. Wang, A. Srinivasan, W. Thacker, J. Winokur, and O. Knio. An overview of uncertainty quantification techniques with application to oceanic and oil-spill simulations. *Journal of Geophysical Research*, 121(4):2789–2808, 2016. Gulf Oil Spill special section.
- [73] M. Iskandarani, M. Le He naff, W. C. Thacker, A. Srinivasan, and O. M. Knio. Quantifying uncertainty in gulf of mexico forecasts stemming from uncertain initial conditions. *Journal of Geophysical Research*, 121(7):4819–4832, 2016. Gulf Oil Spill special section.
- [74] G. Jacobs, J. G. Richman, J. D. Doyle, P. Spence, B. Bartels, C. N. Barron, R. Helber, and F. Bub. Simulating conditional deterministic predictability within ocean frontogenesis. *Ocean Modelling*, 78:1–16, 2014.
- [75] G.A. Jacobs, B.P. Bartels, D.J. Bogucki, F.J. Beron-Vera, S.S. Chen, E.F. Coelho, M. Curcic, A. Griffa, M. Gough, B.K. Haus, A.C. Haza, R.W. Helber, P.J. Hogan, H.S. Huntley, M. Iskandarani, F. Judt, A.D. Kirwan, Jr., N. Laxague, A. Valle-Levinson, B.L. Lipphardt, Jr., A.J. Mariano, H.E. Ngodock, G. Novelli, M.J. Olascoaga, T.M. Özgökmen, A.C. Poje, A. J.H.M. Reniers, C.D. Rowley, E.H. Ryan, S.R. Smith, P.L. Spence, P.G. Thoppil, and M. Wei. Data assimilation considerations for improved ocean predictability during the gulf of mexico grand lagrangian deployment (GLAD). *Ocean Modelling*, 83:98–117, 2014.
- [76] Gregg A. Jacobs, Helga S. Huntley, A. D. Kirwan, Jr., Bruce L. Lipphardt, Jr., Timothy Campbell, Travis Smith, Kacey Edwards, and Brent Bartels. Ocean processes underlying surface clustering. *Journal of Geophysical Research*, 121(1):180–197, 2016. Gulf Oil Spill special section.
- [77] S.B. Joye, J. Montoya, S. Murawski, T. Özgökmen, T. Wade, R. Montuoro, B. Roberts, D. Hollander, W. Jeffrey, and J. Chanton. A rapid response study of the hercules gas well blowout. *Eos, Transactions AGU*, 95(38):341–342, 2014. 23 September 2014.



- [78] Samantha B. Joye, Annalisa Bracco, Tamay M. Özgökmen, Jeffrey P. Chanton, Martin Grosell, Ian R. MacDonald, Erik E. Cordes, Joseph P. Montoya, and Uta Passow. The gulf of mexico ecosystem, six years after the macondo oil well blowout. *Deep-Sea Research II*, 129:4–19, 2016.
- [79] F. Judt and S. S. Chen. A new aircraft hurricane wind climatology and applications in assessing predictive skill of tropical cyclone intensity using high-resolution ensemble forecasts. *Geophysical Research Letters*, 42(14):60436050, 2015.
- [80] F. Judt, S. Chen, and J. Berner. Predictability of tropical cyclone intensity: Scale-dependent forecast error growth in high-resolution stochastic kinetic-energy backscatter ensembles. *Quarterly Journal of the Royal Meteorological Society*, 142(694):43–57, 2016.
- [81] Falko Judt, Shuyi S. Chen, and Milan Curcic. Atmospheric forcing of the upper ocean transport in the gulf of mexico: From seasonal to diurnal scales. *Journal of Geophysical Research*, 121(6):4416–4433, 2016. Gulf Oil Spill special section.
- [82] Mario J. Juha, Jie Zhang, and Andrs E. Tejada-Martinez. Large scale structures in les of an oscillating open channel flow under the influence of surface cooling. *Computers and Fluids*, 158(24):96–106, 2017.
- [83] Jeremy Katz and Ping Zhu. Evaluation of surface layer flux parameterizations using in-situ observations. *Atmospheric Research*, 194:150–163, 2017.
- [84] Naoko Kurata, Kate Vella, Bryan Hamilton, Mahmood Shivji, Alexander Soloviev, Silvia Matt, Aurlien Tartar, and William Perrie. Surfactant-associated bacteria in the near-surface layer of the ocean. *Nature.com/Scientific Reports*, 6(19123), 2016.
- [85] A.D. Kirwan, Jr., H.S. Huntley, and H. Chang. *Emergence of Coherent Clusters in the Ocean*, pages 213–224. Springer, 2018.
- [86] Lucas C. Laurindo, Arthur J. Mariano, and Rick Lumpkin. An improved near-surface velocity climatology for the global ocean from drifter observations. *Deep Sea Research Part I*, 124:73–92, 2017.
- [87] N. Laxague, B. K. Haus, D. Bogucki, and T. M. Özgökmen. Spectral characterization of fine-scale wind waves using shipboard optical polarimetry. *Journal of Geophysical Research*, 120(4):3140–3156, 2015.
- [88] Nathan J. M. Laxague, Milan Curcic, Jan-Victor Björqvist, and Brian K. Haus. Gravity capillary wave spectral modulation by gravity waves. *Transactions on Geoscience and Remote Sensing*, 55(5):2477–2485, 2017.
- [89] N.J.M. Laxague, B.K. Haus, D.G. Ortiz-Suslow, C.J. Smith, G. Novelli, H. Dai, T.M. Özgökmen, and H.C. Graber. Passive optical sensing of the near-surface, wind-driven current profile. *Journal of Atmospheric and Oceanic Technology*, 34(5):1097–1111, 2017.

- [90] Nathan J.M. Laxague, Tamay M. Özgökmen, Brian K. Haus, Guillaume Novelli, Andrey Shcherbina, Peter Sutherland, Cedric Guigand, Bjorn Lund, Sanchit Mehta, Matas Alday, and Jeroen Molemaker. Observations of near-surface current shear help describe oceanic oil and plastic transport. *Geophysical Research Letters*, 45(1):245–249, 2018.
- [91] C.-Y. Lee and S. S. Chen. Stable boundary layer and its impact on tropical cyclone structure in a coupled atmosphere-ocean model. *Monthly Weather Review*, 142(5):1927–1944, 2014.
- [92] Guotu Li, Mohamed Iskandarania, Matthieu Le Hnaff, Justin Winokur, Olivier P. Le Matre, and Omar M. Knio. Quantifying initial and wind forcing uncertainties in the gulf of mexico. *Computational Geosciences*, 20(5):11331153, 2016.
- [93] Qing Li, Baylor Fox-Kemper, Oyvind Breivik, and Adrean Webb. Statistical models of global langmuir mixing. *Ocean Modelling*, 113(113):95–114, 2017.
- [94] R. Lumpkin, T.M. Özgökmen, and L. Centurioni. Advances in the application of surface drifters. *Annual Review of Marine Science*, 9(1):59–81, 2017.
- [95] B. Lund, B. Haus, J. Horstmann, H.C. Graber, R. Carrasco, N.J.M. Laxague, G. Novelli, C.M. Guigand, and T.M. zgkmen. Near-surface current mapping by shipboard marine x-band radar: A validation. *Journal of Atmospheric and Oceanic Technology*, 2018. accepted.
- [96] K.T. Mandli and C.N. Dawson. Adaptive mesh refinement for storm surge. *Ocean Modelling*, 75:36–50, 2014.
- [97] A. J. Mariano, E. H. Ryan, H. S. Huntley, L.C. Laurindo, E. Coelho, A. Griffa, T. M. Özgökmen, M. Berta, D. Bogucki, S. Chen, M. Curcic, K.L. Drouin, M. Gough, B. K. Haus, A. C. Haza, P. Hogan, M. Iskandarani, G. Jacobs, A. D. Kirwan, Jr., N. Laxague, B. Lipphardt, Jr, M. G. Magaldi, G. Novelli, A. Reniers, J. M. Restrepo, C. Smith, A. Valle-Levinson, and M. Wei. Statistical properties of the surface velocity field in the northern gulf of mexico sampled by glad drifters. *Journal of Geophysical Research*, 121(7):5193–5216, 2016. Gulf Oil Spill special section.
- [98] G.M. Marques and T.M. Özgökmen. On modeling turbulent exchange in buoyancy-driven fronts. *Ocean Modelling*, 83:43–62, 2014.
- [99] S. Matt, A. Fujimura, A. Soloviev, S.H. Rhee, and R. Romeiser. Fine-scale features on the sea surface in sar satellite imagery. part ii: Numerical modeling. *Ocean Science*, 10(3):427–438, 2014.
- [100] T. Mayo, T. Butler, C. Dawson, and I. Hoteit. Data assimilation within the advanced circulation (adcirc) modeling framework for the estimation of mannings friction coefficient. *Ocean Modelling*, 76:43–58, 2014.
- [101] G.M. Maze, M. J. Olascoaga, and L. Brand. Historical analysis of environmental conditions during florida red tide. *Harmful Algae*, 50:1–7, 2015.

- [102] J.A. Mensa, T.M. Özgökmen, A.C. Poje, and J. Imberger. Material transport in a convective surface mixed layer under weak wind forcing. *Ocean Modelling*, 96:226–242, 2015.
- [103] Jean A. Mensa and M.-L. Timmermans. Characterizing the seasonal cycle of upper-ocean flows under multi-year sea ice. *Ocean Modelling*, 113:115–130, 2017.
- [104] Jena Mensa, Mary-Louise Timmermans, and Tamay Özgökmen. Surface drifter observations from the arctic oceans beaufort sea: Evidence for submesoscale dynamics. *Journal of Geophysical Research*, 2018. accepted.
- [105] P. Miron, F. J. Beron-Vera, M. J. Olascoaga, J. Sheinbaum, P. Perez-Brunius, and G. Froyland. Lagrangian dynamical geography of the gulf of mexico. *Nature.com/Scientific Reports*, 7:7021, 2017.
- [106] P. Muscarella, M. Carrier, H. Ngodock, S. Smith, B. Lipphardt, A. Kirwan, and H. Huntley. Do assimilated drifter velocities improve lagrangian predictability in an operational ocean model? *Monthly Weather Review*, 143(5):1822–1832, 2015.
- [107] G. Novelli, C. M. Guigand, C. Cousin, E. Ryan, N. Laxague, H. Dai, B. Haus, and T. M. Özgökmen. A biodegradable surface drifter for ocean sampling on a massive scale. *Journal of Atmospheric and Oceanic Technology*, 34(11):2509–2532, 2017.
- [108] M. J. Olascoaga and G. Haller. Forecasting sudden changes in environmental pollution patterns. *Proceedings of the National Academy of Sciences*, 109(13):4738–4743, 2012.
- [109] M. J. Olascoaga, F. J. Beron-Vera, G. Haller, J. Trinanes, M. Iskandarani, E. F. Coelho, B. Haus, H. S. Huntley, G. Jacobs, A. D. Kirwan, Jr., B.L. Lipphardt, Jr., T. Özgökmen, A.J.H.M. Reniers, and A. Valle-Levinson. Drifter motion in the gulf of mexico constrained by altimetric lagrangian coherent structures. *Geophysical Research Letters*, 40(23):6171–6175, 2013.
- [110] D. Ortiz-Suslow, B. Haus, N. Laxague, A. Reniers, H. Graber, and N. Williams. The spatial-temporal variability of air-sea momentum fluxes observed at a tidal inlet. *Journal of Geophysical Research*, 120(2):660–676, 2015.
- [111] T.M. Özgökmen and P.F. Fischer. Cfd application to oceanic mixed layer sampling with lagrangian platforms. *International Journal of Computational Fluid Dynamics*, 26(6-8):337–348, 2012.
- [112] T.M. Özgökmen, A.C. Poje, P.F. Fischer, H. Childs, H. Krishnan, C. Garth, A. Haza, and E. Ryan. On multi-scale dispersion under the influence of surface mixed layer instabilities and deep flows. *Ocean Modelling*, 56:16–30, 2012.
- [113] T.M. Özgökmen, F. J. Beron-Vera, D. Bogucki, S. S. Chen, C. Dawson, W. Dewar, A. Griffa, B.K. Haus, A.C. Haza, H. Huntley, M. Iskandarani, G. Jacobs, B. Jagers, A.D. Kirwan, Jr., N. Laxague, B. Lipphardt, Jr., J. MacMahan, A.J. Mariano, J. Olascoaga, G. Novelli, A.C. Poje, A.J.H.M. Reniers, J.M. Restrepo, B. Rosenheim, E.H.

- Ryan, C. Smith, A. Soloviev, S. Venkataramani, G. Zha, and P. Zhu. Research overview of the consortium for advanced research on transport of hydrocarbon in the environment (CARTHE). In *International Oil Spill Conference Proceedings*, volume 2014, pages 544–560, 2014.
- [114] T. Özgökmen, 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. Over what area did the oil and gas spread during the 2010 deepwater horizon oil spill? *Oceanography*, 29(3):96–107, 2016.
- [115] G. Pantelev, M. Yaremchuk, O. Francis, and T. Kikuchi. Configuring high frequency radar observations in the southern chukchi sea. *Polar Science*, 7(2):72–81, 2013.
- [116] Gleb Pantelev, Max Yaremchuk, and W. Erick Rogers. Adjoint-free variational data assimilation into a regional wave model. *Journal of Atmospheric and Oceanic Technology*, 32(7):1386–1399, 2015.
- [117] M.A. Pendergraft and B.E. Rosenheim. Varying relative degradation rates of oil in different forms and environments revealed by ramped pyrolysis. *Environmental Science and Technology*, 48(18):10966–10974, 2014.
- [118] A. C. Poje, T. M. Özgökmen, B. Lipphardt, Jr., B. Haus, E. H. Ryan, A. C. Haza, G. Jacobs, A. J.H.M. Reniers, J. Olascoaga, G. Novelli, A. Griffa, F. J. Beron-Vera, S. S. Chen, P. Hogan, E. Coelho, A.D. Kirwan, Jr., H. Huntley, and A. J. Mariano. Submesoscale dispersion in the vicinity of the deepwater horizon spill. *Proceedings of the National Academy of Sciences*, 111(35):12693–12698, 2014.
- [119] A. C. Poje, T.M. Özgökmen, D.J. Bogucki, and A. Kirwan, Jr. Evidence of a forward energy cascade and kolmogorov self-similarity in submesoscale ocean surface drifter observations. *Physics of Fluids*, 29(2):020701, 2017. special issue for Prof. John Lumley.
- [120] N. Rasche, J. Molemaker, L. Marie, F. Noguier, B. Chapron, B. Lund, and A. Mouche. Intense deformation field at oceanic front inferred from directional sea surface roughness observations. *Geophysical Research Letters*, 44(11):5599–5608, 2017.
- [121] J.M. Restrepo, S. Venkataramani, and C. Dawson. Nearshore sticky waters. *Ocean Modelling*, 80:49–58, 2014.
- [122] J.M. Restrepo, V. Shankar, D. Comeau, and H. Flaschka. Defining a trend for time series using the intrinsic time-scale decomposition. *New Journal of Physics*, 16(8):085004, 2014.
- [123] I. Romero, T. Özgökmen, S. Snyder, P. Schwing, B. OMalley, F. Beron-Vera, M. Olascoaga, P. Zhu, E. Ryan, S. Chen, D. Wetzel, and D. Hollander and S. Murawski. Tracking the hercules 265 marine gas well blowout in the gulf of mexico. *Journal of Geophysical Research*, 121(1):706–724, 2016. Gulf Oil Spill special section.

- [124] B. Rosenheim, M.A. Pendergraft, G.C. Flowers, R. Carney, J. Sericano, R.M. Amer, J. Chanton, Z. Dincer, and T. Wade. Employing extant stable carbon isotope data in gulf of mexico sedimentary organic matter for oil spill studies. *Deep-Sea Research II*, 129:249–258, 2016.
- [125] Steven Rosenthal, Shankar Venkataramani, Arthur J. Mariano, and Juan M. Restrepo. Displacement data assimilation. *Journal of Computational Physics*, 330:594614, 2017.
- [126] M. Roth, J. MacMahan, A. Reniers, T.M. Özgökmen, K. Woodall, and B. Haus. Observations of inner shelf cross-shore surface material transport adjacent to a coastal inlet in the northern gulf of mexico. *Continental Shelf Research*, 137(4):142–153, 2017.
- [127] A. Sarafraz and B. K. Haus. A structured light method for underwater surface reconstruction. *ISPRS Journal of Photogrammetry and Remote Sensing*, 114(4):40–52, 2016.
- [128] K. Schroeder, J. Chiggiato, A.C. Haza, A. Griffa, T.M. Özgökmen, P. Zanasca, A. Molcard, M. Borghini, P.M. Poulain, R. Gerin, Z. Zambianchi, P. Falco, and C. Trees. Targeted lagrangian sampling of submesoscale dispersion at a coastal frontal zone. *Geophysical Research Letters*, 39(11):L11608, 2012.
- [129] Andrey Y. Shcherbina, Eric A. DAsaro, and Sven Nylund. Observing fine-scale oceanic velocity structure with an autonomous nortek acoustic doppler current profiler. *Journal of Atmospheric and Oceanic Technology*, 35(2):411–427, 2018.
- [130] N. Sinha, A.E. Tejada-Martnez, C. Akan, and C.E. Grosch. Toward a k-profile parameterization of langmuir turbulence in shallow coastal shelves. *Journal of Physical Oceanography*, 45(12):2869–2895, 2015.
- [131] Adil Siripatana, Talea Mayo, Ihab Sraj, Omar Knio, Clint Dawson, Olivier Le Maitre, and Ibrahim Hoteit. Assessing an ensemble kalman filter inference of mannings n coefficient of an idealized tidal inlet against a polynomial chaos-based mcmc. *Ocean Dynamics*, 67(8):1067–1094, 2017.
- [132] K. M. Smith, P. E. Hamlington, and B. Fox-Kemper. Effects of submesoscale turbulence on ocean tracers. *Journal of Geophysical Research*, 121(1):908–933, 2016. Gulf Oil Spill special section.
- [133] A. Soloviev, A. Fujimura, and S. Matt. Air-sea interface in hurricane conditions. *Journal of Geophysical Research*, 117(C11):C00J34, 2012.
- [134] A. Soloviev, C. Maingot, S. Matt, R. E. Dodge, S. Lehner, D. Velotto, S. Bruschi, W. Perrie, and E. Hochberg. Fine-scale features on the sea surface in sar satellite imagery part 1: Simultaneous in-situ measurements. *Ocean Science Discussions*, 9(5):2885–2914, 2012.
- [135] A. Soloviev and R. Lukas, editors. *The Near-Surface Layer of the Ocean: Structure, dynamics and applications*, volume 48 of *Atmospheric and Oceanographic Sciences Library*. Springer, second edition, 2014.

- [136] A.V. Soloviev, R. Lukas, M.A. Donelan, B.K. Haus, and I. Ginis. The air-sea interface and surface stress under tropical cyclones. *Nature.com/Scientific Reports*, 4:5306, 2014.
- [137] A.V. Soloviev, S. Matt, and A. Fujimura. Three-dimensional dynamics of freshwater lenses in the oceans near-surface layer. *Oceanography*, 28(1):142–149, 2015.
- [138] A. V. Soloviev, B. K. Haus, M. G. McGauley, C. W. Dean, D. Ortiz-Suslow, N. Laxague, and T. M. Özgökmen. Surface dynamics of crude and weathered oil in the presence of dispersants: Laboratory experiment and numerical simulation. *Journal of Geophysical Research*, 121(5):3502–3516, 2016. Gulf Oil Spill special section.
- [139] A.V. Soloviev, A. Hirons, C. Maingot, C.W. Dean, R.E. Dodge, A.E. Yankovsky, J. Wood, R. H. Weisberg, M.E. Luther, and J.P. McCreary. Southward flow on the coastal flank of the florida current. *Deep-Sea Research I*, 125:94–105, 2017.
- [140] Is the state of the air-sea interface a factor in rapid intensification and rapid decline of tropical cyclones? *Journal of Geophysical Research*, 122(12):10174–10183, 2017.
- [141] I. Sraj, M. Iskandarani, A. Srinivasan, W.C. Thacker, J. Winokur, A. Alexanderian, C. Lee, S. S. Chen, and O.M. Knio. Bayesian inference of drag parameters using axbt data from typhoon fanapi. *Monthly Weather Review*, 141(7):2347–2367, 2013.
- [142] I. Sraj, M. Iskandarani, W.C. Thacker, A. Srinivasan, and O.M. Knio. Drag parameter estimation using gradients and hessian from a polynomial chaos model surrogate. *Monthly Weather Review*, 142(2):933–941, 2014.
- [143] M. H. M. Sulman, H.S. Huntley, B.L. Lipphardt, Jr., and A.D. Kirwan, Jr. Out of flatland: Three-dimensional aspects of lagrangian transport in geophysical fluids. In J. Lin, D. Brunner, C. Gerbig, A. Stohl, A. Luhar, and P. Webley, editors, *Langrangian Modeling of the Atmosphere*, AGU Geophysical Monograph Series, pages 77–84. AGU, 2012.
- [144] M. H. M. Sulman, H.S. Huntley, B.L. Lipphardt, Jr., and A.D. Kirwan, Jr. Leaving flatland: Diagnostics for lagrangian coherent structures in three-dimensional flows. *Physica D*, 258:77–92, 2013.
- [145] M. H. M. Sulman, H.S. Huntley, B.L. Lipphardt, Jr., G. Jacobs, P. Hogan, and A.D. Kirwan, Jr. Hyperbolicity in temperature and flow fields during the formation of a loop current ring. *Nonlinear Processes in Geophysics*, 20(5):883–892, 2013.
- [146] Nobuhiro Suzuki and Baylor Fox-Kemper. Understanding stokes forces in the wave-averaged equations. *Journal of Geophysical Research*, 121(5):3579–3596, 2016. Gulf Oil Spill special section.
- [147] Nobuhiro Suzuki, Baylor Fox-Kemper, Peter E. Hamlington, and Luke P. Van Roekel. Surface waves affect frontogenesis. *Journal of Geophysical Research*, 121(5):3597–3624, 2016. Gulf Oil Spill special section.

- [148] W. Carlisle Thacker, Mohamed Iskandarani, Rafael C. Goncalves, Ashwanth Srinivasan, and Omar M. Knio. Pragmatic aspects of uncertainty propagation: A conceptual review. *Ocean Modelling*, 95:25–36, 2015.
- [149] A. Valle-Levinson, K. Huguenard, L. Ross, J. Branyon, J. MacMahan, and A. Reniers. Tidal and nontidal exchange at a subtropical inlet: Destin Inlet, Northwest Florida. *Estuarine, Coastal and Shelf Science*, 155:137–147, 2015.
- [150] Rachel Walker, Andrs E. Tejada-Martnez, and Chester E. Grosch. Large-eddy simulation of a coastal ocean under the combined effects of surface heat fluxes and full-depth langmuir circulation. *Journal of Physical Oceanography*, 46(8):2411–2436, 2016.
- [151] B. D. Walker, E. R. M. Druffel, J. Kolasinski, B. J. Roberts, X. Xu, and B. E. Rosenheim. Stable and radiocarbon isotopic composition of dissolved organic matter in the gulf of mexico. *Geophysical Research Letters*, 44(16):8424–8434, 2017.
- [152] P. Wang and T. M. Özgökmen. How do hydrodynamic instabilities affect 3d transport in geophysical vortices? *Ocean Modelling*, 87:48–66, 2015.
- [153] P. Wang and T. M. Özgökmen. Spiral inertial waves emitted from geophysical vortices. *Ocean Modelling*, 99:22–42, 2016.
- [154] S. Wang, M. Iskandarani, A. Srinivasan, W. C. Thacker, J. Winokur, and O. M. Knio. Propagation of uncertainty and sensitivity analysis in an integral oil-gas plume model. *Journal of Geophysical Research*, 121(5):3488–3501, 2016. Gulf Oil Spill special section.
- [155] Peng Wang, Tamay M. Özgökmen, and Angelique C. Haza. Material dispersion by oceanic internal waves. *Environmental Fluid Mechanics*, 18(1):149–171, 2018.
- [156] P. Wang and T.M. Özgökmen. Langmuir circulation with explicit surface waves from moving-mesh modelling. 45(1):216–226, 2018.
- [157] M. Wei, G. Jacobs, C. Rowley, C. Barron, P. Hogan, P. Spence, O.M. Smedstad, P. Muscarella, and E. Coelho. The impact of initial spread calibration on the relo ensemble and its application to lagrangian dynamics. *Nonlinear Processes in Geophysics*, 20(5):621–641, 2013.
- [158] M. Wei, C. Rowley, P. Martin, C.N. Barron, and G. Jacobs. The u.s. navys relo ensemble prediction system and its performance in the gulf of mexico. *Quarterly Journal of the Royal Meteorological Society*, 140(681):1129–1149, 2014.
- [159] M. Wei, G. Jacobs, C. Rowley, C. N. Barron, P. Hogan, P. Spence, O.M. Smedstad, P. Martin, P. Muscarella, and E. Coelho. The performance of the us navys relo ensemble, ncom, hycom during the period of glad at-sea experiment in the gulf of mexico. *Deep-Sea Research II*, 129:374–393, 2016.
- [160] J. Winokur, P. Conrad, I. Sraj, O.M. Knio, A. Srinivasan, W.C. Thacker, Y. Marzouk, and M. Iskandarani. A priori testing of sparse adaptive polynomial chaos expansions using an ocean general circulation model database. *Computational Geosciences*, 17(6):899–911, 2013.

- [161] M. Yaremchuk, P. Spence, M. Wei, and G. Jacobs. Lagrangian predictability in the dwh region from hf radar observations and model output. *Deep-Sea Research II*, 129:394–400, 2016.
- [162] M. Yaremchuk and E. Coelho. Filtering drifter trajectories sampled at submesoscale resolution. *IEEE Journal of Oceanic Engineering*, 40(3):497–505, 2015.
- [163] M. Yaremchuk and P. Martin. On sensitivity analysis within the 4DVAR framework. *Monthly Weather Review*, 142(2):774–787, 2014.
- [164] L. Zhao, M.C. Bouffadel, K. Lee, T. King, N. Loney, and X. Geng. Evolution of bubble size distribution from gas blowout in shallow water. *Journal of Geophysical Research*, 121(3):1573–1599, 2016. Gulf Oil Spill special section.
- [165] P. Zhu and J. Furst. On the parameterization of surface momentum transport via drag coefficient in low wind conditions. *Geophysical Research Letters*, 40(11):2824–2828, 2013.
- [166] P. Zhu. On the mass-flux representation of vertical transport in moist convection. *Journal of the Atmospheric Sciences*, 72(12):4445–4468, 2015.
- [167] P. Zhu, Y. Wang, S. Chen, M. Curcic, and C. Gao. Impact of storm-induced cooling of sea surface temperature on large turbulent eddies and vertical turbulent transport in the atmospheric boundary layer of hurricane isaac. *Journal of Geophysical Research*, 121(1):861–876, 2016. Gulf Oil Spill special section.