

Refereed Publications

Stefan A. Talke

1. JOURNAL ARTICLES

Graduate/undergraduate students underlined.

- [40] **Talke, S.A.**, A. Mahedy, D.A. Jay, P. Lau, C. Hilley, A. Hudson (2019) *submitted*. Sea level, tidal and river flow trends in the Lower Columbia River Estuary, 1853-present, submitted to *Journal of Geophysical Research-Oceans*
- [39] Haigh, I.D., M. D. Pickering, J. A. M. Green, B. K. Arbic, A. Arns, S. Dangendorf, D. Hill, K. Horsburgh, T. Howard, D. Idier, D. A. Jay, S. B. Lee, M. Müller, M. Schindelegger, **S.A. Talke**, S.B. Wilmes, P. L. Woodworth (2018). The Tides They Are a'Changin *Manuscript re-submitted to Annual Review of Geophysics, July 2019*
- [38] Familkhalili, R., **S.A. Talke**, D.A. Jay (2019) *submitted*. An analytical model of tides and storm surge in weakly convergent estuaries: the effect of changing conditions. Returned for revisions from *Journal of Geophysical Research, May 2019*
- [37] **Talke, S.A** & D.A. Jay (2020). Changing tides: The role of natural and anthropogenic factors. *Annual Review of Marine Science*, <https://doi.org/10.1146/annurev-marine-010419-010727>
- [36] Ray, R., & **S.A Talke** (2019). Nineteenth-Century Tides in the Gulf of Maine and implications for secular trends. In press, *Journal of Geophysical Research* <https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019JC015277>.
- [35] Helaire, L.T., **S.A. Talke**, D. A. Jay and D. Mahedy (2019), Historical changes in Lower Columbia River and Estuary Floods and Tides. In press, *Journal of Geophysical Research*, <https://doi.org/10.1029/2019JC015055>
- [34] P. Gurumurthy, P. Orton, N. Georgas, **S. A. Talke**, and J. Booth (2019) Mechanics and historical evolution of sea level blowouts in New York Harbor. 7(5), 160, doi:<https://doi.org/10.3390/jmse7050160>.
- [33] Al-Murib, M., S. Wells, **S.A. Talke**, (2019). Integrating Landsat TM/ETM+ and Numerical Modeling to Estimate Water Temperature in the Tigris River under Future Climate and Management Scenarios. *Water* 11(5):892 doi: 10.3390/w11050892
- [32] Ralston, D.K., **S.A. Talke**, W. R. Geyer, H. Al'Zubadaei, & C K. Sommerfield (2019). Bigger tides, less flooding: Effects of dredging on water level in the Hudson River estuary. *Journal of Geophysical Research*, 124(1), doi: 10.1029/2018JC014313
- [31] **Talke, S.A.**, A. Kemp, & J. Woodruff (2018). Relative sea level, tides, and extreme water levels in Boston (MA) from 1825 to 2018. *Journal of Geophysical Research* 123(6), doi.org/10.1029/2017JC013645
- [30] Chant, R.J., C.K. Sommerfield, **S.A. Talke** (2018). Impact of channel deepening on tidal and gravitational circulation in a highly engineered estuarine basin. *Estuaries and Coasts* 41(6), p. 1587-1600 <https://doi.org/10.1007/s12237-018-0379-6>
- [29] Branch, R., A. Horner-Devine, C. Akan, C. Chickadel, G. Farquharson, A. Hudson, **S.A. Talke**, J. Thomson, and A. Jessup (2018). Airborne Lidar measurements and model simulations of tides, waves, and surface slope at the mouth of the Columbia River. *IEEE Transactions on Geoscience and Remote Sensing* DOI: [10.1109/TGRS.2018.2847561](https://doi.org/10.1109/TGRS.2018.2847561) Volume PP Issue 99 p 1-11.

- [28] Devlin, A.T., D.A. Jay, **S. A. Talke**, E. D. Zaron, and J. Pan (2018). Seasonality of Tides in Southeast Asian Waters. *Journal of Physical Oceanography* 48 (5), 1169-1190
<https://doi.org/10.1175/JPO-D-17-0119.1>
- [27] Devlin, A.T., D.A. Jay, E. D. Zaron, **S. A. Talke**, J. Pan, H. Lin (2017). Coupling of sea level and tidal range changes with implications for future water levels. *Nature: Scientific Reports* 7 (1), 17021, DOI:10.1038/s41598-017-17056-z
- [26] Devlin, A.T., D.A. Jay, **S. A. Talke**, E. D. Zaron, and J. Pan (2017). Tidal variability related to sea level variability in the Pacific Ocean. *Journal of Geophysical Research*, 122 (11), 8445-8463, doi/10.1002/2017JC013165
- [25] Hudson, A.S., **S. A. Talke**, R. Branch, C. Chickadel, G. Farquharson, A. Jessup (2017). Remote measurements of tides and river slope using airborne lidar instrument, *Journal of Atmospheric and Oceanic Technology*, 34 (4), 897-904, <http://dx.doi.org/10.1175/JTECH-D-16-0197.1>
- [24] Arns, A., S. Dangendorf, J. Jensen, J. Bender, **S. A. Talke**, and C. Pattiaratchi (2017). Sea-level rise induced amplification of coastal protection design heights. *Nature: Scientific Reports*, DOI: 10.1038/srep40171
- [23] Kemp, A., T.D. Hill, C. Bernhardt, C. H. Vane, N. Cahill, P. M. Orton, **S.A. Talke**, A.C. Parnell, K. Sanborn, and E. K. Hartig (2017). Relative Sea-Level Trends in New York City During the Past ~1500 years. *The Holocene*, doi/full/10.1177/0959683616683263
- [22] Hudson, A., **Talke, S.A.**, and D.A. Jay (2017). Using satellite observations to characterize the response of estuary turbidity maxima to external forcing. *Estuaries and Coasts* 39(5) DOI 10.1007/s12237-016-0164-3
- [21] Orton, P.M., T.M. Hall, **S.A. Talke**, N. Georgas, A.F. Blumberg, S. Vinogradov (2016). A Validated Tropical-Extratropical Flood Hazard Assessment for New York Harbor. *Journal of Geophysical Research*, DOI: 10.1002/2016JC011679
- [20] Familkhalili, R., and **S. A. Talke** (2016). The Effect of Channel Deepening on Storm Surge: A Case Study of Wilmington, NC; *Geophysical Research Letters*, DOI 10.1002/2016GL069494
- [19] Moftakhari, H.R., D.A. Jay, **S.A. Talke** (2016). Estimating river discharge using multiple-tide gages distributed along a channel, *Journal of Geophysical Research., Oceans*, 121, doi:10.1002/2015JC010983.
- [18] Moftakhari, H.R., D.A. Jay, **S.A. Talke**, D.H. Schoellhamer (2015). Estimation of historic flows and sediment loads to San Francisco Bay, 1849-2011, *Journal of Hydrology*, [doi:10.1016/j.jhydrol.2015.08.043](https://doi.org/10.1016/j.jhydrol.2015.08.043)
- [17] Orton, P. M., **S. A. Talke**, D. A. Jay, L. Yin, A. F. Blumberg, N. Georgas, H. Zhao, H. J. Roberts, and K. MacManus (2015). Channel Shallowing as Mitigation of Coastal Flooding, *Journal of Marine Science and Engineering*, 3(3), 654-673, DOI: 10.3390/jmse3030654
- [16] **Talke, S.A.**, P. Orton, D.A. Jay (2014). Increasing Storm Tides in New York Harbor, 1844-2013 *Geophysical Research Letters* 41(9), p3149-3155, DOI: 10.1002/2014GL059574
- [15] Devlin, A., D.A. Jay, **S.A. Talke**, E.D. Zaron (2014). Tidal trends associated with anomalous sea level rise in the western Pacific Ocean. *Ocean Dynamics* 64:1093-1120 DOI 10.1007/s10236-014-0741-6
- [14] de Jonge, V.N. de, H.M. Schuttelaars, J.M.M. van Beusekom, **S.A. Talke**, H.E. de Swart (2014). The influence of channel deepening on estuarine turbidity dynamics, as exemplified by the Ems estuary. *Estuary, Coastal and Shelf Science* 139, p. 46-59.

- [13] **Talke, S.A.** & D.A. Jay (2013). Nineteenth Century North American and Pacific Tides: Lost or just forgotten? *Journal of Coastal Research* 29(6a), p. 118- 127.
- [12] **Talke, S.A.**, A.R. Horner-Devine, C.C. Chickadel, and A. T. Jessup (2013). Turbulent kinetic energy and coherent structures in a tidal river. *Journal of Geophysical Research*. 118(12), p. 6965–6981, DOI: 10.1002/2012JC008103
- [11] Moftakahri, H.R., D.A. Jay, **S.A. Talke**, T. Kulkulka, P. D. Bromirski (2013). A novel approach to flow estimation in tidal rivers, *Water Resources Research*. 49, 1-16, doi:10.1002/wrcr.20363
- [10] Yeh, H., E. Tolkova, D. Jay, **S. Talke**, H. Fritz (2012). Tsunami Hydrodynamics in the Columbia River, *Journal of Disaster Research*. Vol. **7(5)**.
- [9] Chickadel, C.C., **Talke, S.A.**, A.R. Horner-Devine, and A.T. Jessup (2011). Infrared based measurements of velocity, turbulent kinetic energy and dissipation at the water surface in a tidal river. *Geoscience and Remote Sensing Letters*, GRSL-00530-2010.R1
- [8] **Talke, S.A.**, A.R. Horner-Devine, C.C. Chickadel (2010). Mixing layer dynamics in separated flow over an estuarine sill with variable stratification, *Journal of Geophysical Research* Vol.. 115, C09004, doi:10.1029/2009JC005467
- [7] Chernetsky, A.S., H.M.Schuttelaars, & **S.A. Talke** (2010). The effect of tidal asymmetry and temporal settling lag on sediment trapping in tidal estuaries. *Ocean Dynamics* 60, 1219-1241, doi: 10.1007/s10236-010-0329-8.
- [6] **Talke, S.A.**, H.E. De Swart & H.M.Schuttelaars (2009). Feedback between residual circulation and sediment distribution in highly turbid estuaries: an analytical model. *Continental Shelf Research*, 29(1) p. 119-135. doi:10.1016/j.csr.2007.09.002
- [5] **Talke, S.A.**, H.E. de Swart, & V.N. de Jonge (2009). An idealized model and systematic process study of oxygen depletion in highly turbid estuaries. *Estuaries and Coasts*, 32 (4) p. 602-620. DOI 10.1007/s12237-009-9171-y.
- [4] Chickadel, C. C., A. R. Horner-Devine, **S. A. Talke**, and A. T. Jessup (2009). Vertical boil propagation from a submerged estuarine sill, *Geophysical Research Letters*, 36, L10601, doi:10.1029/2009GL0372782010.
- [3] de Swart, H.E., H.M. Schuttelaars, & **S.A. Talke** (2009). Phytoplankton growth in turbid estuaries: a simple model. *Continental Shelf Research*, 29(1), p. 136-147, doi:10.1016/j.csr.2007.09.006
- [2] **Talke, S.A.**, & M.T. Stacey (2008). Suspended Sediment Fluxes at an intertidal flat: Shifting Influence of wave, wind, tidal, and freshwater forcing. *Continental Shelf Research* 28(6), p. 710-725, doi:10.1016/j.csr.2007.12.003
- [1] **Talke, S.A.**, & M.T. Stacey (2003). The influence of oceanic swell on flows over an estuarine intertidal mudflat in San Francisco Bay, *Estuarine, Coastal, and Shelf Science* 58, 541-554.

2. BOOK CHAPTERS

- [2] Jay, D.A., **S.A. Talke**, A. Hudson, and M. Twardowski (2015). Estuarine turbidity maxima revisited: Instrumental approaches, remote sensing, modeling studies, and new directions. Ch. 2 in *Fluvial-Tidal Sedimentology*, Vol. 68 of *Developments in Sedimentology*, Editors: P.J. Ashworth, J.L. Best, and D. Parsons, p. 49-109.
- [1] A.T. Jessup, Chickadel, C.C., **Talke, S.A.**, and A.R. Horner-Devine (2013). *COHSTREX: Coherent Structures in Rivers and Estuaries Experiment*. Ch. 14 in Coherent Flow Structures at the Earth's

Surface (Editors J.G. Venditti, J.L. Best, M. Church, J.R. Hardy), John Wiley and Sons, New York.

3. RESEARCH REPORTS

- [4] **Talke, S.A.** & D.A. Jay (2017). Archival Water-Level Measurements: Recovering Historical Data to Help Design for the Future. US Army Corps of Engineers: *Civil Works Technical Series, Report CWTS-02, 49p.*
- [3] Chang, H., S.Y. Cho, L. Helaire, **S.A. Talke**, and H. Duong (2017). Climate change and flood risk: Toward a flood resilient Portland. Report submitted to City of Portland, Aug. 2017.
- [2] **Talke, S.A.** & H.E. de Swart (2011). Circulation, sediment concentration, and oxygen depletion in the tidal Ems River. In: *Aspects of coastal research in contribution to LOICZ in the Netherlands and Flanders (2002-2010)*, Eds. C. Heip and R. Laane, LOICZ R&S Report No. 38
- [1] **Talke, S.A.** & H.E. de Swart (2006). Hydrodynamics and Morphology in the Ems/Dollard Estuary: Review of Models, Measurements, Scientific Literature, and the Effects of Changing Conditions. *IMAU Report R-01-06, 78 pp.*

4. CONFERENCE PROCEEDINGS

- [3] Helair, L., Heejun Chang, H., S.A. Talke, H. Duong, S.Y. Cho (2017). Assessing Urban flood Risk in a Changing Climate. Proceedings of International Geographical Union (IGU) conference, Beijing, Aug. 2017.
- [2] Al-Murib M., S. Wells, & **S.A. Talke (2017)**. Estimation of Surface Water Temperature of the Tigris River System in Iraq. Proceedings of *World Environmental and Water Resources Congress*, Sacramento, CA, May 2017.
- [1] **Talke, S.A.**, H.E. de Swart, & H.M. Schuttelaars (2008). An analytical model of the equilibrium distribution of suspended sediment in an estuary. In *Dohmen-Janssen and Hulscher, eds: River, Coastal and Estuarine Morphodynamics 2008*, p. 403-411, London, Taylor & Francis.