Curriculum Vitae

Chuanmin Hu

1. *Address*

College of Marine Science (CMS), University of South Florida (USF)
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2. *Professional Preparation*

Ph.D. in Physics, 1997, University of Miami, Coral Gables, Florida, U.S.A.
M.S. in Physics, 1992, Institute of Physics, Academia Sinica, Beijing, China
B.S. in Physics, 1989, University of Sci. and Tech. of China, Hefei, China

3. *Professional Appointments*

2014 – present, Professor, University of South Florida
2009 – 2014, Associate Professor, University of South Florida
2006 – 2008, Associate Research Professor, University of South Florida
2001 – 2005, Assistant Research Professor, University of South Florida
1998 – 2000, Post-doctorate Research Associate, University of South Florida

4. *Honors & Awards*

2020 Member, Academy of Science, Engineering & Medicine of Florida
2019 Outstanding Graduate Faculty Mentor Award, University of South Florida
2016 Global Achievement Group Award, University of South Florida
2014 Faculty Outstanding Research Achievement Award, University of South Florida
2014 Outstanding Faculty Award, University of South Florida
2013 Group Achievement Honor Award, NASA Ames Research Center
2013 Gulf Guardian Award, U.S. Environmental Protection Agency
2013 STEM Collaborative Partnership Award, ARCS

5. *Refereed Publications (as of 11/5/2020)*

Total: 285 journal articles and 20 book chapters; Hu as first author: 51 journal articles and 6 book chapters; 10 appeared on journal covers, many highlighted by AGU, NASA, and IOCCG through press releases.

Google Scholar citation (11/5/2020): total citations: 16,244; h-index: 69.

a. *Professional Refereed Journals*

Underlined authors are students or postdocs

2020

285 **Hu, C.,** L. Feng, and Q. Guan (2020). A Machine Learning Approach to Estimate Surface Chlorophyll a Concentrations in Global Oceans From Satellite Measurements. *IEEE Trans. Geosci. & Remote Sens.*, DOI: 10.1109/TGRS.2020.3016473

284 Garcia, R. A., Z. Lee, B. B. Barnes, **C. Hu**, H. M. Dierssen, and E. J. Hochberg (2020) Benthic classification and IOP retrievals in shallow water environments using MERIS imagery. Remote Sens Environ 249:112015

283 Lee, C. C., B. B. Barnes, S. C. Sheridan, E. T. Smith, **C. Hu**, D. E. Pirhalla, V. Ransibrahmanakul, and R. E. Adams (2020) Using Machine Learning to Model Water Clarity in the Great Lakes. J Great Lakes Res https://doi.org/10.1016/j.jglr.2020.07.022

282 Barnes, B. B., **C. Hu**, S. W. Bailey, and B. A. Franz (2020) Sensitivity of Satellite Ocean Color Data to System Vicarious Calibration of the Long Near Infrared Band. IEEE Trans. Geosci. Remote Sens. https://doi.org/10.1109/TGRS.2020.3000475

281 Liu, D., H. Duan, S. Loiselle, **C. Hu**, G. Zhang, et al. (2020). Observations of water transparency in China's lakes from space. Int J. Appl. Earth Obs Geoinformation. 92, 102187,https://doi.org/10.1016/j.jag.2020.102187.

280 Le Hénaff, M., Kourafalou, V. H., Androulidakis, Y., Smith, R. H., Kang, H., **Hu, C.**, & Lamkin, J. T. (2020). In situ measurements of circulation features influencing cross-shelf transport around northwest Cuba. Journal of Geophysical Research: Oceans, 125, e2019JC015780. https://doi.org/10.1029/2019JC015780.

279 Wang, M., and **C. Hu** (2020), Automatic extraction of Sargassum features on Sentinel-2 MSI images. IEEE Trans. Geosci. Remote Sens., Doi: 10.1109/TGRS.2020.3002929.

278 Liu, Y., B. Xu, W. Zhi, **C. Hu**, Y. Dong, S. Jin, Y. Lu, T. Chen, W. Xue, Y. Liu, B. Zhao, and W. Lu (2020). Space eye on flying aircraft: From Sentinel-2 MSI parallax to hybrid computing. Remote Sens. Environ., 246, 111867, https://doi.org/10.1016/j.rse.2020.111867

277 Kerr, M., J. Browning, E-M. Bonnelycke, Y. Zhang, **C. Hu**, M. Armenteros, S. Murawski, E. Peebles, M. Breitbart (2020). DNA barcoding of fish eggs collected off northwestern Cuba and across the Florida Straits demonstrates egg transport by mesoscale eddies. Fish Oceanogr. 2020;00:1–9.https://doi.org/10.1111/fog.12475

276 Lu, Y., J. Shi, **C. Hu**, M. Zhang, S. Sun, and Y. Liu (2020). Optical interpretation of oil emulsions in the ocean – Part II: Applications to T multi-band coarse-resolution imagery. Remote Sens. Environ. 242, 111778, https://doi.org/10.1016/j.rse.2020.111778.

275 Johns, E. M., R. Lumpkin, N. F. Putman, R. H. Smith, F. E. Muller-Karger, D. Rueda, **C. Hu**, M. Wang, M. T. Brooks, L. J. Gramer, and F. E. Werner (2020). The establishment of a pelagic Sargassum population in the tropical Atlantic: Biological consequences of a basin-scale long distance dispersal event. *Progress in Oceanography*, https://doi.org/10.1016/j.pocean.2020.102269.

274 Lapointe, B. E., R. A. Brewton, L. W. Herren, J. W. Porter, **C. Hu**, and J. P. Cannizzaro (2020). Sound science, not politics, must inform restoration of Florida Bay and the coral reefs of the Florida Keys, Marine Biology, 167:67, https://doi.org/10.1007/s00227-020-3669-z.

273 Li, G., Y. He, G. Liu, Y. Zhang, **C. Hu**, and W. Perrie (2020). Multi-sensor observations of submesoscale eddies in coastal regions. Remote Sens., 2020, 12, 711; doi:10.3390/rs12040711.

272 Qi, L., **C. Hu**, K. MIkelsons, M. Wang, V. Lance, S. Sun, B. B. Barnes, J. Zhao, and D. V. der Zande (2020). In search of floating algae and other organisms in global oceans and lakes. Remote Sens. Environ., 239, 111659, https://doi.org/10.1016/j.rse.2020.111659.

271 Zhang, M., and **C. Hu** (2020). Evaluation of remote sensing reflectance derived from the Sentinel-2 Multispectral Instrument observations using POLYMER atmospheric correction. IEEE Trans. Geosci & Remote Sens., DOI: 10.1109/TGRS.2020.2969900.

270 Garcia-Pineda, O., G. Staples, C. E. Jones, **C. Hu**, B. Holt, et al. (2020). Classification of oil spill by thicknesses using multiple remote sensors. Remote Sens. Environ., 236, 11421, https://doi.org/10.1016/j.rse.2019.111421.

2019

269 **Hu, C.,** and M. Wang (2019). Unprecedented Sargassum blooms in the tropical Atlantic. [in "State of the Climate in 2018"]. Bull. Amer. Meteor. Soc.,100(9), S73–S74,doi:10.1175/2019BAMSStateoftheClimate.1.

268 Li, Y., **C. Hu**, A. Quigg, and H. Gao (2019). Potential influence of the Deepwater Horizon oil spill on phytoplankton primary productivity in the northern Gulf of Mexico. Environ. Res. Letters, 14(9), 094018, Environ. Res. Lett., https://doi.org/10.1088/1748-9326/ab3735

267 Dong, Y., Y. Liu, **C. Hu**, and B. Xu (2019). Coral reef geomorphology of the Spratly Islands: A simple method based on time-series of Landsat-8 multi-band inundation maps. ISPRS Journal of Photogrammetry and Remote Sensing. 157:137-154.

266 Zhang, Y., **C. Hu**, Y. Liu, R. H. Weisberg, and V. H. Kourafalou (2019). Submesoscale and mesoscale eddies in the Florida Straits: Observations from satellite ocean color measurements. Geophys. Res. Lett., 46, 13,262–13,270. https://doi.org/10.1029/2019GL083999.

265 **Hu, C.**, Barnes, B. B., Feng, L., Wang, M. & Jiang, L. (2019). On the interplay between ocean color data quality and data quantity: Impacts of quality control flags. IEEE Geosci. & Remote Sens. Lett., doi:10.1109/LGRS.2019.2936220

264 Chen, S., & **Hu, C.** (2019). Environmental controls of surface water pCO_2 in different coastal environments: Observations from marine buoys. *Continental Shelf Research*, 183, 73-86.

263 Duffy, J. E., L. Benedetti-Cecchi, J. A. Trinanes et al. (2019). Toward a coordinated global observing system for seagrasses and marine macroalgae. *Frontiers in Marine Science*, 6, 317.

262 Androulidakis, Y., Kourafalou, V., Le Hénaff, M., Kang, H., Sutton, T., Chen, S., **Hu, C.**, & Ntaganou, N. (2019). Offshore spreading of Mississippi waters: pathways and vertical structure under eddy influence. Journal of Geophysical Research: Oceans. doi: 10.1029/2018JC014661.

261 Lapointe, B. E., R. A. Brewton, L. W. Herren, J. W. Porter, and **C. Hu** (2019). Nitrogen enrichment, altered stoichiometry, and coral reef decline at Looe Key, Florida Keys, USA: a 3-decade study. Marine Biology, 166, 8, 108. https://doi.org/10.1007/s00227-019-3538-9.

260 Lu, Y., J. Shi, Y. Wen, **C. Hu**, Y. Zhou, S. Sun, M. Zhang, Z. Mao, and Y. Liu (2019). Optical interpretation of oil emulsions in the ocean–Part I: Laboratory measurements and proof-of-concept with AVIRIS observations. *Remote Sens. Environ.*, 230, 111183, https://doi.org/10.1016/j.rse.2019.05.002.

259 Wang, M., **C. Hu**, B.B. Barnes, G. Mitchum, B. Lapointe, and J. P. Montoya (2019) The Great Atlantic Sargassum Belt. *Science*, 365: 83 – 87.

258 Qi, L., S-F. Tsai, Y. Chen, C. Le, and **C. Hu** (2019). In search of red *Noctiluca scintillans* blooms in the East China Sea (2019). *Geophys. Res. Lett.*, 46, 5997–6004. https://doi.org/10.1029/2019GL082667.

257 Zhang, M., **C. Hu**, and B. B. Barnes (2019). Performance of POLYMER Atmospheric Correction of Ocean Color Imagery in the Presence of Absorbing Aerosols. IEEE Trans. Geosci & Remote Sens., 57:6666-6674. https://doi.org/10.1109/TGRS.2019.2907884.

256 Le, C., S. Wu, **C. Hu**, M. W. Beck, and X. Yang (2019). Phytoplankton decline in the eastern North Pacific transition zone associated with atmospheric blocking. Glob Change Biol. 2019;00:1–9. https://doi.org/10.1111/gcb.14737.

255 Chen, S., **C. Hu**, B. B. Barnes, R. Wanninkhof, W-J. Cai, L. Barbero, and D. Pierrot (2019). A machine learning approach to estimate surface ocean pCO2 from satellite measurements. Remote Sens. Environ., 228:203-226.

254 Cannizzaro, J.P., Barnes, B.B., **Hu, C.**, Corcoran, A.A., Hubbard, K.A., Muhlbach, E., Sharp, W.C., Brand, L.E. and Kelble, C.R. (2019). Remote detection of cyanobacteria blooms in an optically shallow subtropical lagoonal estuary using MODIS data. Remote Sensing of Environment, 231, p.111227.

253 Sun, S., and **C. Hu** (2019). The Challenges of Interpreting Oil–Water Spatial and Spectral Contrasts for the Estimation of Oil Thickness: Examples From Satellite and Airborne Measurements of the Deepwater Horizon Oil Spill. IEEE Trans. Geosci. Remote Sens., 57:2643-2658. doi:10.1109/TGRS.2018.2876091.

252 Weisberg, R. H., Liu, Y., Lembke, C., **Hu, C.,** Hubbard, K., & Garrett, M. (2019). The coastal ocean circulation influence on the 2018 West Florida Shelf K. brevis red tide bloom. Journal of Geophysical Research: Oceans, 124. 2501–2512. https://doi.org/10.1029/2018JC014887.

251 Behrenfeld MJ, Moore RH, Hostetler CA, et al. (2019) The North Atlantic Aerosol and Marine Ecosystem Study (NAAMES): Science Motive and Mission Overview. Front. Mar. Sci. 6:122. doi: 10.3389/fmars.2019.00122.

250 **Hu, C.**, Feng, L., Lee, Z., Franz, B. A., Bailey, S. W., Werdell, P. J., & Proctor, C. W. (2019). Improving satellite global chlorophyll a data products through algorithm refinement and data recovery. Journal of Geophysical Research: Oceans, 124. https://doi.org/10.1029/2019JC014941.

249 Hu, L., K. Zeng, **C. Hu**, and M-X. He (2019). On the remote estimation of Ulva prolifera areal coverage and biomass. Remote Sens. Environ., 223:194-207. https://doi.org/10.1016/j.rse.2019.01.014.

248 Yu, K., and **C. Hu** (2019). Long-term vegetation changes in four types of wetland in China and USA between 2000 and 2011: observations from MODIS. Int. J. Remote Sens., DOI: 10.1080/01431161.2018.1562584.

247 Chen, S., **C. Hu**, B. B. Barnes, Y. Xie, G. Lin, and Z. Qiu (2019). Improving ocean color data coverage through machining learning. Remote Sens. Environ., 222:286-302. https://doi.org/10.1016/j.rse.2018.12.023.

246 Liu, Y., **C. Hu**, Y. Dong, B. Xu, W. Zhan, and C. Sun (2019). Geometric accuracy of remote sensing images over oceans: The use of global offshore platforms. Remote Sens. Environ., 222:244-266. https://doi.org/10.1016/j.rse.2019.01.002.

245 Barnes, B. B., J. P. Cannizzaro, D. English, and **C Hu** (2019) Validation of VIIRS and MODIS reflectance data in coastal and oceanic waters: An assessment of methods. Remote Sensing of Environment 220:110-123.

2018

244 Han, X., Feng, L., Hu, C., & Kramer, P. (2018). Hurricane-Induced changes in the Everglades National Park mangrove forest: Landsat observations between 1985 and 2017. Journal of Geophysical Research: Biogeosciences, 123.https://doi.org/10.1029/2018JG004501.

243 Milligan, R. J., A. M. Bernard, K. M. Boswell, H. D. Bracken-Grissom, M. A. D'Elia, S. deRada, C. G. Easson, D. Egnlish, R. I. Eytan, K. A. Finnegan, **C. Hu**, et al. (2018). The Application of Novel Research Technologies by the Deep Pelagic Nekton Dynamics of the Gulf of Mexico (DEEPEND) Consortium. 52:81-86. DOI:10.4031/MTSJ.52.6.10.

242 Le, C., Zhou, X., **Hu, C.**, Lee, Z., Li, L., & Stramski, D. (2018). A color-index-based empirical algorithm for determining particulate organic carbon concentration in the ocean from satellite observations. Journal of Geophysical Research: Oceans, 123, 7407–7419. https://doi.org/10.1029/2018JC014014.

241 Wang, M., **C. Hu**, J. Cannizzaro, D. English, X. Han, D. Naar, B. Lapointe, R. Brewton, and F. Hernandez (2018). Remote sensing of Sargassum biomass, nutrients, and pigments. Geophys. Res. Lett., 45 doi:10.1029/2018GL078858

240 Jo, Y-H., H-C. Kim, **C. Hu**, V. V. Klemas, and K. R. Turpie (2018). Potential Applications of HyspIRI for the Observation of Sea-Margin Processes. J. Coastal Research, DOI: 10.2112/JCOASTRES-D-17-00089.1.

239 Lee, Z., R. Arnone, D. Boyce, B. Franz, S. Greb, **C. Hu**, S. Lavender, M. Lewis, B. Schaeffer, S. Shang, M. Wang, M. Wernand, and C. Wilson (2018). Global Water Clarity: Continuing a Century-Long Monitoring. Eos, 99, https://doi.org/10.1029/2018EO097251.

238 Hardy, R. F., **C. Hu**, B. Witherington, B. Lapointe, A. Meylan, E. Peebles, L. Meirose, and S. Hirama (2018). Characterizing a Sea Turtle Developmental Habitat Using Landsat Observations of Surface-Pelagic Drift Communities in the Eastern Gulf of Mexico. IEEE J. Selected Topics in Applied Earth Observations and Remote Sensing, 11:3646-3659. doi:10.1109/JSTARS.2018.2863194.

237 Sun, S., **C. Hu**, O. Garcia-Pineda, V. Kourafalou, M. L. Henaff, and Y. Androulidakis (2018). Remote sensing assessment of oil spills near a damaged platform in the Gulf of Mexico. Marine Pollution Bulletin. 136:141-151. https://doi.org/10.1016/j.marpolbul.2018.09.004.

236 Qi, L., **C. Hu**, P. M. Visser, and R. Ma (2018). Diurnal changes of cyanobacteria blooms in Taihu Lake as derived from GOCI observations. Limnol. Oceanogr., 63:1711-1726. doi: 10.1002/lno.10802.

235 Feng, L., **C. Hu**, and J. Li (2018). Can MODIS Land Reflectance Products be Used for Estuarine and Inland Waters? Water Resources Research, 54, 35833601. https://doi.org/10.1029/2017WR021607. (cover article)

234 Zhang, M., **C .Hu**, J. Cannizzaro, D. English, B. B. Barnes, P. Carlson, and L. Yarbro (2018). Comparison of two atmospheric correction approaches applied to MODIS T measurements over North American waters. Remote Sens. Environ., 216:442-455.

233 Putman, N. F., G. J. Goni, L. J. Gramer, **C. Hu**, E. M. Johns, J. Trinanes, and M. Wang (2018). Simulating transport pathways of pelagic Sargassum from the Equatorial Atlantic into the Caribbean Sea. Progress in Oceanography, 165:205-214.

232 Androulidakis, Y., Kourafalou, V., Ozgokmen, T., Garcia-Pineda, O., Lund, B., Le H enaff, M., **Hu, C.**, Haus, B. K. et al. (2018). Influence of river-induced fronts on hydrocarbon transport: A multiplatform observational study. Journal of Geophysical Research: Oceans, 123. https://doi.org/10.1029/2017JC013514

231 **Hu, C.**, L. Feng, J. Holmes, G. A. Swayze, I. Leifer, C. Melton, O. Garcia, I. MacDonald, M. Hess, F. Muller-Karger, G. Graettinger, and R. Green (2018). Remote sensing estimation of surface oil volume during the 2010 Deepwater Horizon oil blowout in the Gulf of Mexico: scaling up AVIRIS observations with MODIS measurements. J. Appl. Remote Sens. 12(2), 026008 (2018), doi: 10.1117/1.JRS.12.026008.

230 Sun, S., Lu, Y., Liu, Y., Wang, M., & **Hu, C.** (2018). Tracking an oil tanker collision and spilled oils in the East China Sea using multisensor day and night satellite imagery. Geophysical Research Letters, 45. https://doi.org/10.1002/2018GL077433

229 Liu, Y., **C. Hu**, C. Sun, W. Zhan, S. Sun, B. Xu, and Y. Dong (2018). Assessment of offshore oil/gas platform status in the northern Gulf of Mexico using multi-source satellite time-series images. Remote Sens. Environ., 208:63-81. https://doi.org/10.1016/j.rse.2018.02.003

228 Barnes, B. B., Garcia, R., **C. Hu**, Z. Lee (2018). Multi-band spectral matching inversion algorithm to derive water column properties in optically shallow waters: An optimization of parameterization. Remote Sensing of Environment, 204:424-438. http://dx.doi.org/10.1016/j.rse.2017.10.013

227 Cao, F., M. Tzortziou, **C. Hu**, A. Mannino, C. G. Fichot, R. Del Vecchio, R. G. Najjar, and M. Novak (2018). Remote sensing retrievals of colored dissolved organic matter and dissolved organic carbon dynamics in North American estuaries and their margins. Remote Sens. Environ. 205:151-165. https://doi.org/10.1016/j.rse.2017.11.014.

226 Han, X., L. Feng, **C. Hu**, X. Chen (2018). Wetland changes of China's largest freshwater lake and their linkage with the Three Gorges Dam. Remote Sens. Environ., 204:799-811.

225 Lee, Z., R. Arnone, D. Boyce, B. Franz, S. Greb, **C. Hu**, et al. (2018). Global water clarity: continuing a century-long monitoring. *Eos, 99,* https://doi.org/10.1029/2018EO097251. Published on 07 May 2018.

224 Liu, Y., **C. Hu**, W. Zhan, C. Sun, B. Murch, and L. Ma (2018). Identifying industrial heat sources using time-series of the VIIRS Nightfire product with an object-oriented approach. Remote Sensing of Environment, 204:347-365. http://dx.doi.org/10.1016/j.rse.2017.10.019

223 Long, J. S., **C. Hu** & M. Wang (2018) Long-term spatiotemporal variability of southwest Florida whiting events from MODIS observations, International Journal of Remote Sensing, 39:3, 906-923, DOI: 10.1080/01431161.2017.1392637

222 Wang, M., and **C. Hu** (2018). On the continuity of quantifying floating algae of the Central West Atlantic between MODIS and VIIRS. Int. J. Remote Sens. 39:12, 3852-3869, DOI: 10.1080/01431161.2018.1447161.

221 Zhang, M., **C. Hu**, J. Cannizzaro, M. G. Kowalewski, and Scott J. Janz (2018). Diurnal changes of remote sensing reflectance over Chesapeake Bay: Observations from the Airborne Compact Atmospheric Mapper. Estuarine, Coastal and Shelf Science. 200:181-193. https://doi.org/10.1016/j.ecss.2017.10.021.

220 Zhang, M., **C. Hu**, M. G. Kowalewski, and S. J. Janz (2018). Atmospheric correction of hyperspectral GCAS airborne measurements over the North Atlantic Ocean and Louisiana Shelf. IEEE Trans. Geosci. Remote Sens., 56: 168-179. doi:10.1109/TGRS.2017.2744323.

2017

219 Chen, S., **C. Hu**, W-J. Cai, and B. Yang (2017). Estimating surface pCO2 in the northern Gulf of Mexico: Which remote sensing model to use? Cont. Shelf Res., 151:94-110. https://doi.org/10.1016/j.csr.2017.10.013

218 Mitchell, C., **C. Hu**, B. Bowler, D. Drapeau, and W. M. Balch (2017). Estimating particulate inorganic carbon concentrations of the global ocean from ocean color measurements using a reflectance difference approach. Journal of Geophysical Research: Oceans, 122. https://doi.org/10.1002/2017JC013146

217 Qi, L., **C. Hu**, M. Wang, S. Shang, and C. Wilson (2017). Floating algae blooms in the East China Sea. Geophysical Research Letters, 44.https://doi.org/10.1002/2017GL075525

216 Sun, D., Y. Huan, Z. Qiu, **C. Hu**, S. Wang, Y. He (2017). Remote- sensing estimation of phytoplankton size classes from GOCI satellite measurements in Bohai Sea and Yellow Sea. Journal of Geophysical Research: Oceans, 122, 8309–8325. https://doi.org/10.1002/2017JC013099.

215 Zhang, M., I. Leifer, and **C. Hu** (2017). Challenges in Methane Column Retrievals from AVIRIS-NG Imagery over Spectrally Cluttered Surfaces: A Sensitivity Analysis. Remote Sensing 2017, 9(8), 835; doi:10.3390/rs9080835

214 Li, J., **C. Hu**, Q. Shen, B. B. Barnes, B. Murch, L. Feng, M. Zhang, and B. Zhang (2017). Recovering low quality MODIS-Terra data over highly turbid waters through noise reduction and regional vicarious calibration adjustment: A case study in Taihu Lake. Remote Sens. Environ., 197:72-84, http://dx.doi.org/10.1016/j.rse.2017.05.027

213 Feng, L., and **C. Hu** (2017), Land adjacency effects on MODIS Aqua top-of-atmosphere radiance in the shortwave infrared: Statistical assessment and correction, J. Geophys. Res. Oceans, 122, 4802–4818, doi:10.1002/2017JC012874.

212 Chen, S, and **C. Hu** (2017). Estimating sea surface salinity in the northern Gulf of Mexico from satellite ocean color measurements. Remote Sens. Environ., 201:115-132. http://dx.doi.org/10.1016/j.rse.2017.09.004.

211 Long, J. S., **C. Hu,** L. L. Robbins, R. H. Byrne, J. H. Paul, and J. L. Wolny (2017). Optical and biochemical properties of a southwest Florida whiting event. Estuarine, Coastal and Shelf Science. 196:258-268, http://dx.doi.org/10.1016/j.ecss.2017.07.017

210 Shang, S., Z. Lee, G. Lin, **C. Hu**, L. Shi, Y. Zhang, X. Li, J. Wu, and J. Yan (2017). Sensing an intense phytoplankton bloom in the western Taiwan Strait from radiometric measurements on a UAV. Remote Sens. Environ., 198:85-94. http://dx.doi.org/10.1016/j.rse.2017.05.036

209 Qi, L., Z. Lee, **C. Hu**, and M. Wang (2017), Requirement of minimal signal-to-noise ratios of ocean color sensors and uncertainties of ocean color products, J. Geophys. Res. Oceans, 122, 2595–2611, doi:10.1002/2016JC012558.

208 Wang, M., and **C. Hu** (2017), Predicting Sargassum blooms in the Caribbean Sea from MODIS observations, Geophys. Res. Lett., 44, 3265–3273, doi:10.1002/ 2017GL072932.

207 Qi, L., **C. Hu**, B. B. Barnes, and Z. Lee (2017). VIIRS captures phytoplankton vertical migration in the NE Gulf of Mexico. Harmful Algae, 66:40-46. http://dx.doi.org/10.1016/j.hal.2017.04.012.

206 Feng, L., **C. Hu**, B. B. Barnes, A. Mannino, A. K. Heidinger, K. Strabala, and L. T. Iraci (2017). Cloud and Sun-glint statistics derived from GOES and MODIS observations over the Intra-Americas Sea for GEO-CAPE mission planning. J. Geophys. Res. Atmospheres. 122:1725-1745, doi:10.1002/2016JD025372.

205 **Hu, C.**, and L. Feng (2017). Modified MODIS fluorescence line height data product to improve image interpretation for red tide monitoring in the eastern Gulf of Mexico. J. Appl. Remote Sens. 11(1), 012003 (2016), doi: 10.1117/1.JRS.11.012003.

204 Hu, L., **C. Hu**, and M-X. He (2017). Remote estimation of biomass of Ulva prolifera macroalgae in the Yellow Sea. Remote Sens. Envion., 192:217-227. http://dx.doi.org/10.1016/j.rse.2017.01.037.

203 Le, C., J. C. Lehrter, **C. Hu**, H. MacIntyre, and M. W. Beck (2017). Satellite observation of particulate organic carbon dynamics on the Louisiana continental shelf. J. Geophys. Res. Oceans, 122:555-569, DOI: 10.1002/2016JC012275..

202 Lee, C. C., S. C. Sheridan, B. B. Barnes, **C. Hu**, D. E. Pirhalla, V. Ransibrahmanakul, and K. Shein (2017). The development of a non-linear autoregressive model with exogenous input (NARX) to model climate-water clarity relationships: reconstructing a historical water clarity index for the coastal waters of the southeastern USA. Theor. Appl. Climatol., 130: 557-569, DOI 10.1007/s00704-016-1906-7.

201 Pirhalla, D. E., S. C. Sheridan, C. C. Lee, B. B. Barnes, V. Ransibrahmanakul, and **C. Hu** (2017). Water clarity patterns in South Florida coastal waters and their linkages to

synoptic-scale wind forcing. Satellite Oceanography and Meteorology, vol.1(2): 1-15. http://dx.doi.org/10.18063/SOM. 2016.02.003.

200 Soto, I. M., F. E. Muller-Karger, **C. Hu**, and J. Wolny (2017). Characterization of Karenia brevis blooms on the West Florida Shelf using ocean color satellite imagery: implications for bloom maintenance and evolution. J. Appl. Remote Sens. 11(1), 012002 (2017), doi: 10.1117/1.JRS.11.012002. (published online in Dec 2016).

199 Walsh, J. J., J. M. Lenes, R. H. Weisberg, L. Zheng, **C. Hu**, K. A. Fanning, R. Snyder, and J. Smith (2017). More surprises in the global greenhouse: Human health impacts from recent toxic marine aerosol formations, due to centennial alterations of world-wide coastal food webs. Marine Pollution Bulletin. 116:9-40, http://dx.doi.org/10.1016/j.marpolbul.2016.12.053.

198 Marechal, J-P., C. Hellio, and **C. Hu** (2017). A simple, fast, and reliable method to predict Sargassum washing ashore in the Lesser Antilles. Remote Sensing Applications: Society and Environment. 5:54-63. http://dx.doi.org/10.1016/j.rsase.2017.01.001.

197 Salisbury, J., C. Davis, A. Erb, **C. Hu**, C. Gatebe, C. Jordan, Z. Lee, A. Mannino, C. B. Mouw, C. Schaaf, B. A. Schaeffer, and M. Tzortziou (2017). Coastal observations from a new vantage point. EOS, 98(1):20-25. doi:10.1029/2016EO062707.

196 Zhang, M., **C. Hu**, M. G. Kowalewski, S. J. Janz, Z. Lee, and J. Wei (2017). Atmospheric correction of hyperspectral airborne GCAS measurements over the Louisiana Shelf using a cloud shadow approach. International Journal of Remote Sensing, 38(4): 1162-1179, doi: 10.1080/01431161.2017.1280633.

2016

195 Barnes, B. B., **C. Hu** (2016) Island building in the South China Sea: detection of turbidity plumes and artificial islands using Landsat and MODIS data. Sci. Rep. 6, 33194; doi: 10.1038/srep33194

194 Barnes, B.B. and **C. Hu** (2016) Dependence of satellite ocean color data products on viewing angles: A comparison between SeaWiFS, MODIS, and VIIRS. Remote Sens. Environ. 175:120-129

193 Chen, J., Z. Lee, **C. Hu**, and J. Wei (2016), Improving satellite data products for open oceans with a scheme to correct the residual errors in remote sensing reflectance, J. Geophys.Res. Oceans, 121, 3866–3886, doi:10.1002/2016JC011673.

192 Chen, S., **C. Hu**, R. H. Byrne, L. L. Robbins, and B. Yang (2016). Remote estimation of surface pCO2 on the West Florida Shelf. Cont. Shelf. Res., 128:10-25. http://dx.doi.org/10.1016/j.csr.2016.09.004

191 Feng, L., X. Han, **C. Hu**, and X. Chen (2016). Four decades of wetland changes of the largest freshwater lake in China: Possible linkage to the Three Gorges Dam? Remote Sens. Environ., 176:43-55. doi10.1016/j.rse.2016.01.011.

190 Feng, L., and **C. Hu** (2016). Cloud adjacency effects on top-of-atmosphere radiance and ocean color data products: A statistical assessment. Remote Sens. Environ., 174:301-313. doi:10.1016/j.rse.2015.12.020.

189 Feng, L., and **C. Hu** (2016). Comparison of Valid Ocean Observations Between MODIS Terra and Aqua Over the Global Oceans. IEEE Trans. Geosci. Remote Sens. 54:1575-1585.

188 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. http://dx.doi.org/10.1016/j.mio.2016.09.005

187 **Hu, C.**, B. B. Barnes, L. Qi, C. Lembke, and D. English (2016). Vertical migration of Karenia brevis in the northeastern Gulf of Mexico observed from glider measurements. Harmful Algae. 58:59-65, doi:10.1016/j.hal.2016.07.005.

186 **Hu, C.**, B. Murch, B. B. Barnes, M. Wang, J-P. Marechal, J. Franks, D. Johnson, B. Lapointe, D. S. Goodwin, J. M. Schell, and A. N. S. Siuda (2016). Sargassum watch warns of incoming seaweed, Eos, 97(22):10-15, http://dx.doi.org/10.1029/2016EO058355

185 **Hu, C.**, B. Murch, A. A. Corcoran, L. Zheng, B. B. Barnes, R. H. Weisberg, K. Atwood, J. M. Lenes (2016). Developing a smart semantic web with linked data and models for near real-time monitoring of red tides in the eastern Gulf of Mexico. IEEE Systems Journal, 10:1282 - 1290. doi:10.1109/JSYST.2015.2440782.

184 **Hu, C.**, R. Hardy, E. Ruder, A. Geggel, L. Feng, S. Powers, F. Hernandez, G. Graettinger, J. Bodnar, and T. McDonald (2016). Sargassum coverage in the northeastern Gulf of Mexico during 2010 from Landsat and airborne observations: Implications for the Deepwater Horizon oil spill impact assessment. Marine Pollution Bulletin, 107:15-21. DOI information: 10.1016/j.marpolbul.2016.04.045.

183 Le, C., J. C. Lehrter, **C. Hu**, and D. R. Obenour (2016), Satellite-based empirical models linking river plume dynamics with hypoxic area and volume, Geophys. Res. Lett., 43, 2693–2699, doi:10.1002/2015GL067521.

182 Le, C., J. C. Lehrter, B. A. Schaeffer. **C. Hu**, M. C. Murrell, J. D. Hagy, R. M. Greene, and M. Beck (2016). Bio-optical water quality dynamics observed from MERIS in Pensacola Bay, Florida. Estuarine, Coastal and Shelf Science. 173:26-38. doi:10.1016/j.ecss.2016.02.003.

181 Li, X., **C. Hu**, S. Bao, and X. Yang (2016). MODIS captures large-scale atmospheric gravity waves over the Atlantic Ocean. Acta Oceanol. Sin., 35:1-2.

180 Lu, Y., W. Zhan, and **C. Hu** (2016). Detecting and quantifying oil slick thickness by thermal remote sensing: A ground-based experiment. Remote Sens. Environ., 181: 207-217, doi:10.1016/j.rse.2016.04.007.

179 Lu, Y., S. Sun, M. Zhang, B. Murch, and **C. Hu** (2016), Refinement of the critical angle calculation for the contrast reversal of oil slicks under sunglint, J. Geophys. Res. Oceans, 121, 148–161, doi:10.1002/2015JC011001.

178 Lu, Y., **C. Hu**, S. Sun, M. Zhang, Y. Zhoug, J. Shi, and Y. Wen (2016). Overview of optical remote sensing of marine oil spills and hydrocarbon seepage. Journal of Remote Sensing, 20(5):1259-1269 [DOI:10.11834/jrs.20166122]

177 Lu, Y., L. Li, **C. Hu**, L. Li, M. Zhang, S. Sun, and C. Lv (2016), Sunlight induced chlorophyll fluorescence in the near-infrared spectral region in natural waters: Interpretation of the narrow reflectance peak around 761 nm, J. Geophys. Res. Oceans, 121, 5017–5029, doi:10.1002/2016JC011797.

176 Murawski, S.A., J.W. Fleeger, W.F. Patterson III, **C. Hu**, K. Daly, I. Romero, and G.A. Toro-Farmer. 2016. How did the Deepwater Horizon oil spill affect coastal and continental shelf ecosystems of the Gulf of Mexico? Oceanography 29(3):160–173, http://dx.doi.org/10.5670/oceanog.2016.80.

175 O'Connor, B. S., F. E. Muller-Karger,R. W. Nero, **C. Hu**, and E. B. Peebles (2016). The role of Mississippi River discharge in offshore phytoplankton blooming in the northeastern Gulf of Mexico during August 2010. Remote Sens. Environ, 173:133-144. http://dx.doi.org/10.1016/j.rse.2015.11.004

174 Qi, L., **C. Hu**, Q. Xing, and S. Shang (2016). Long-term trend of Ulva prolifera blooms in the western Yellow Sea. Harmful Algae, 58:35-44. http://dx.doi.org/10.1016/j.hal.2016.07.004

173 Qiu, Z., D. Sun, **C. Hu**, S. Wang, L. Zheng, Y. Huan, and T. Peng (2016). Variability of Particle Size Distributions in the Bohai Sea and the Yellow Sea. Remote Sens. 2016, 8(11), 949; doi:10.3390/rs8110949

172 Sun, D., Z. Qiu, **C. Hu**, S. Wang, L. Wang, L. Zheng, T. Peng, and Y. He (2016), A hybrid method to estimate suspended particle sizes from satellite measurements over Bohai Sea and Yellow Sea, J. Geophys. Res. Oceans, 121, 6742–6761, doi:10.1002/2016JC011949.

171 Sun, S., and **C. Hu** (2016), Sun glint requirement for the remote detection of surface oil films, Geophys. Res. Lett., 43, 309–316, doi:10.1002/2015GL066884.

170 Sun, S., **Hu, C.**, Feng, L., Swayze, G.A., Holmes, J., Graettinger, G., MacDonald, I., Garcia, O., and I. Leifer (2016). Oil slick morphology derived from AVIRIS measurements of the Deepwater Horizon oil spill: Implications for spatial resolution requirements of remote sensors. Mar. Pollut. Bull., 103: 276-285, doi:10.1016/j.marpolbul.2015.12.003

169 Wang, M., and **C. Hu** (2016). Mapping and quantifying Sargassum distribution and coverage in the Central West Atlantic using MODIS observations. Remote Sens. Environ., 183:356-367. http://dx.doi.org/10.1016/j.rse.2016.04.019

168 Weisberg, R. H., L. Zheng, Y. Liu, S. Murawski, **C. Hu**, D. Hollander, and J. Paul (2016). Did Deepwater Horizon Hydrocarbons Transit to the West Florida Continental Shelf? Deep-sea Research II, 129:259-272, DOI: 10.1016/j.dsr2.2014.02.002.

167 Weisberg, R. H., L. Zheng, Y. Liu, A. A. Corcoran, C. Lembke, **C. Hu,** J. M. Lenes, and J. J. Walsh (2016). Karenia brevis blooms on the West Florida Shelf: A comparative study of the robust 2012 bloom and the nearly null 2013 event. Cont. Shelf. Res., 120:106-121. doi:10.1016/j.csr.2016.03.011.

166 Xing, Q., and **C. Hu** (2016). Mapping macroalgal blooms in the Yellow Sea and East China Sea using HJ-1 and Landsat data: Application of a virtual baseline reflectance

height technique. Remote Sens. Environ., 178:113-126. http://dx.doi.org/10.1016/j.rse.2016.02.065

165 Zhang, M., D. English, **C. Hu**, P. Carlson, F. E. Muller-Karger, G. Toro-Farmer, and S. R. Herwitz (2016). Short-term changes of remote sensing reflectancein a shallow-water environment: observations from repeated airborne hyperspectral measurements, International Journal of Remote Sensing, 37:7, 1620-1638, DOI:10.1080/01431161.2016.1159746

2015

164 Walsh, J. J., J. M. Lenes, B. Darrow, A. Parks, R. H. Weisberg, L. Zheng, **C. Hu**, B. Barnes, K. L. Daly, G. Brooks, W. Jeffrey, R. Snyder, and D. Hollander (2015). A simulation analysis of the plankton fate of the Deepwater Horizon oil spills in 2010-2011. Cont. Shelf. Res., 107:50-68. http://dx.doi.org/10.1016/j.csr.2015.07.002

163 Sun, S., **C. Hu**, and J. W. Tunnell Jr. (2015). Surface oil footprint and trajectory of the Ixtoc-I oil spill determined from Landsat/MSS and CZCS observations. Marine Pollution Bulletin, 101:632-641. doi:10.1016/j.marpolbul.2015.10.036.

162 MacDonald, I. R., O. Garcia-Pineda, A. Beet, S. Daneshgar Asl, L. Feng, G. Graettinger, D. French-McCay, J. Holmes, **C. Hu**, F. Huffer, I. Leifer, F. Muller-Karger, A. Solow, M. Silva, and G. Swayze (2015), Natural and unnatural oil slicks in the Gulf of Mexico, J. Geophys. Res. Oceans, 120, 8364-8380, doi:10.1002/2015JC011062.

161 Qi, L., **C. Hu**, J. Cannizzaro, A. A. Corcoran, D. English, and C. Le (2015). VIIRS Observations of a Karenia brevis Bloom in the Northeastern Gulf of Mexico in the Absence of a Fluorescence Band. IEEE. Geosci. Remote Sens. Lett. 12:2213-2217, Doi:10.1109/LGRS.2015.2457773.

160 Barnes, B. B., **C. Hu**, C. Kovach, R. N. Silverstein (2015). Sediment plumes induced by the Port of Miami dredging: Analysis and interpretation using Landsat and MODIS data. Remote Sens. Environ., 170:328-339. doi:10.1016/j.rse.2015.09.023

159 Soto, I. M., J. Cannizzaro, F. E. Muller-Karger, **C. Hu**, J. Wolny, and D. Goldgof (2015). Evaluation and optimization of remote sensing techniques for detection of Karenia brevis blooms on the West Florida Shelf. Remote Sens. Environ., 170:239-254. doi:10.1016/j.rse.2015.09.026.

158 Wang, M., and **C. Hu** (2015). Extracting oil slick features from VIIRS nighttime imagery using a Gaussian filter and morphological constraints. IEEE Geosci. Remote Sens. Lett. 12:2051-2055. doi 10.1109/LGRS.2015.2444871.

157 Xing, Q., **C. Hu**, D. Tang, L. Tian, S. Tang, X. Wang, M. Lou, and X. Gao (2015). World's largest macroalgal blooms altered phytoplankton biomass in summer in the Yellow Sea: Satellite observations. Remote Sens., 7:12,297-12,313; doi:10.3390/rs70912297.

156 Zhang, M., **C. Hu**, D. English, P. Carlson, F. E. Muller-Karger, G. Toro-Farmer, and S. R. Herwitz (2015). Atmospheric correction of AISA measurements over the Florida Keys optically shallow waters: Challenges in radiometric calibration and aerosol selection. IEEE J. of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS), 8:4189-4196.

155 Lee, Z. P., S. Shang, **C. Hu**, K. Du, A. Weidemann, W. Hou, J. Lin, and G. Lin (2015). Secchi disk depth: A new theory and mechanistic model for underwater visibility. Remote Sens. Environ., 169:139-149.

154 **Hu, C.**, L. Feng, R. F. Hardy, and E. J. Hochberg (2015). Spectral and spatial requirements of remote measurements of pelagic Sargassum macro algae. Remote Sens. Environ. 167:229-246. doi:10.1016/j.rse.2015.05.022.

153 Sun, D., **C. Hu**, Z. Qiu, and S. Wang (2015). Reconstruction of hyperspectral reflectance for optically complex turbid inland lakes: test of a new scheme and implications for inversion algorithms. Optics Express, 23:A718-A740, doi:10.1364/OE.23.00A718.

152 **Hu, C.**, S. Chen, M. Wang, B. Murch, and J. Taylor (2015). Detecting surface oil slicks using VIIRS nighttime imagery under moon glint: a case study in the Gulf of Mexico. Remote Sensing Letters, 6:295-301. DOI:10.1080/2150704X.2015.1029092.

151 Brewin, R. J. W., S. Sathyendranath; D. Müller; C. Brockmann; P.-Y. Deschamps; E. Devred; R. Doerffer; N. Fomferra; B. Franz; M. Grant; S. Groom; A. Horseman; **C. Hu**; H. Krasemann; Z. Lee; S. Maritorena; F. Mélin; M. Peters; T. Platt; P. Regner; T. Smyth; F. Steinmetz; J. Swinton; J. Werdell; and G. White II (2015). The Ocean Colour Climate Change Initiative: III. A round-robin comparison on in-water biooptical algorithms. *Remote Sens. Environ.* 162:271-294. doi:10.1016/j.rse.2013.09.016.

150 Mouw, C. B., S. Greb, D. Aurin, P. M. DiGiacomo, Z. Lee, M. Twardowski, C. Binding, **C. Hu**, R. Ma, T. Moore, W. Moses, and S. E. Craig (2015). Aquatic Color Radiometry Remote Sensing of Coastal and Inland Waters: Challenges and Recommendations for Future Satellite Missions. Remote Sens. Environ. 160:15-30.

149 Le, C., J. C. Lehrter, **C. Hu**, B. Schaeffer, H. MacIntyre, J. D. Hagy, and D. L. Beddick (2015). Relation between inherent optical properties and land use and land cover across Gulf Coast estuaries. Limnol & Oceanogr. 60:920-933.

148 Barnes, B. B., P. Hallock, **C. Hu**, F. Muller-Karger, D. Palandro, C. Walter, and R. Zepp (2015). Prediction of coral bleaching in the Florida Keys using remotely sensed data. Coral Reefs. 34:491-503.

147 Sun, D., **C. Hu**, Z. Qiu, and K Shi (2015). Estimating phycocyanin pigment concentration in productive inland waters using Landsat measurements: A case study in Lake Dianchi. Opt. Express, 23, 3055-3074. doi:10.1364/OE.23.003055

146 Qi, L., **C. Hu**, H. Duan, Y. Zhang, and R. Ma (2015). Influence of Particle Composition on Remote Sensing Reflectance and MERIS Maximum Chlorophyll Index Algorithm: Examples From Taihu Lake and Chaohu Lake. IEEE Geoscience. remote sensing letters. 12 (5): 1136-1140. doi: 10.1109/LGRS.2014.2385800.

145 **Hu, C.**, B. B. Barnes, L. Qi, and A. A. Corcoran (2015). A harmful algal bloom of Karenia brevis in the northeastern Gulf of Mexico as revealed by MODIS and VIIRS: A comparison. Sensors, 15:2873-2887, doi:10.3390/s150202873.

144 Al-Handal, A., and **C. Hu** (2015). MODIS Observations of Human-Induced Changes in the Mesopotamian Marshes in Iraq. Wetlands, 35:31-40, doi 10.1007/s13157-014-0590-6.

143 Barnes, B. B., and **C. Hu** (2015). Cross-sensor continuity of satellite-derived water clarity in the Gulf of Mexico: Insights into temporal aliasing and implications for long-term water clarity assessment. IEEE Trans. Geosci. & Remote Sens., 53:1761-1772.

142 Feng, L., **C. Hu**, X. Han, X. Chen, and L. Qi (2015). Long-term distribution patterns of chlorophyll-a concentration in China's largest freshwater lake: MERIS full-resolution observations with a practical approach. Remote Sensing. 7:275-299. doi:10.3390/rs70100275.

2014

141 Wall C. C., C. Lembke, **C. Hu**, and D. A. Mann (2014) Fish Sound Production in the Presence of Harmful Algal Blooms in the Eastern Gulf of Mexico. PLoS ONE 9(12): e114893. doi:10.1371/journal.pone.0114893.

140 Le, C., J. C. Lehrter, **C. Hu**, M. C. Murrell, and L. Qi (2014), Spatiotemporal chlorophyll-a dynamics on the Louisiana continental shelf derived from a dual satellite imagery algorithm, J. Geophys. Res. Oceans, 119, 7449–7462, doi:10.1002/2014JC010084.

139 Qi, L., **C. Hu**, H. Duan, B. B. Barnes, and R. Ma (2014). An EOF-based algorithm to estimate chlorophyll a concentrations in Taihu Lake from MODIS land-band measurements: Implications for near real-time applications and forecasting models. Remote Sens., 6:10,694-10,715; doi:10.3390/rs61110694.

138 Sun, D., **C. Hu**, Z. Qiu, J. P. Cannizzaro, and B. B. Barnes (2014). Influence of a red band-based water classification on chlorophyll algorithms for optically complex estuaries. Remote Sens. Environ. 155:289-302. DOI: 10.1016/j.rse.2014.08.035

137 Wall, C.C., P. Simard, M. Lindemuth, C. Lembke, D.F. Naar, **C. Hu**, B.B. Barnes, F.E. Muller-Karger, and D.A. Mann (2014). Temporal and spatial mapping of red grouper (Epinephelus morio) sound production. Journal of Fish Biology. 85(5): 1469—1487. doi: 10.1111/jfb.12500 http://onlinelibrary.wiley.com/doi/10.1111/jfb.12500/abstract

136 Qi, L., **C. Hu**, H. Duan, J. Cannizzaro, and R. Ma (2014). A novel MERIS algorithm to derive cyanobacterial phycocyanin pigment concentrations in a eutrophic lake: Theoretical basis and practical considerations. Remote Sens. Environ., 154:298-317. http://dx.doi.org/10.1016/j.rse.2014.08.026

135 Chen, S., and **C. Hu** (2014). In search of oil seeps in the Cariaco basin using MODIS and MERIS medium-resolution data. Remote Sensing Letters. 5:442-450, http://dx.doi.org/10.1080/2150704X.2014.917218.

134 Long, J., **C. Hu**, and L. Robbins (2014). Whiting events in SW Florida coastal waters: a case study using MODIS medium-resolution data. Remote Sensing Letters. 5:539-547.

133 Zhao, J., M. Temimi, H. Ghedira, and **C. Hu** (2014). Exploring the potential of optical remote sensing for oil spill detection in shallow coastal waters – A case study in the Arabian Gulf. Opt. Express. 22:13755-13772. http://dx.doi.org/10.1364/OE.22.013755

132 Lapointe, B. E., L. E. West, T. T. Sutton, and **C. Hu** (2014). Nutrient excretions by symbiotic fishes support enhanced productivity of pelagic Sargassum in the western North Atlantic Ocean. Journal of Experimental Marine Biology and Ecology. 458:46-56.

131 Lee, Z., S. Shang, **C. Hu**, and G. Zibordi (2014). Spectral interdependence of remote-sensing reflectance and its implications on the design of ocean color satellite sensors. *Applied Optics*, 53:3301 – 3310.

130 Hu, L., Z. Liu, Z. Liu, **C. Hu,** and M-X. He (2014), Mapping bottom depth and albedo in coastal waters of the South China Sea islands and reefs using Landsat TM and ETM+ data. Int. J. Remote Sens., 35:4156-4172. DOI:10.1080/01431161.2014.916441.

129 Feng, L., **C. Hu**, and X. Chen (2014). Dramatic Inundation Changes of China's Two Largest Freshwater Lakes: Natural Process or Influenced by the Three Gorges Dam? A Revisit. Environmental Science & Technology. 48:2088-2089.

128 He, M-X., L. Hu, and **C. Hu** (2014). Harbour dredging and fish mortality in an aquaculture zone: Assessment of changes in suspended particulate matter using multi-sensor remote-sensing data. Int. J. Remote Sens., 35:4383-4398. DOI:10.1080/01431161.2014.916446

127 Pahlevan, N., Z. Lee, **C. Hu**, and J. R. Schott (2014). Diurnal remote sensing of coastal/oceanic waters: A radiometric analysis for Geostationary Coastal and Air Pollution Events. Appl. Opt., 53:648-665.

126 **Hu, C.**, and L. Feng (2014). GOES Imager shows diurnal change of a Trichodesmium erythraeum bloom on the west Florida shelf. IEEE Geosci. Remote Sens. Lett., 11:1428 – 1432.

125 Shang, S., Q. Dong, **C. Hu**, G. Lin, Y. Li, and S. Shang (2014). On the consistency of MODIS chlorophyll a products in the northern South China Sea. *Biogeosciences*, 11, 269-280, doi:10.5194/bg-11-269-2014.

124 **Hu, C.**, and C. Le (2014). Ocean color continuity from VIIRS measurements over Tampa Bay. *IEEE Geosci. Remote Sens. Lett.*, 11:945-949. Doi: 10.1109/LGRS.2013.2282599

123 Feng, L., C. Hu, X. Chen, and Q. Song (2014). Influence of the Three Gorges Dam on total suspended matters in the Yangtze Estuary and its adjacent coastal waters: Observations from MODIS. Remote Sens. Environ., 140:779-788.

122 Barnes, B. B., **C. Hu**, J. P. Cannizzaro, S. E. Craig, P. Hallock, D. Jones, J. C. Lehrter, N. Melo, B. A. Schaeffer, and R. Zepp (2014). Estimation of diffuse attenuation of ultraviolet light in optically shallow Florida Keys waters from MODIS measurements. *Remote Sens. Environ*. 140:519-532.

121 Barnes, B. B., **C. Hu**, K. L. Holekamp, S. Blonski, B. A. Spiering, D. Palandro, and B. Lapointe (2014). Use of Landsat data to track historical water quality changes in Florida Keys marine environments. *Remote Sens. Environ.*, 140:485-496.

120 Lou, X., and **C. Hu** (2014). Diurnal changes of a harmful algal bloom in the East China Sea: Observations from GOCI. *Remote Sens. Environ*., 140:562-572.

119 **Hu, C.**, B. B. Barnes, B. Murch, and P. Carlson (2014). Satellite-based virtual buoy system (VBS) to monitor coastal water quality. *Optical Engineering*. *53(5)*, 051402. DOI: 10.1117/1.OE.53.5.051402.

2013

118 Garcia-Pineda, O., I. MacDonald, **C. Hu**, J. Svejkovsky, M. Hess, D. Dukhovskoy, and S. Moorey (2013). Detection of floating oil anomalies from the Deepwater Horizon oil spill with synthetic aperture radar. *Oceanography.* 26(2): 124–137, http://dx.doi.org/10.5670/oceanog.2013.38.

117 Otremba, Z., O. Zielinski, and **C. Hu** (2013). Optical contrast of oil dispersed in seawater under windy conditions. *J. Europ. Opt. Soc. Rap. Public*., 8, 13051, DOI: http://dx.doi.org/10.2971/jeos.2013.13051.

116 Le, C., and **C. Hu** (2013). A hybrid approach to estimate chromophoric dissolved organic matter in turbid estuaries from satellite measurements: A case study for Tampa Bay. *Opt Express*. 21: 18849-18871, DOI:10.1364/OE.21.018849.

115 Anderson, J. C., J. Wang, J. Zeng, G. Leptoukh, M. Petrenko, C. Ichoku, and **C. Hu** (2013). Long-term Statistical Assessment of Aqua-MODIS Aerosol Optical Depth over Coastal Regions: Bias Characteristics and Uncertainty Sources. *Tellus* B, 65, 20805, http://dx.doi.org/10.3402/tellusb.v65i0.20805.

114 Feng, L., **C. Hu**, X. Chen, and X. Zhao (2013). Dramatic inundation changes of China's largest freshwater lakes linked to the Three Gorges Dam. *Environmental Science and Technology.* 47:9628-9634.

113 Zhao, J., **C. Hu**, J. M. Lenes, R. H. Weisberg, C. Lembke, D. English, J. Wolny, L. Zheng, J. J. Walsh, and G. Kirkpatrick (2013). Three-dimensional structure of a *Karenia brevis* bloom: observations from gliders, satellites, and field measurements. *Harmful Algae*. http://dx.doi.org/10.1016/j.hal.2013.07.004.

112 Cannizzaro, J. P., P. R. Carlson Jr., L. A. Yarbro, and **C. Hu** (2013). Optical variability along a river plume gradient: Implications for management and remote sensing. *Estuarine, Coastal and Shelf Science*. 131:149-161. http://dx.doi.org/10.1016/j.ecss.2013.07.012.

111 Lee, Z., **C. Hu,** S. Shang, K. Du, M. Lewis, R. Arnone, and R. Brewin (2013). Penetration of UV-Visible solar radiation in the global oceans: Insights from ocean color remote sensing. *J. Geophys. Res. Oceans, 118, doi:10.1002/jgrc.20308.*

110 Le, C., **C. Hu**, J. Cannizzaro, and H. Duan (2013). Long-term distribution patterns of remotely sensed water quality parameters in Chesapeake Bay. *Estuarine, Coastal and Shelf Science.* 128:93-103. doi: 10.1016/j.bbr.2011.03.031.

109 Barnes, B. B., **C. Hu**, B. A. Schaeffer, Z. Lee, D. A. Palandro, and J. C. Lehrter (2013). MODIS-derived spatiotemporal water clarity patterns in optically shallow Florida Keys waters: a new approach to remove bottom contamination. *Remote Sens. Environ.*, 134:377-391.

108 **Hu, C.,** L. Feng, and Z. Lee (2013). Uncertainties of SeaWiFS and MODIS remote sensing reflectance: Implications from clear water measurements. *Remote Sens. Environ.*, 133:163-182.

107 Cannizzaro, J. **C. Hu,** K. L. Carder, C. R. Kelble, N. Melo, E. M. Johns, G. A. Vargo, and C. A. Heil (2013). On the accuracy of SeaWiFS ocean color data products on the West Florida Shelf. *J. Coastal Res.*, DOI: 10.2112/JCOASTRES-D-12-00223.1.

106 Yu, K., and **C. Hu** (2013). Changes in vegetative coverage of the Hongze Lake national wetland nature reserve: a decade-long assessment using MODIS medium-resolution data. J. Appl. Remote Sens. 7(1), 073589 (Feb 06, 2013). doi:10.1117/1.JRS.7.073589.

105 Zhao, J., **C. Hu**, B. Lapointe, N. Melo, E. M. Johns, and R. H. Smith (2013). Satellite-observed black water events off Southwest Florida: Implications for coral reef health in the Florida Keys National Marine Sanctuary. *Remote Sens.*, 5:415-431; doi:10.3390/rs510415.

104 Zhao, J., B. Barnes, N. Melo, D. English, B. Lapointe, F. Muller-Karger, B. Schaeffer, and **C. Hu** (2013). Assessment of satellite-derived diffuse attenuation coefficients and euphotic depths in south Florida coastal waters. Remote Sens. Environ., 131:38-50.

103 Barnes, B. B., and **C. Hu** (2013). A hybrid cloud detection algorithm to improve MODIS sea surface temperature data quality and coverage over the eastern Gulf of Mexico. IEEE Trans. Geosci. Remote Sens. doi:10.1109/TGRS.2012.2223217.

102 Le, C., **C. Hu,** J. Cannizzaro, D. English, C. Kovach (2013). Climate-driven chlorophyll a changes in a turbid estuary: Observation from satellites and implications for management. Remote Sens. Environ. 130, 11-24.

101 Le, C., **C. Hu**, J. Cannizzaro, D. English, F. Muller-Karger, and Z. Lee (2013). Evaluation of chlorophyll-a remote sensing algorithms for an optically complex estuary. Remote Sens. Environ. 129: 75-89.

100 Le, C., **C. Hu**, D. English, J. Cannizzaro, Z. Chen, L. Feng, R. Boler, and C. Kovach (2013). Towards a long-term chlorophyll-a data record in a turbid estuary using MODIS observations. Progress in Oceanography. 109:90-103.

99 Le, C., **C. Hu**, D. English, J. Cannizzaro, Z. Chen, C. Kovach, C. J. Anastasiou, J. Zhao, and K. L. Carder (2013). Inherent and apparent optical properties of the complex estuarine waters of Tampa Bay: What controls light? Estuarine, Coastal and Shelf Science. 117:54-69.

2012

98 Fishman, J., L. T. Iraci, J. Al-Saadi, K. Change, F. Chavez, M. Chin, P. Coble, C. Davis, P. M. DiGiacomo, D. Edwards, A. Eldering, J. Goes, J. Herman, **C. Hu,** D. J. Jacob, C. Jordan, S. R. Kawa, R. Key, X. Liu, S. Lohrenz, A. Mannino, V. Natraj, D. Neil, J. Neu, M. Newchurch, K. Pickering, J. Salisbury, H. Sosik, A. Subramaniam, M. Tzortziou, J. Wang, and M. Wang (2012). The United States' next generation of atmospheric composition and coastal ecosystem measurement: NASA's Geostationary Coastal and Air Pollution Events (GEO-CAPE) Mission. Bull. Amer. Meteor. Soc., 93:1547-1566, DOI:10.1175/BAMS-D-11-00201.1.

97 **Hu, C.,** L. Feng, and Z. Lee (2012). Evaluation of GOCI sensitivity for at-sensor radiance and GDPS-retrieved chlorophyll-a products. *Ocean Science Journal*, 47:279-285.

96 Duan, H., R. Ma, and **C. Hu** (2012). Evaluation of remote sensing algorithms for cyanobacterial pigment retrievals during spring bloom formation in several lakes of East China. *Remote Sens. Environ.*, 126:126-135.

95 **Hu, C.**, L. Feng, Z. Lee, C. O. Davis, A. Mannino, C. R. McClain, and B. A. Franz (2012). Dynamic range and sensitivity requirements of satellite ocean color sensors: learning from the past. *Appl. Opt.*, 51:6045-6062.

94 Lee, Z., **C. Hu**, R. Arnone, and Z. Liu (2012). Impact of sub-pixel variations on ocean color remote sensing products. *Opt. Express*, 20:20,844-20,854.

93 Feng, L., **Hu, C.,** and Chen, X. (2012). Satellites capture the drought severity around China's largest freshwater lake. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing. 5:1266-1271.

92 Feng, L., **C. Hu,** X. Chen, L. Tian, and L. Chen (2012), Human induced turbidity changes in Poyang Lake between 2000 and 2010: Observations from MODIS. J. Geophys. Res., 117, C07006, doi:10.1029/2011JC007864.

91 Chollett, I., P. J. Mumby, F. E. Muller-Karger, and **C. Hu** (2012). Physical environments of the Caribbean Sea. *Limnol. Oceanogr.* 57:1233-1244.

90 Feng, L., **Hu, C.**, Chen, X., Cai, X., Tian, L., & Gan, W. (2012). Assessment of inundation changes of Poyang Lake using MODIS observations between 2000 and 2010. Remote Sensing of Environment, 121, 80-92

89 Soto, I., **C. Hu**, K. Steidinger, F. Muller-Karger, J. Cannizzaro, J. Wolny, S. Cerdeira-Estrada, E. Santamaria del Angel, F. Tafoya del Angel, P. Alvarez-Torres, J. Herrera Silveira and J. Allen (2012). Binational collaboration to study Gulf of Mexico's harmful algae. Eos. 93: 49 - 50.

88 **Hu, C.**, Z. Lee, and B. Franz (2012). Chlorophyll a algorithms for oligotrophic oceans: A novel approach based on three-band reflectance difference. *J. Geophys. Res.,* 117, C01011, doi:10.1029/2011JC007395.

2011

87 Feng, L., **C. Hu,** X. Chen, & R. Li (2011). Satellite observations make it possible to estimate Poyang Lake's water budget. *Environ. Res. Lett.,* 6, 044023

86 Rossby, T., C. Flagg, P. Ortner, and **C. Hu** (2011). A tale of two eddies: Diagnosing coherent eddies through acoustic remote sensing. *J. Geophys. Res.* 116, C12017, DOI: 10.1029/2011JC007307.

85 Dash, P., N. D. Walker, D. R. Mishra, **C. Hu,** J. L. Pinckney, and E. J. D'Sa (2011). Estimation of cyanobacterial pigments in a freshwater lake using OCM satellite data. *Remote Sens. Environ.* 115:3409-3423.

84 Soto, I. M., F. E. Muller-Karger, P. Hallock, and **C. Hu** (2011). Sea Surface Temperature Variability in the Florida Keys and Its Relationship to Coral Cover. *J. Mar. Biology.*, Volume 2011 (2011), Article ID 981723, 10 pages, doi:10.1155/2011/981723.

83 Yu, K., **C. Hu,** F. E. Muller-Karger, D. Lu, and I. Soto (2011). Shoreline changes in west-central Florida between 1987 and 2008 from Landsat observations, Int. J. Remote Sens., 32(23):8299-8313.

82 Barnes, B., **C. Hu,** and F. E. Muller-Karger (2011). An Improved High-Resolution SST Climatology to Assess Cold Water Events off Florida. IEEE Geosci. Remote Sens. Lett., 8:769-773.

81 Nababan, B., F. E. Muller-Karger, **C. Hu,** and D. C. Biggs (2011). Chlorophyll variability in the northeastern Gulf of Mexico. *Int. J. Remote Sens.* 32(23): 8373-8391.

80 Feng, L., **C. Hu,** X. Chen, R. Li, L. Tian, and B. Murch (2011). MODIS observations of the bottom topography and its inter-annual variability of Poyang Lake. *Remote Sens. Environ.* 115:2729-2741.

79 **Hu, C.,** R. H. Weisberg, Y. Liu, L. Zheng, K. Daly, D. English, J. Zhao, and G. Vargo (2011). Did the northeastern Gulf of Mexico become greener after the Deepwater Horizon oil spill? *Geophys. Res. Lett.* 38, L09601, doi:10.1029/2011GL047184. (cover article)

78 Lorenzoni, L, **C. Hu**, R. Varela, G. Arias, L. Guzman, and F. E. Muller-Karger (2011). Bio-optical characteristics of Cariaco Basin (Caribbean Sea) waters. *Cont. Shelf Res.* 31:582-593.

77 Lin, I-I., **C. Hu**, Y-H. Li, T-Y. Ho, T. Fischer, G. T. F. Wong, J. Wu, C-W. Huang, D. A. Chu, D-S. Ko, and J-P. Chen (2011). Fertilization potential of volcanic dust in the low‐nutrient low‐chlorophyll western North 35 Pacific subtropical gyre: Satellite evidence and laboratory study. *Global Biogeochem. Cycles,* 25, GB1006, doi:10.1029/2009GB003758.

76 Zhang, C., H. Hong, **C. Hu,** and S. Shang (2011). Evolution of a coastal upwelling event during summer 2004 in the southern Taiwan Strait. *Acta Oceanol. Sinica*, 30:1-6.

75 Liu, Y, R. H. Weisberg, **C. Hu,** and L. Zheng (2011). Tracking the Deepwater Horizon oil spill: A modelling perspective. *EOS. AGU Trans.* 92(6):45-46.

74 **Hu, C.** (2011). An empirical approach to derive MODIS ocean color patterns under severe sun glint. *Geophys. Res. Lett.*, 38, L01603, doi:10.1029/2010GL045422.

2010

73 Ma, R., H. Duan, **C. Hu,** X. Feng, A. Li, W. Ju, J. Jiang, and G. Yang (2010). A half-century of changes in China's lakes: Global warming or human influence? *Geophys. Res. Lett.* 37, L24106, doi:10.1029/2010GL045514. (cover article)

72 Chen, Z., **C. Hu,** F. E. Muller-Karger, and M. Luther (2010). Short-term variability of suspended sediment and phytoplankton in Tampa Bay, Florida: Observations from a coastal oceanographic tower and ocean color satellites. *Estuarine Coastal and Shelf Science*, 89:62-72.

71 Lee, Z., **C. Hu,** B. Casey, S. Shang, H. Dierssen, and R. Arnone (2010). Global shallow-water bathymetry from satellite ocean color data. *Eos. AGU Trans.* 91(46):429-430.

70 Lee, Z., S. Shang, **C. Hu**, M. Lewis, R. Arnone, Y. Li, and B. Lubac (2010), Time series of bio-optical properties in a subtropical gyre: Implications for the evaluation of interannual trends of biogeochemical properties, J. Geophys. Res., 115, C09012, doi:10.1029/2009JC005865.

69 Du, C., S. Shang, Q. Dong, **C. Hu,** and J. Wu (2010). Characteristics of chromophoric dissolved organic matter in the nearshore waters of the western Taiwan Strait. *Estuarine Coastal and Shelf Science*, 88:350-356.

68 **Hu, C.**, J. Cannizzaro, K. L.Carder, F. E. Muller-Karger, and R. Hardy (2010). Remote detection of *Trichodesmium* blooms in optically complex coastal waters: Examples with MODIS full-spectral data. *Remote Sens. Environ.*, 114:2048-2058.

67 **Hu, C.**, D. Li, C. Chen, J. Ge, F. E. Muller-Karger, J. Liu, F. Yu, and M-X He (2010). On the recurrent *Ulva prolifera* blooms in the Yellow Sea and East China Sea. *J. Geophys. Res.* 115, C05017, doi:10.1029/2009JC005561.

66 **Hu, C.**, Z. Lee, R. Ma, K. Yu, D. Li, and S. Shang (2010). MODIS observations of cyanobacteria blooms in Taihu Lake, China. *J. Geophys. Res.* 115, C04002, doi:10.1029/2009JC005511.

65 Lee, Z., R. Arnone, **C. Hu,** P. J. Werdell, and B. Lubac. (2010). Uncertainties of optical parameters and their propagations in an analytical ocean color inversion algorithm. *Appl. Opt.* 49:369-381.

64 Lapointe, B. R., R. Langton, B. J. Bedford, A. C. Potts, O. Day, and **C. Hu** (2010). Land-based nutrient enrichment of the Buccoo Reef Complex and fringing coral reefs of Tobago, West Indies. *Mar. Pollut. Bull.* 60:334-343.

2009

63 Cannizzaro, J. P., **C. Hu**, D. C. English, K. L. Carder, C. A. Heil, and F. E. Muller-Karger (2009). Detection of *Karenia brevis* blooms on the west Florida shelf using in situ backscattering and fluorescence data. *Harmful Algae* 8:898-909.

62 **Hu, C.** (2009). A novel ocean color index to detect floating algae in the global oceans. *Remote Sens. Environ.* 113 :2118 :2129.

61 **Hu, C.,** X. Li, W. G. Pichel, and F. E. Muller-Karger (2009). Detection of natural oil slicks in the NW Gulf of Mexico using MODIS imagery. *Geophys. Res. Lett.* Vol. 36, L01604, doi:10.1029/2008GL036119. (cover article)

60 **Hu, C.**, F. E. Muller-Karger, B. Murch, D. Myhre, J. Taylor, R. Luerssen, C. Moses, C. Zhang, L. Gramer, and J. Hendee (2009). Building an automated integrated observing system to detect sea surface temperature anomaly events in the Florida Keys. *IEEE Trans. Geosci. Remote Sens.* 47:1607-1620.

59 Soto, I., S. Andrefouet, **C. Hu,** F. E. Muller-Karger, C. C. Wall, J. Sheng, and B. G. Hatcher (2009). Physical connectivity in the Mesoamerican Barrier Reef System inferred from 9 years of ocean color observations. *Coral Reefs*. DOI 10.1007/s00338-009-0465-0.

2008

58 Biggs, D. C., **C. Hu**, and F. E. Muller-Karger. Remotely sensed sea-surface chlorophyll and POC flux at Deep Gulf of Mexico Benthos sampling stations. *Deep-Sea Res. II.* 55:2555-2562.

57 Wall, C., Muller-Karger, F.E., Roffer, M.A., **Hu, C.** Yao, W. & Luther, M.E. (2008). Satellite remote sensing of surface oceanic fronts in coastal waters off west-central Florida. *Remote Sens. Environ.* 112:2963-2976.

56 **Hu, C.,** and M-X. He (2008). Origin and offshore extent of floating algae in Olympic sailing area. *Eos. AGU Trans.* 89(33):302-303.

55 Palandro, DA, Andréfouët, S, **Hu, C**, Hallock, P, Muller-Karger, FE, Dustan, P, Callahan, MK, Kranenburg, C and. Beaver, CR. (2008). Quantification of two decades of coral reef habitat decline in the Florida Keys National Marine Sanctuary using Landsat data (1984-2002). *Remote Sens. Environ.* 112:3388-3399.

54 Marrari, M., K. L. Daly, and **C. Hu** (2008). Spatial and temporal variability of SeawiFS chlorophyll a distributions west of the Antarctic Peninsula: Implications for Krill production. *Deep-Sea Res. II*. 55:377-392.

53 **Hu, C.** (2008). Ocean color reveals sand ridge morphology on the west Florida shelf. *IEEE Geoscience and Remote Sens. Lett*. 5:443-447.

52 Shang, S., L. Li, F. Sun, J. Wu, **C. Hu,** D. Chen, X. Ning, Y. Qiu, C. Zhang, and S. Shang (2008), Changes of temperature and bio-optical properties in the South China Sea in response to Typhoon Lingling, 2001, *Geophys. Res. Lett.,* 35, L10602, doi:10.1029/2008GL033502.

51 **Hu, C.,** R. Luerssen, F. E. Muller-Karger, K. L. Carder, and C. A. Heil (2008). On the remote monitoring of *Karenia brevis* blooms of the west Florida shelf. *Cont. Shelf. Res.* 28:159-176.

2007

50 Sheng, J., L. Wang, S. Andrefouet, **C. Hu**, B. Hatcher, F. E. Muller-Karger, B. Kjerfve, W. D. Heyman, and B. Yang (2007). Upper ocean response of the Meso-American Barrier Reef System to Hurricane Mitch and coastal freshwater inputs: A study using SeaWiFS data and a nested-grid ocean circulation model. *J. Geophs. Res.* Vol. 112, C07016, doi:10.1029/2006JC003900.

49 Zawada, D. G., **C. Hu**, T. Clayton, Z. Chen, J. C. Brock, and F. E. Muller-Karger (2007). Remote sensing of particle backscattering in Chesapeake Bay: A 6-year SeaWiFS retrospective view. *Estuarine, Coastal, and Shelf Science.* 73:792-806.

48 Odriozola, A. L., R. Varela, **C. Hu**, Y. Astor, L. Lorenzoni, and F. E. Muller-Karger (2007). On the absorption of light in the Orinoco River plume. *Cont. Shelf Res.* 27:1447-1464.

47 **Hu, C**. and F. E. Muller-Karger (2007), Response of sea surface properties to Hurricane Dennis in the eastern Gulf of Mexico, *Geophys. Res. Lett.,* VOL. 34, L07606, doi: 10.1029/2006GL028935.

46 Chen Z., F. E. Muller-Karger, and **C. Hu** (2007). Remote sensing of water clarity in Tampa Bay. *Remote Sens. Environ.* 109:249-259.

45 Chen, Z., **C. Hu**, and F. E. Muller-Karger (2007). Monitoring turbidity in Tampa Bay using MODIS/Aqua 250-m imagery. *Remote Sens. Environ.* 109:207-220.

44 Chen, Z., **C. Hu**, R. N. Conmy, P. Swarzenski, and F. E. Muller-Karger (2007). Colored dissolved organic matter in Tampa Bay, Florida. *Mar. Chem.* 104:98-109.

43 Oey, L-Y., T. Ezer, **C. Hu**, and F. E. Muller-Karger (2007). Baroclinic tidal flows and inundation processes in Cook Inlet, Alaska: numerical modeling and satellite observations. *Ocean Dynamics.* DOI 10.1007/s10236-007-0103-8.

2006

42 Gower, J., **C. Hu**, G. Borstad, and S. King (2006). Ocean color satellites show extensive lines of floating Sargassum in the Gulf of Mexico. *IEEE Trans. Geosci. Remote Sens.* 44:3619-3625. (cover article)

41 Marrari, M., **C. Hu**, and K. Daly (2006). Validation of SeaWiFS chlorophyll-a concentrations in the Southern Ocean: A revisit. *Remote Sens. Environ.* 105:367-375.

40 **Hu, C**., F. E. Muller-Karger, and P. W. Swarzenski (2006). Hurricanes, submarine groundwater discharge, and Florida's red tides. *Geophysical Research Letters.* Vol. 33, L11601, doi:10.1029/2005GL025449.

39 Zhang, C., **C. Hu**, S. Shang, F. E. Muller-Karger, Y. Li, M. Dai, B. Huang, X. Ning, and H. Hong (2006). Bridging between SeaWiFS and MODIS for continuity of chlorophyll-*a* assessments off Southeastern China. *Remote Sens. Environ.* 102:250-263.

38 **Hu, C.**, Z. Lee, F. E. Muller-Karger, K. L. Carder, and J. J. Walsh (2006). Ocean color reveals phase shift between marine plants and yellow substance. *IEEE Geoscience and Remote Sens. Lett*. 3:262-266.

37 Lee, Z., and **C. Hu** (2006). Global distribution of Case-1 waters: An analysis from SeaWiFS measurements. *Remote Sens. Environ.* 101:270-276.

2005

36 **Hu, C.**, F. E. Muller-Karger, C. Taylor, K. L. Carder, C. Kelble, E. Johns, and C. Heil (2005). Red tide detection and tracing using MODIS fluorescence data: A regional example in SW Florida coastal waters. *Remote Sens. Environ.,* 97:311-321.

35 **Hu, C**., J. Nelson, E. Johns, Z. Chen, R. Weisberg, and F. E. Muller-Karger (2005). Mississippi River water in the Florida Straits and in the Gulf Stream off Georgia in summer 2004. *Geophys. Res. Lett.,* 32, L14606, doi:10.1029/2005GL022942.

34 Hong, H., J. Wu, S. Shang, and **C. Hu** (2005). Absorption and fluorescence of chromophoric dissolved organic matter in the Pearl River Estuary, South China. *Mar. Chem*., 97:78-89.

33 Shang, S., C. Zhang, H. Hong, Q. Liu, G. T. F. Wong, **C. Hu**, and B. Huang (2005). Hydrographic and biological changes in the Taiwan Strait during the 1997-1998 El Nino winter. *Geophys. Res. Lett.,* 32, L11601, doi:10.1029/2005GL022578.

32 Jarrett, B. D., A. C. Hine, R. B. Halley, D. F. Naar, S. D. Locker, A. C. Neumann, D. Twichell, **C. Hu,** B. T. Donahue, W. C. Jaap, D. Palandro, and K. Ciembronowicz (2005), Strange bedfellows – a deep hermatypic coral reef superimposed on a drowned barrier island; southern Pulley Ridge, SW Florida platform margin. *Marine Geology*, 214:295-307.

31 Muller-Karger, F. E., R. Varela, R. Thunell, R. Luerssen, **C. Hu**, and J. J. Walsh (2005). The importance of continental margins in the global carbon cycle. *Geophys. Res. Lett.* 32, L01602, doi:10.1029/2004GL021346.

2004

30 Froidefond J.M., Lahet Fl., **Hu C.**, Doxaran D. , Guiral D., Prost M.T, Ternon J-F. (2004), Mudflats and mud suspension observed from satellite data in French Guiana, *Marine Geology*. 208:153-168.

29 **Hu, C.**, Z. Chen, T. D. Clayton, P. Swarzenski, J. C. Brock, and F. E. Muller-Karger (2004). Assessment of estuarine water-quality indicators using MODIS medium-resolution bands: Initial results from Tampa Bay, Florida. *Remote Sens. Environ*. 93:423-441.

28 Chen, Y-J, I-I Lin, **C. Hu**, G-C Gong, and K-K Liu (2004). Primary production in the South China Sea: A comparison between ocean-color derived estimates and coupled-model output. *Acta Oceanographica Taiwanica,* 42(1):1-14.

27 Palandro, D, **Hu, C**, Andrefouet, S, Muller-Karger, FE (2004) Synoptic water clarity assessment in the Florida Keys using diffuse attenuation coefficient estimated from Landsat imagery. *Hydrobiologia*. 530-531(1), pp489-493.

26 Andréfouët S., C. Payri, E. J. Hochberg, **C. Hu**, M.J. Atkinson, FE Muller-Karger (2004). Use of in situ and airborne reflectance for scaling-up spectral discrimination of coral reef macroalgae from species to communities. *Marine Ecology Progress Series*. 283:161-177.

25 **Hu, C.**, E. Montgomery, R. Schmitt, and F. E. Muller-Karger (2004). The Amazon and Orinoco River plumes in the tropical Atlantic: Observation from space and S-Floats. *Deep Sea Res-II*. 51:1151-1171.

24 Muller-Karger, F. E., R. Varela, R. Thunell, Y., Astor, H. Zhang, R. Luerssen, and **C. Hu** (2004). Processes of coastal upwelling and carbon flux in the CARIACO basin. *Deep Sea Res.-II*. 51:927-943.

23 **Hu, C.**, B. Nababan, D. C. Biggs, and F. E. Muller-Karger (2004). Variability of bio-optical properties at sampling stations and implications for remote sensing: A case study in the NE Gulf of Mexico. *Int. J. Remote Sens.* 25(11):2111-2120.

22 **Hu, C.**, F. E. Muller-Kager, G. A. Vargo, M. B. Neely, and E. Johns (2004). Linkages between coastal runoff and the Florida Keys ecosystem: A study of a dark plume event. *Geophys. Res. Lett.* 31, L15307, doi:10.1029/2004GL020382.

21 Coble, P., **C. Hu**, R. Gould, G. Chang, and A. M. Wood (2004). Colored dissolved organic matter in the coastal ocean: An optical tool for coastal environmental assessment and management. *Oceanography.* 17:50-59.

2003

20 **Hu, C.**, K. E. Hackett, M. K. Callahan, S. Andréfouët, J. L. Wheaton, J. W. Porter, F. E. Muller-Karger (2003). The 2002 ocean color anomaly in the Florida Bight : a cause of local coral reef decline? *Geophys. Res. Lett.* 30(3), 1151, doi:10.1029/2002GL016479. (cover article)

19 Jolliff, J. K., J. J. Walsh, R. He, R. Weisberg, A. Stovall-Leonard, P. G. Coble, R. Conmy, C. Heil, B. Nababan, H. Zhang, **C. Hu**, and F. E. Muller-Karger (2003). Dispersal of the Suwannee River plume over the West Florida shelf. Simulation and observation of the optical and biochemical consequences of a flushing event. *Geophys. Res. Lett.* 30(13). doi:10.1029/2003GL016964.

18 **Hu, C.**, Muller-Karger, F. E., Biggs, D. C., Carder, K. L., Nababan, B., Nadeau, D., and Vanderbloemen, J. (2003), Comparison of ship and satellite bio-optical measurements on the continental margin of the NE Gulf of Mexico, *Int. J. Remote Sens*. 24:2597-2612.

17 **Hu, C.**, F. E. Muller-Karger, C. Taylor, D. Myhre, B. Murch, A. L. Odriozola, and G. Godoy (2003). MODIS detects oil spills in Lake Maracaibo, Venezuela. *Eos. AGU Trans.* 84(33):313,319. (feature article)

16 Palandro D., S. Andréfouët, FE Muller-Karger, P Dustan, **C. Hu**, P. Hallock (2003). Detection of changes in coral communities using Landsat 5/TM and Landsat 7/ETM+ data. *Canadian Journal of remote sensing.* 29(2):201-209.

15 Andréfouët, S., J. A. Robinson, **C. Hu**, G. C. Feldman, B. Salvat, C. Payri, and F. E. Muller-Karger (2003). Influence of the spatial resolution of SeaWiFS, Landsat-7, SPOT, and International Space Station data on the estimates of landscape parameters of Pacific Ocean Atolls. *Canadian Journal of remote sensing.* 29(2):210-218.

14 Lin, I-I, W. T. Liu, C-C Wu, G. T. F. Wong, **C. Hu**, Z. Chen, W-D Liang, Y. Yang, and K-K Liu (2003). New evidence for enhanced ocean primary production triggered by tropical cyclone. *Geophys. Res. Lett.* 30(13), doi:10.1029/2003GL017141

13 Walsh, J. J., R. H. Weisberg, D. A. Dieterle, R. He, B. P. Darrow, J. K. Joliff, K. M. Lester, G. A. Vargo, G. J. Kirkpatrick, K. A. Fanning, T. T. Sutton, A. E. Jochens, D. C. Biggs, B. Nababan, **C. Hu**, and F. E. Muller-Karger (2003). Phytoplankton response to intrusions of slope water on the West Florida Shelf: Models and observations. *J. Geophys. Res.* 108:3190, doi:10.1029/2002JC001406.

2002

12 **Hu, C.**, and 26 others (The South West Florida Dark Water Observation Group), 2002. Satellite images track 'black water' event off Florida coast. *Eos. AGU Trans.* 83(26):281,285.

11 **Hu, C.**, F. E. Muller-Karger, and R. G. Zepp (2002). Absorbance, absorption coefficient, and apparent quantum yield: A comment on common ambiguity in the use of these optical concepts. *Limnol. Oceangr.* 47:1261-1267.

10 Andréfouët S., P.J. Mumby M. McField, **C. Hu**, F.E. Muller-Karger. 2002. Revisiting coral reef connectivity. *Coral Reefs.* 21:43-48.

9 **Hu, C.**, and K. L. Carder, 2002. Atmospheric correction for airborne sensors: Comment on a scheme used for CASI. *Remote Sens. Environ*. 79:134-137.

8 D'Sa, E. J., **C. Hu**, F. E. Muller-Karger, and K. L. Carder. 2002. Estimation of colored dissolved organic matter and salinity fields in case 2 waters using SeaWiFS: Examples from Florida Bay and Florida Shelf. *Proc. Indian Acad. Sci. (Earth Planet. Sci.)*, 111, No. 3, September 2002, pp. 197-207.

2001

7 **Hu, C.**, Muller-Karger, F. E., Andrefouet, S., and Carder, K. L., (2001), Atmospheric correction and calibration of LANDSAT-7/ETM+ imagery over aquatic environments: a multi-platform approach using SeaWiFS/MODIS, *Remote Sens. Environ.* 78:99-107.

6 **Hu, C.**, Carder, K. L, and Muller-Karger, F. E. (2001), How precise are SeaWiFS ocean color estimates? Implications of digitization-noise errors, *Remote Sens. Environ.* 76:239-249.

5 Andréfouët, S., F. E. Muller-Karger, E. J. Hochberg, **C. Hu**, and K. L. Carder (2001). Change detection in shallow coral reef environments using Landsat 7 ETM+ data. *Remote Sens. Environ.* 78:150-162.

2000

4 **Hu, C.**, Carder, K. L., and Muller-Karger, F. E. (2000), Atmospheric correction of SeaWiFS imagery over turbid coastal waters: a practical method, *Remote Sens. Environ.* 74:195-206.

3 **Hu, C.**, Carder, K. L., and Muller-Karger, F. E. (2000), Atmospheric correction of SeaWiFS imagery: assessment of the use of alternative bands, *Appl. Opt.* 39:3573-3581. (cover article)

1998

2 **Hu, C.**, and K. J. Voss (1998). Measurement of solar-stimulated fluorescence in natural waters. *Limnol. Oceanogr.* 43:1198-1206.

1997

1 **Hu, C.**, and K. J. Voss (1997). In situ measurements of Raman scattering in clear ocean water. *Appl. Opt.* 36:6962-6967.

b. Refereed Book Chapters or Proceedings

20 Murk, A. J., Hollander, D. J., Chen, **S., Hu**, C., Liu, Y., Vonk, S. M., ... & Foekema, E. M. (2020). A Predictive Strategy for Mapping Locations Where Future MOSSFA Events Are Expected. In Scenarios and Responses to Future Deep Oil Spills (pp. 355-368). Springer, Cham.

19 Cannizzaro, J., I. Soto, and C. Hu (2018). Remote sensing as a monitoring and modeling tool. In Steidinger, K.A. and Meave del Castillo, M.E. [Eds.] Guide to the Identification of Harmful Microalgae in the Gulf of Mexico. St. Petersburg, FL, USA, Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute. pp 523-246.

18 **Hu, C.,** S. Sathyendranath, J. D. Shutler, C. W. Brown, T. S. Moore, S.E. Craig, I. Soto, and A. Subramaniam (2014). Detection of Dominant Algal Blooms by Remote Sensing. In: IOCCG (2014). Phytoplankton Functional Types from Space. Sathyendranath, S. (ed.), Reports of the International Ocean-Colour Coordinating Group, No. 15, IOCCG, Dartmouth, Canada.

17 **Hu, C.**, and J. Campbell (2014). Oceanic chlorophyll-a content. In: Biophysical applications of satellite remote sensing (J. M. Hanes Eds), Springer Remote Sensing/Photogrammetry. Springer-Verlag Berlin Heidelberg 2014.

16 Zhang, M., **C. Hu,** and G. Amu (2014). Real-world problem solving in entry-level programming courses: A case study on the Deepwater Horizon oil spill. Frontiers in Education Conference, 2013 IEEE, 343 – 348, doi: 10.1109/FIE.2013.6684845

15 **Hu, C.** (2012). South Florida marine environments can be assessed with satellite remote sensing. pp. 134-135. In: Kruczynski, W.L. and P.J. Fletcher (eds.). 2012. Tropical Connections: South Florida's marine environment. IAN Press, University of Maryland Center for Environmental Science, Cambridge, Maryland. 492 pp.

14 Liu, Y., R. H. Weisberg, **C. Hu,** and L. Zheng (2011), Trajectory forecast as a rapid response to the *Deepwater Horizon* oil spill, in *Monitoring and Modeling the Deepwater Horizon Oil Spill: A Record-Breaking Enterprise*, Geophys. Monogr. Ser., vol. 195, edited by Y. Liu et al., pp. 153–165, AGU, Washington, D. C., doi:10.1029/2011GM001121.

13 Liu, Y., R. H. Weisberg, **C. Hu,** C. Kovach, and R. Riethmüller (2011), Evolution of the Loop Current system during the *Deepwater Horizon* oil spill event as observed with drifters and satellites, in *Monitoring and Modeling the Deepwater Horizon Oil Spill: A Record-Breaking Enterprise*, Geophys. Monogr. Ser., vol. 195, edited by Y. Liu et al., pp. 91–101, AGU, Washington, D. C., doi:10.1029/2011GM001127.

12 **Hu, C.**, J. Cannizzaro, K. L. Carder, Z. Lee, F. E. Muller-Karger, and I. Soto (2011). Red tide detection in the eastern Gulf of Mexico using MODIS imagery. In: Morales, J., V. Stuart, T. Platt, and S. Sathyendranath (Eds.) (2011). Handbook of Satellite Remote Sensing Image Interpretation: Applications for Marine Living Resources Conservation and Management, EU PRESPO and IOCCG, Dartmouth, Canada. p95 – 110.

11 He, M.-X., J. Liu, F. Yu, D. Li, and **C. Hu** (2011). Monitoring green tides in Chinese marginal seas. In: Morales, J., V. Stuart, T. Platt, and S. Sathyendranath (Eds.) (2011). Handbook of Satellite Remote Sensing Image Interpretation: Applications for Marine Living Resources Conservation and Management, EU PRESPO and IOCCG, Dartmouth, Canada. p111 – 124.

10 **Hu, C.**, X. Li, and W. G. Pichel (2011). Detection of oil slicks using MODIS and SAR imagery. In: Morales, J., V. Stuart, T. Platt, and S. Sathyendranath (Eds.) (2011). Handbook of Satellite Remote Sensing Image Interpretation: Applications for Marine Living Resources Conservation and Management, EU PRESPO and IOCCG, Dartmouth, Canada. p21 – 34.

9 Muller-Karger, F. E., R. Varela, R. C. Thunell, M. I. Scranton, G. T. Taylor, Y. Astor, C. R. Benitez-Nelson, L. Lorenzoni, K. A. Fanning, E. Tappa, M. A. Goni, D. Rueda, and **C. Hu** (2010). CARIACO: A time series of primary production and vertical export in the Cariaco Basin. p454-463. In: *Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis.* Eds., K.-K. Liu, L. Atkinson, R. Quinones, and L. Talaue-McManus, IGBP Book Series. Springer, Berlin, 744 p + XXVIII.

8 **Hu, C**., I-I Lin, and C-C Lien (2010). Introduction to SeaWiFS/MODIS chlorophyll data products and data analysis tools. p620-624. In: *Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis.* Eds., K.-K. Liu, L. Atkinson, R. Quinones, and L. Talaue-McManus, IGBP Book Series. Springer, Berlin, 744 p + XXVIII.

7 Wilson, C., C. Chen, C. Clark, P. Fanning, M-H. Forget, K. Friedland, E. Howell, **C. Hu**, and others (2009). Chapter 4: Remote Sensing Applications to Marine Resource. *In: Remote Sensing in Fisheries and Aquaculture. Forget, M.-H., Stuart, V. and Platt, T. (eds.), Reports of the International Ocean-Colour Coordinating Group, No. 8, IOCCG, Dartmouth, Canada. 2009. pp 43-56.*

6 Bundy, A., G. Borstad, J. Field, S. Groom, N. Hoepffner, **C. Hu,** V. Lutz, and C. Wilson (2009). Chapter 7: Building Links with the Fishing, Aquaculture and Management Communities. *In: Remote Sensing in Fisheries and Aquaculture. Forget, M.-H., Stuart, V. and Platt, T. (eds.), Reports of the International Ocean-Colour Coordinating Group, No. 8, IOCCG, Dartmouth, Canada. 2009. pp 89-102.*

5 Muller-Karger, F. E., **C. Hu**, S. Andréfouët, and R. Varela (2005). The color of the coastal ocean and applications in the solution of research and management problems In: Remote Sensing of Aquatic Coastal Environments (R. L. Miller, C. E. Del Castillom, and B. A. McKee eds.), Springer-Verlag, New York, pp 101-127.

4 Andréfouët, S., E. J. Hochberg, C. Chevillon, F. E. Muller-Karger, J. C. Brock, and **C. Hu** (2005). Multi-scale remote sensing of coral reefs. In: Remote Sensing of Aquatic Coastal Environments (R. L. Miller, C. E. Del Castillom, and B. A. McKee eds.), Springer-Verlag, New York, pp 297-315.

3 Biggs, D. C., A. E. Jochens, M. K. Howard, S. F. DiMarco, K. D. Mullin, R. R. Leben, F. E. Muller-Karger, and **C. Hu** (2005). Eddy forced variations in on-margin and off-margin summertime circulation along the 1000 m isobath of the northern Gulf of Mexico, 2000-2003, and links with sperm whale distributions along the middle shelf. *AGU Geophys Monogr.* (New Developments in the circulation of the Gulf of Mexico), p71-85.

2 Neely, M. B., et al. (2004). Florida's black water event. *Harmful Algae 2002. Proceedings of the Xth International Conference on Harmful Algae.* Steidinger, K. A., Landsberg, J. H., Tomas, C. R., and Vargo, G. A. (Eds.). Florida Fish and Wildlife Conservation Commission, Intergovernmental Oceanographic Commission of UNESCO, Florida Institute of Oceanography, pp377-379.

1 Neumann, A., Doerffer, R., Krawczyk, H., Dowell, M., Arnone, R., Davis, C., Kishino, M., Tanaka, A., **Hu, C.**, Campbell, J., and Sathyendranath, S. (2000), Algorithm for Case 2 waters. *IOCCG. Remote sensing of ocean color in coastal, and other optically-complex, waters. Sathyendranath, S. (eds), Reports of the International Ocean-Colour Coordinating Group, No. 3, IOCCG, Dartmouth, Canada*.

6. *Non-Refereed Publications (updated 1/1/2015)*

29 Hu, C., Z. Lee, and B. Franz (2014). Minimize CDOM impact on the band-subtraction chlorophyll algorithm through optical weighting: Preliminary results. Oct 27 – 31, 2014, Ocean Optics XXII, Portland, Maine, USA.

28 Qi, L., C. Hu, H. Duan, et al. (2014). A novel algorithm to derive cyanobacterial phycocyanin pigment concentrations in a eutrophic lake from MERIS measurements: Theoretical basis and practical considerations. Oct 27 – 31, 2014, Ocean Optics XXII, Portland, Maine, USA.

27 English, D., M. Zhang, and C. Hu et al. (2014). Hyperspectral remote sensing of shallow coastal waters in the Florida Keys using Unmanned Aircraft Systems (UAS): Initial

results from atmospheric correction and glint correction. Oct 27 – 31, 2014, Ocean Optics XXII, Portland, Maine, USA.

26 Johannessen, J. A., M.-X. He, W. Alpers, G. Chen, J.-F. Piolle, Z. Liu, L. Shao, K.-F. Dagestad, B. Chapron, L. Wan, C. Hu, and L. Guan (2013). Dragon in support to harmonizing european and chinese marine monitoring for environment and security system. European Space Agency, (Special Publication) ESA SP Volume 704 SP, 2013, 8p. Dragon 2 Final Results and Dragon 3 Kick-Off Symposium; Beijing; China; 25 June 2012 through 29 June 2012.

25 Pahlevan, N., Z. Lee, C. Hu, and J. R. Schott (2013). Analyzing radiometric requirements for diurnal observations of coastal/oceanic waters from geostationary orbits. *Proc. SPIE* 8724, Ocean Sensing and Monitoring V, 87240K (June 3, 2013); doi:10.1117/12.2016279

24 Jochens, A. E., M. K. Howard, L. Campbell, R. Mullins-Perry, G. Kirkpatrick, B. Kirkpatrick, C. Simoniello, C. Hu, R. H. Weisberg, C. Lembke, A. Corcoran, J. Ivey, and S. H. Wolfe (2012). Integrating Observing Systems to benefit stakeholders: A case study in the Gulf of Mexico. Oceans 2012 MTS/IEEE: Harnessing the Power of the Ocean. Virginia Bean, VA; United States, 14 – 19 October 2012.

23 Santhyendranath, S., B. Brewin, D. Mueller, et al. (2012). Ocean colour climate change initiative – Approach and initial results. Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International, p2024-2027.

22 Liu, Y., R.H. Weisberg, **C. Hu,** and L. Zheng, 2011: Combining numerical ocean circulation models with satellite observations in a trajectory forecast system: a rapid response to the Deepwater Horizon oil spill, *Proc. SPIE* 8030, 80300K. doi:10.1117/12.887983

21 **Hu, C.,** 2011: Observing MODIS ocean color patterns under severe sun glint. *Proc. SPIE* 8030, 80300M. doi:101117/12.803021.

20 Lee, Z., R. Arnone, **C. Hu,** P. J. Werdell, and B. Lubac. 2011. Quantification of uncertainties in remotely derived optical properties of coastal and oceanic waters. *Proc. SPIE* 7678, 767802.

19 He, M-X., S. He, Q. Yang, Y. Wang, Z. Liu, J. Sha, and **C. Hu** (2010). Overview of Chinese spaceborne ocean observing systems, onboard sensors and data products (1988 - 2025). DRAGONESS Symposium. 12pp.

18 Johannessen, J. A., M-X. He, W. Alpers, G. Chen, J-F Piolle, Z. Liu, L. Shao, K-F Dagestad, B. Chapron, L. Wan, **C. Hu,** and L. Guan (2010). Dagon in support to harmonizing European and Chinese marine monitoring for environment and security system (DRAGONESS). DRAGONESS Symposium, 8pp.

17 **Hu, C.**, Z. Chen, F. Muller-Karger, M. Luther, and C. Kovach (2009). High Temporal Resolution Assessments of Tampa Bay Water Quality Using Satellites. Proceedings of the 5th Bay Area Scientific Information Symposium. 20-23 October 1999. Tampa, Florida. 13 pp.

16 English, D., **C. Hu**, C. Lembke, R. Weisberg, D. Edwards, L. Lorenzoni, G. Gonzalez, and F. Muller-Karger (2009). Observing the 3-dimensional distribution of bio-optical

properties of West Florida Shelf waters using gliders and autonomous platforms. 7pp. Oct 26-29, MTS/IEEE Oceans'09 conference, Biloxi, Mississippi. Paper published in conference proceedings (ISBN CD-ROM: 978-0-933957-38-1).

15 Cheng, W., L. O. Hall, D. B. Goldgof, I. Soto, and **C. Hu** (2009). Automatic red tide detection from MODIS satellite images. IEEE International Conference on Systems, Man and Cybernetics, 2009. **ISSN:** 1062-922X, p1864-1868. DOI 10.1109/ICSMC.2009.5346189

14 Gramer, L. J., E. M. Johns, J. C. Hendee, and **C. Hu** (2009). Characterization of biologically significant hydrodynamic anomalies on the Florida Reef Tract. Proceedings of the 11th International Coral Reef Symposium, Ft. Lauderdale.

13 He, M-X., Y. Wang, L. Hu, Q. Yang, S. He, **C. Hu,** and R. Doerffer (2008). Detection of red tides using MERIS 681 nm and 709 nm bands in the East China Sea: A case study. Proc. Dragon 1 Programme Final Results 2004-2007, Beojing, P. R. China, 21-25 April 2008 (ESA SP-655, April 2008).

12 **Hu, C.,** and F. E. Muller-Karger (2008). On the connectivity and "black water" phenomena near the FKNMS: A remote sensing perspective. In: Connectivity – Science, People and Policy in the FKNMS (B. D. Keller and F. C. Wilmot eds, 263pp). 47-55.

11 Lee., Z. P., **C. Hu,** et al., MERIS-derived bio-optical properties of the US coastal waters. ENVISAT Symposium proceedings, 23-27 April 2007, Montreux, Switzerland.

10 He, M.X., S. He, L. Hu, Y. Wang, Q. Yang, T. Zhang, J. Fischer, Z. P. Lee, and **C. Hu.** MERIS performance in the East China Seas: Evaluation of atmospheric correction and optical inversion algorithms. ENVISAT Symposium proceedings, 23-27 April 2007, Montreux, Switzerland.

9 **Hu, C.,** Y. Wang, Q. Yang, S. He, L. Hu, and M. X. He. Comparison of ocean color data products from MERIS, MODIS, and SeaWiFS: Preliminary results for the East China Seas. ENVISAT Symposium proceedings, 23-27 April 2007, Montreux, Switzerland.

8 Dogliotti, A. I., O. Ulloa, F. E. Muller-Karger, **C. Hu,** B. Murch, et al. (2005). The Antares observation network. SPIE proceedings 5885. DOI: 10.1117/12.617971, (Remote sensing of the coastal oceanic environment, edited by R. J. Frouin, M. Barbin, and S. Sathyendranath), p182-187.

7 **Hu, C.,** and F. E. Muller-Karger (2003). MODIS monitors Florida's ocean dispersal of the Piney Point phosphate treated wastewater. *The Earth Observer* (NASA), 15(6):21-23.

6 **Hu, C.,** Z.P. Lee, F. E. Muller-Karger, and K. L. Carder (2003). Application of an optimization algorithm to satellite ocean color imagery: A case study in Southwest Florida coastal waters. SPIE proceedings 4892. (*Ocean Remote Sensing and Applications*, edited by R. J. Frouin, Y. Yuan, and H. Kawamura. SPIE, Bellingham, WA, 2003), p 70-79.

5 **Hu, C.** (2003). A simple instrument for measurement of remote sensing reflectance in coastal environment. SPIE Proceedings 4897 (*Multispectral and Hyperspectral Remote Sensing Instruments and Applications*, edited by Allen M. Larar, Qingxi Tong, and Makoto Suzuki. SPIE, Bellingham, WA, 2003), p. 219-226.

4 **Hu, C.,** I-I Lin, and S. Shang (2002). Ocean color climatology using multiple sensors. Proceedings of the Fifth cross-strait symposium, 14-16 May 2002, Taipei, Taiwan. pp259-261.

3 Gasch, J., T. Arvidson, S. N. Goward, S. Andrefouet, **C. Hu**, and F. E. Muller-Karger (2000). Assessment of Landsat 7/ETM+ coverage of coral reefs worldwide. DIG INT GEOSCI REMOTE SENS SYMP(IGARSS), 6:2687-2689.

2 **Hu, C.,** K. L. Carder, and F. E. Muller-Karger (2000). Preliminary algorithm to derive chlorophyll pigment concentration and DOM absorption in turbid coastal waters from SeaWiFS imagery. Proceedings of the 4th Pacific Ocean Remote Sensing Conference, Qingdao, China, 28–31 July. P78-82.

1 **Hu, C.,** and K. J. Voss (1997). Solar-stimulated inelastic light scattering in clear seawater. *Proc. SPIE* 2963, Ocean Optics XIII, 266 (February 6, 1997); doi:10.1117/12.266453, p266-271.

7. Invited Talks (updated 9/1/2019)

Hu, C., et al. (2019). Rising green tides and golden tides: An oceanographic regime shift? International Ocean Color Science meeting, 9 – 12 April 2019, Busan, South Korea.

Hu, C., et al. (2018). EO monitoring of Sargassum aggregations and movements: opportunities and applications. Workshop on Utilising Earth Observation to support Blue Growth & Risk Management in the Caribbean 23 - 26 January, 2018, St. Lucia.

Hu, C. (2018). SaWS system: potential tailored applications. EO monitoring of Sargassum aggregations and movements: opportunities and applications. Workshop on Utilising Earth Observation to support Blue Growth & Risk Management in the Caribbean 23 - 26 January, 2018, St. Lucia.

Hu, C. (2018). The Satellite-based Sargassum Watch System (SaWS). Workshop Sargassum and Oil Spills Monitoring Pilot Project for the Caribbean and Adjacent Regions. 2 – 4 May 2018, Mexico D.F., Mexico.

Hu, C. (2017). The beauty of subtraction: new concepts in algorithm development. 11/1/2017 – 11/3/2017, 17th Chinese Ocean Color Remote Sensing Symposium, Xiamen, China.

January 27, 2016, NOAA Coastal Watch workshop, NOAA/AOML, Miami, Florida
Presentation: Near real-time data products at USF by C. Hu

3/21/2016 – 3/22/2016, Sargasso Sea Commission workshop, Key West, Florida,
Presentation: “Remote sensing of Sargassum blooms” by C. Hu

9/13/2016 – 9/14/2016, Conferencia Internacional Maritima Oceanografica (CIMO) 2016, Santo Dominica Republic
Presentation: “Sargassum Watch from Space” by C. Hu

10/5/2016, Invited seminar at University of Maryland Baltimore County
Presentation: “From green tides, oil spills, to global ocean biology: How two coastal events led to a new remote sensing algorithm concept for the global ocean” by C. Hu

Sept 28, 2015, Invited seminar at Texas A&M University Dept of Oceanography & Dept of Atmosphere. “From green tides, oil spills, to global ocean biology: How two coastal events led to a new remote sensing algorithm concept.”

April 27, 2015, Invited talk to celebrate Dr. Howard Gordon’s retirement at University of Miami, Physics Department: “The beauty of subtraction.”

June 4, 2014, Invited talk at Wuhan University, Wuhan, China: “Satellite based virtual buoy system” by C. Hu.

June 10, 2014, Invited seminar at Nanjing Institute of Geography and Limnology, Nanjing, China: “Satellite remote sensing of coastal environment” by C. Hu

September 25, 2013. Invited seminar at University of Masachusetts at Boston: “Remote sensing of coastal water quality and blooms – from research to management decision support”

February 16, 2012. Invited presentation for Sarasota Power & Sail Squadron, Sarasota, Florida: “Monitoring the coastal ocean using optical remote sensing.”

March 8, 2011. Invited seminar at TAMU Galveston: “Satellite remote sensing of coastal environments: New applications using old concepts”

May 16-17, 2011, SECOORA annual meeting, Jacksonville, Florida, Invited talk: “SECOORA satellite remote sensing component”

Dec 13 – 17, 2010, AGU Fall Meeting, San Francisco, California, USA. Invited talk by Weisberg, R.H., Y. Liu, L. Zheng, C. Hu, and C. Lembke: “Rapid Response to Deepwater Horizon Oil Spill from University of South Florida: Numerical Models, Remote Sensing, and In-situ Observations”

Oct 28 – 29, 2010, Hongkong, China, Second International Conference on Global Change and the Environment in Asia and Pacific (GCEAP, 28-29 Oct 2010). Plenary talk: "A remote sensing view of aquatic hazards in East China and the US Gulf Coast"

Oct 14 – 17, 2010, CSDMS Meeting, San Antonio, Texas, USA, Invited keynote talk by Weisberg, R.H., Y. Liu, L. Zheng, and C. Hu: “The Oil Trajectory: How it behaved in the Gulf of Mexico and why, and where might residual oil be heading?”

Sept 27 – Oct 1, 2010, Ocean Optics XX conference, Anchorage, Alaska. Invited talk: “One index, many applications”

May 12 – 13, 2010, Southeast Coastal Ocean Observing Regional Association (SECOORA) 2010 Annual Board & Member Meeting, Savanna, Georgia, USA, Invited keynote talk by Liu, Y., R.H. Weisberg, L. Zheng, and C. Hu: “Tracking Gulf of Mexico Oil Spill with Numerical Models and Satellite Imagery”.

March 5, 2010, Invited seminar at Dalhousie University, Department of Oceanography, Canada, “Satellite remote sensing of coastal environments: Maximizing the power of MODIS”

Feb 4, 2010, Estuarine Nutrient Criteria Workshop, FWCC, St. Petersburg, Florida. Invited talk: “Satellite Chl in Near-shore Waters of the West Florida: Influence of River Discharge”

Dec 18-19, 2009, The 9th National Symposium on Ocean Color Remote Sensing of Case-II Waters, Nanchang, China, invited presentation: “Assessment of blue-green algae blooms in two freshwater lakes of China using MODIS”

Dec 8-10, 2009, NASA Applied Sciences Gulf Workshop, New Orleans, Louisiana, Invited presentation: “An overview of NASA ocean color data products”

Sept 22-24, 2009, NASA GEO-CAPE working group meeting, Columbia, Maryland, Invited presentation: "GEO-CAPE requirements on measurement sensitivity, saturation, and solar angles"

May 6-8, 2009, NASA Ocean Color Research Team meeting, Westin New York at Times Square Hotel, New York, invited presentation: "Coastal ocean color from space: where are we and what's next"

8. Projects and Grants (as of 11/5/2020)

Number of projects: 58 (PI on 30) (since 2009 when C. Hu become teaching faculty)

Amount to C. Hu: $14.8M (since 2009)**.**

73: Remote sensing of marine debris: potentials and limitations
PI: C. Hu
Agency: NASA; Duration: 1/1/2021 – 12/31/2023; Total budget: $497,231; Hu's portion: $497,231

72: Cooperative red tide research program - Reduction of harmful impacts from red tide - Red tide mitigation and technology development initiative
PI: K. Buck (USF), co-PIs: **C. Hu et al.**
Agency: FWC/FWRI; Duration: 7/1/2020 – 6/30/2025; Total budget: $2,600,000, Hu's portion: $600K

71: Deciphering Sargassum physics, biology, and physiology through PACE measurements: Implications to ocean ecology, biogeochemistry, and management decision support
PI: **C. Hu**
Agency: NASA; Duration: 4/1/2020 – 3/31/2023; Total budget: $682,367, Hu's portion: $500K

70: Spectral matching inversion algorithms for PACE application in optically shallow waters: an assessment using HICO and PRISM data
PI: B. Barnes, co-PI: **C. Hu**
Agency: NASA; Duration: 4/1/2020 – 3/31/2023; Total budget: $532,509, Hu's portion: ~50K.

69: Using ecosystem modeling to understand the impacts of seagrass restoration and red tides on sea turtles, marine mammals and seabirds of the West Florida Shelf
PI: C. Ainsworth; Co-PIs: **C. Hu** and others
Agency: Florida Institute of Oceanography
Duration: 4/1/2020 – 3/31/2023; Co-Hu's portion: $50K

68: Retrospective Analysis of Karenia brevis Blooms on the West Florida Shelf
PI: **C. Hu**
Agency: NOAA (through UM/CIMAS),
Duration: 6/1/2019 – 3/31/2020; Total budget: $54,920

67: Remote sensing support of red tide studies
PI: **C. Hu**
Agency: Florida Fish and Wildlife Conservation Commission
Duration: 10/3/2019 – 6/30/2020; Total budget: $175,000

66: Thermal stress in South Florida estuaries: A multi-sensor assessment
PI: **C. Hu**
Agency: NASA; Duration: 11/1/2019 – 10/31/2022; Total budget: $306,639

65: Geostationary Littoral Imaging and Monitoring Radiometer (GLIMR)
PI: Joe Salisbury (Univ New Hampshire), USF PI: C. Hu
Agency: NASA; Duration: 1/1/2021 – 12/31/2019; C. Hu's portion: 849,912

64: Precipitation, water management, and algae blooms in South Florida estuaries
PI: C. Hu
Agency: NASA; Duration: 7/15/2019 – 7/14/2022; Total budget: $1,174,015
Effort: 1.0 month/year

63: On the capacity of commercial high-resolution satellite data in mapping and quantifying macroalgae and microalgae in aquatic environments
PI: C. Hu
Agency: NASA; Duration: 1/1/2019 – 12/31/2019; Total budget: $98,329
Effort: 0.5 month/year

62: Southeastern Gulf of Mexico processes affecting basin-wide connectivity and hydrocarbon transport: the role of mesoscale eddies and upwelling near Cuba.
PI: Villy Kourafalou (Univ Miami), Co-PIs: C. Hu, others
Agency: GoMRI, Duration: 1/1/2018 – 12/31/2019; Hu's portion: $132,522
Effort: 0.5 month/year

61: Center for Integrated Modeling and Analysis of Gulf Ecosystems-C-IMAGE (III)
PI: Steve Murawski (USF), co-PIs: C. Hu, others
Agency: GoMRI, Duration: 1/1/2018 – 12/31/2019; Hu's portion: $89,998
Effort: 0.5 month/year

60: Linking habitat to recruitment: evaluating the importance of pelagic Sargassum to fisheries management in the Gulf of Mexico
PI: Frank Hernandez; Co-PI: C. Hu and others
Agency: NOAA; Duration: 7/1/2017 – 6/30/2020; C. Hu's portion: $316,174
Effort: 1 month/Year

59: Response of carbon cycling in two North American subtropical estuaries to climatic and anthropogenic perturbations.
PI: Ray Najjar (Penn State U.), co-PI: C. Hu and H. Brinco (Florida Int. U)
Agency: NASA; Duration: 2/24/2017 – 2/23/2020; C Hu's portion: $222,314
Effort: 0.5 month/Year

58: Forecasts of pelagic Sargassum blooms and transports in the Intra-Americas Sea and Tropical Atlantic: Improving a prototype decision-making tool
PI: C. Hu
Agency: NASA; Duration: 5/1/2017 – 4/20/2021; C. Hu's portion: $455,939
Effort: 1 month/Year

57: Distribution and abundance of pelagic Sargassum and their linkage with environmental changes in the Intra-Americas Sea and Tropical Atlantic: An interdisciplinary assessment
PI: C. Hu; Co-PI: B. Lapointe (FAU)
Agency: NASA; Duration: 10/1/2016 – 9/30/2019; C. Hu's portion: $431,363

Effort: 1 month/Year

56: Title: Synergistic multi-sensor calibration for global and coastal observations of the aquatic environments
PI: B. Barnes (USF), Co-PI: C. Hu
Agency: NASA; Duration: 10/1/2016 – 9/30/2019; C. Hu's portion: $443,698
Effort: 1 month/year

55: Title: The development of a water clarity index for the Great Lakes as a climate indicator.
PI: Scoot Sheridan (Kent State Univ), Co-PIs: B. Barnes and C. Hu and others
Agency: NASA; Duration: 5/1/2016 – 4/30/2019; C. Hu's portion: $179,433
Effort: 0.25 month/year

54: Title: Influence of river induced fronts on hydrocarbon transport.
PI: V. Kourafalou (UM/RSMAS), Co-PIs: C. Hu and others
Agency: GOMRI; Duration: 1/1/2016 – 12/31/2018; C. Hu's portion: $229,481
Effort: 0.5 month/year

53 Title: NPP VIIRS calibration/validation
PI: C. Hu
Agency: NOAA; Duration: 9/1/2015 – 5/31/2020; Budget: $514,231
Effort: 0.5 month/year

52. Title: Florida GEBF Restoration Strategy – Submerged Habitat Assessment (FL)
Institutional PI: C. Hu
Agency: FWCC; Duration: 10/1/2015 – 12/31/2016; C. Hu's portion: $159,963
Effort: 0.5 month/yeard

51. Title: North Atlantic Aerosol and Marine Ecosystems Study (NAAMES)
PI: Mike Behrenfeld (Oregon State Univerrsity)
Agency: NASA; Duration: 1/1/2015 – 12/31/2019; C. Hu's portion: $431,039
Effort: 1 month/year

50. Title: Refine and Improve Suomi NPP Chlorophyll a and Other Ocean Color Data Products Using a Novel Algorithm Concept
PI: C. Hu
Agency: NASA; Duration: 10/1/2014 – 9/30/2017; C. Hu's portion: $433,543
Effort: 1 month/year

49. Title: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico (DEEPEND)
PI: Tracy Sutton (Nova Southeastern Univ)
Agency: Gulf of Mexico Research Initiative; Duration (1/1/2015 – 12/31/2017); C. Hu's portion: $396,142
Effort: 1 month/year

48. Title: Multi-sensor assessment of diurnal changes of Karenia brevis blooms in the Gulf of Mexico
PI: C. Hu
Agency: NASA; Duration: 1/1/2015 – 12/31/2015; C. Hu's portion: $89,820
Effort: 0.25 month/year

47. Title: Center for Integrated Modeling and Analysis of Gulf Ecosystems-C-IMAGE (II)

PI: S. Murawski
Agency: Gulf of Mexico Research Initiative; Duration: 1/1/2015 – 12/31/2017; C. Hu's portion: $450,000
Effort: 1 month/year

46. Title: Establish a multi-sensor climate data record of ocean chlorophyll-a concentrations using a novel algorithm
PI: C. Hu
Agency: NASA; Duration: 10/1/2014 – 9/30/2017; C. Hu's portion: $419,521
Effort: 1 month/year

45. Title: Maximize MODIS potentials for near real-time ocean applications through developing and refining novel algorithms and products.
PI: C. Hu
Agency: NASA; Duration: 10/1/2014 – 9/30/2017; C. Hu's portion: $497,966
Effort: 1 month/year

44. Title: Detect and Quantify Methane and Carbon Dioxide Emissions for Marine and Terrestrial Environments Using Airborne SWIR & TIR Remote Sensing: A Collaborative NASA / ESA Calibration and Validation Project.
PI: Ira Leifer (Bubblenology Inc.); co-PIs: C. Hu (USF) and others
Agency: NASA. Duration: 10/1/2013 – 9/30/2015. C. Hu's portion: $60,142.

43. Title: Calibration/Validation support for NPP VIIRS data product continuity.
PI: C. Hu
Agency: NOAA. Duration: 7/1/2013 – 5/31/2015; C. Hu's portion: $167,142.

42. Title: Development of a Water Clarity Index for the Southeastern U.S. as a Climate Indicator.
PI: S. Sheridan (Kent State Univ), co-PI: C. Hu
Agency: NASA. Duration: 9/1/2013 – 2/28/2015; C. Hu's portion: $77,581

41. Title: Characterization and Correction of land adjacency effects on ocean color imagery over near-shore and inland waters.
PI: C. Hu
Agency: NASA; Duration: 10/1/2013 – 9/30/2016; C. Hu's portion: $395,869.

40. Title: Removing bottom effects and restoring water-column properties in optically shallow waters: Algorithm development, evaluation, and application. (Approved, award pending)
PI: Z. Lee (Univ. Massachusetts at Boston), co-PI: C. Hu
Agency: NASA. Duration: 9/1/2013 – 8/31/2016; C. Hu's portion: $163,485

39. Title: A multi-sensor assessment of the Deepwater Horizon oil spill: Surface oil volume and impact on marine algae.
PI: C. Hu; collaborator: Zbignew Otremba (Poland)
Agency: NASA. Duration: 1/1/2013 – 12/31/2014; C. Hu's portion: $344,815.

38. Title: West Florida Shelf glider deployments and data dissemination for GCOOS-RA.
PI: C. Hu; co-PI: C. Lembke (USF)
Agency: GCOOS/NOAA IOOS. Duration: 4/1/2012 – 12/31/2012. C. Hu's portion: $25,000.

37. Title: Weathering and Advection Model for Oil Spill Tracking (WAMOST).
    PI: I. MacDonald (FSU), co-PIs: M. Bourassa, D. Dukhovskoy, O. Garcia-Pineda, S. Morey, C. Hu (USF)
    Agency: BOEM (formerly MMS). Duration: 8/15/2012 – 8/14/2015; C. Hu's portion: $120,000.

36. Title: Hyperspectral imaging spectroscopic investigation of California natural and anthropogenic fossil methane emissions in the short-wave and thermal infrared.
    PI: Ira Leifer (Bubblenology Inc.); co-PIs: C. Hu (USF), C. Miller, D. Tratt, J. Margolis, B. Luyendyk, Y. Hsu
    Agency: NASA. Duration: 10/1/2012 – 9/30/2015; C. Hu's portion: $171,393.

35. Title: Error tolerance and uncertainty estimates for GEO-CAPE ocean reflectance and IOPs.
    PI: C. Hu
    Agency: NASA. Duration: 1/1/2013 – 12/31/2014; C. Hu's portion: $83,638.

34. Title: Center for Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE).
    PI: Steve Murawski; co-PIs: J. Dixon, D. Hollander, K. Daly, and many others
    Agency: GoM Research Initiative. Duration: 10/1/2011 – 9/30/2014; C. Hu's portion: $100,000

33. Title: Hyperspectral assessment of benthic productivity dynamics in coastal ecosystems using low-altitude UAVs: development of tools and methods for assessing Earth process impacts.
    PI: Stan Herwitz (UAV Collaborative); co-PIs: F. Muller-Karger (USF), C. Hu, Kim Yates (USGS), P. Carlson (FWC), L. Yarbro (FWC)
    Agency: NASA. Duration: 10/1/2011 – 9/30/2014; C. Hu's portion: $269,937.

32. Title: Bio-optical and taxonomy measurements in the upper Chesapeake Bay to assist GEO-CAPE mission
    PI: C. Hu
    Agency: NASA. Duration: 7/1/2011 – 6/30/2013. Amount: $32,946.

31. Title: NASA GEO-CAPE missing planning
    PI: C. Hu; co-PI: P. Coble (USF)
    Agency: NASA; Duration: 7/1/2010 – 1/9/2013. Amount: $97,304 (C. Hu's portion: $47,685).

30. Title: Harmful Algal Bloom (HAB) monitoring and event response: Technical support and service.
    PI: C. Hu
    Agency: Florida Fish and Wildlife Conservation Commission; Duration: 9/19/2009 – 6/30/2013. Amount: $401,575

29. Title: Mapping water-quality parameters using satellites in the Florida Keys.
    USF PI: C. Hu
    Agency: EPA (through FWC subcontract); Duration: 4/05/2010 – 4/04/2014; Amount: $122,826.

28. Title: A Decision Support System for Ecosystem-Based Management of Tropical Coral Reef Environments.

PI: F. Muller-Karger (USF); co-PIs: M. Eaken (NOAA), L. Guild (NASA) and R. Nemani (NASA), C. Hu.
Agency: NASA; Duration: 4/1/2010 – 3/31/2014; C. Hu's portion: $46,677.

27. Title: Mapping and Forecasting of Pelagic Sargassum Drift Habitat in the Gulf of Mexico and South Atlantic Bight for Decision Support.
PI: C. Hu; co-PIs: T. Linton (Texas A&M), F. Muller-Karger and D. Chambers (USF).
Agency: NASA; Duration: 10/1/2010 – 9/30/2013; Amount: $386,484 (C. Hu's portion: ~$250K).

26. Title: Enhancing Estuarine Water Quality Management Through Integrating Earth Science Research Results: A Targeted Project for Tampa Bay.
PI: C. Hu; co-PI: C. Kovach (Florida DEP)
Agency: NASA; Duration: 9/1/2009 – 12/31/2012. Amount: $380,997 (C. Hu's portion: ~$330K).

25. Title: Physics-based ocean color algorithms for coastal and inland waters.
PI: Z. Lee (Univ Massachusetts at Boston); co-PIs: C. Hu, J. Acker (NASA), etc.
Agency: NASA; Duration: 8/21/2009 – 8/20/2014; C. Hu's portion: $244,054.

24. Title: Remote sensing decision support for water quality and seagrass.
PI: P. Carlson (FWC); co-PI: C. Hu
Agency: NASA (through FWC subcontract); Duration: 4/12/2010 – 7/31/2012; C. Hu's portion: $182,837.

23. Title: Evaluation of Marine Productivity Study for the OCS Planning Areas
USF PI: C. Hu
Agency: MMS (through subcontract of CSA International, Inc.); Duration: 10/30/2009 – 10/29/2010; Amount: $62,823.

22. Title: Nutrient linkages between South Florida rivers and coastal habitats.
PI: B. Lapointe (Florida Atlantic Univ); Co-PI: C. Hu
Agency: NASA (through FAU subcontract); Duration: 12/1/2009 – 11/30/2012; C. Hu's portion: $120,936.

21. Title: SECOORA Regional Coastal Ocean Observing System (RCOOS) Support
USF PI: M. Luther; co-PIs: C. Hu, F. Muller-Karger (USF), and V. Subramanian (USF)
Agency: South Carolina Sea Grant Consortium. Duration: 2007 – 2012; Amount: ~$250K (C. Hu's portion: ~$90K).

20. Title: Gulf of Mexico Coastal Ocean Observing System (GCOOS) data node support.
USF PI: M. Luther; co-PIs: C. Hu, F. Muller-Karger (USF), and V. Subramanian (USF)
Agency: NOAA (through Texas A&M subcontract). Duration: 2007 – 2013; Amount: $150K (C. Hu's portion: ~$50K).

19. Title: ECOHAB: Remote detection of harmful algal blooms in the eastern Gulf of Mexico.
PI: C. Hu; co-PIs: Z. Lee (Univ Masachusetts at Boston) and K. Carder (USF)
Agency: NASA. Duration: 1/10/2009 – 7/9/2013; Amount: $499, 465 (C. Hu's portion: $384,042).

18. Title: HABSOS binational workshops on Harmful Algal Blooms and environmental measurements.
    PI: K. Steidinger (FIO); co-PI: C. Hu, S. Vargo and J. Wolny (FIO)
    Agency: EPA; Duration: 2008 – 2011; Amount: $329,766 (C. Hu's portion: ~$100K).

17. Title: A Binational Gulf of Mexico HAB Risk Assessment and Communications Partnership. PI: C. Hu, co-PIs: K. Steidinger (FIO) and F. Muller-Karger (Univ. Massachusetts Dartmouth)
    Agency: EPA; Duration: 08/01/2007 – 07/31/2011; Amount: $426,236 (C. Hu's portion: ~$350K).

16. Title: Atmospheric correction of ocean color imagery over turbid coastal waters: A self tuning approach.
    PI: C. Hu
    Agency: NOAA; Duration: 4/1/2006 – 2/26/2009; Amount: $200,290.

15. Title: Remote sensing support of the TAMRF project: "A Cooperative Research Study on Sperm Whales and their Response to Seismic Exploration in the Gulf of Mexico", US Mineral Management Service
    USF PI: C. Hu
    Agency: MMS (through Texas A&M Univ Research Foundation); Duration: 2005-2008; Amount: $29,134.

14. Title: The Influence of the Amazon and Orinoco River Plumes on the Tropical Atlantic Climate.
    PI: K. Cook (Cornell Univ); Co-PIs: P. Baker (Duke Univ) and C. HU
    Agency: NASA; Duration: 2005-2008; Amount: $661,095 (C. Hu's portion: $160,233).

13. Title: The Oceanography of Intermittent Harmful Algal Blooms (HAB) off the Caloosahatchee River, FL: Satellite remote sensing component.
    USF PI: C. Hu
    Agency: Florida Fish and Wildlife Conservation Commission; Duration: 2005-2006; Amount: $50,504.

12. Title: EAGLE-EYE: Ecological Assessment of Generalized Littoral Environments – an Integrated EOS DB/Real-Time MODIS Science Applications Project.
    PI: F. Muller-Karger, co-PI: C. Hu
    Agency: NASA; Duration, 2004-2009; Amount: $555,026 (C. Hu's portion: ~$200K)

11. Title: Environmental Assessments of Coral Reef Ecosystems: Interdisciplinary Research Using EOS Platforms and Numerical Models.
    PI: F. Muller-Karger; co-PIs: S. Andrefouet (IRD, France), J. Sheng (Dalhouse Univ, Canada), and C. Hu
    Agency: NASA; Duration: 2004-2008; Amount: $943,499 (C. Hu's portion: ~$150K)

10. Title: An Assessment of Global Organic Carbon Flux Along Continental Margins.
    PI: F. Muller-Karger; Co-PIs: C. Hu and J. Walsh (USF)
    Agency: NASA; Duration: 2004-2008; Amount: $907,661 (C. Hu's portion: ~$200K)

9. Title: Long-Term Measurement of Physical, Chemical and Biological Water Column Properties in the South Florida Coastal Ecosystem.
    USF PI: C. Hu, USF co-PI: F. Muller-Karger

Agency: NOAA (through subcontract from NOAA/AOML), Duration: 2004-2006, Amount $33,734 (C. Hu's portion: $33,734).

8. Title: Remote sensing support of SEA-COOS, ONR (through subcontract from UNC), USF PI: F. Muller-Karger (USF), USF co-PI: C. Hu
   Agency, ONR (through subcontract of U. North Carolina); Duration: 2004-2006; Amount: $282,403 (C. Hu's portion: $140K).

7. Title: Rapid Prototyping of NASA Data Within NOAA Coral Reef Decision Support Tools.
   PI: F. Muller-Karger (USF), Co-PI: C. Hu
   Agency: NASA; Duration: 2005-2006; Amount: $52,415 (C. Hu's portion: $25K)

6. Title: Coastal remote sensing with the Station Hyperspectral Ocean Research Experiment (SHORE)
   PI: C. Hu, co-PI: F. Muller-Karger (USF)
   Agency: Florida Space Research Institute; Duration: 2003-2004; Amount: $39,838 (C. Hu's portion: ~$38K)

5. Title: A feasibility study of the high-resolution MODIS bands in estuarine monitoring.
   PI: C. Hu
   Agency: Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET, U. New Hampshire and NOAA), Duration, 2003-2004, Amount: $19,682,

4. Title: Monitoring of the Piney Point discharge on the West Florida Shelf with satellite remote sensing.
   PI: C. Hu, Co-PI: F. Muller-Karger (USF)
   Agency: Florida Department of Environmental Protection; Duration: 2003-2004; Amount: $103,225 (C. Hu's portion: ~$100K)

3. Title: Use of remote-sensing satellites to monitor water quality and sediment dynamics in Chesapeake Bay and Tampa Bay.
   PI: C. Hu, Co-PI: Frank Muller-Karger (USF)
   Agency, USGS, Duration, 2002 – 2006, Amount: $187,875 (C. Hu's portion: ~$180K)

2. Title: Development of a simple remote-sensing instrument for aquatic applications.
   PI: C. Hu
   Agency: Florida Space Grant Consortium; Duration, 10/1/2002 – 9/30/2003; Amount: $18,958.

1. Title: Impacts of large river plumes on carbon and salt fluxes in the surface ocean.
   PI: C. Hu; Co-PIs: Frank Muller-Karger (USF) and Douglas Biggs (Texas A&M).
   Agency: NASA; Duration: 5/1/2001 – 4/30/2005; Amount: $392,725 (C. Hu's portion: ~$350K)

9. Graduate Education and Mentoring

Courses Taught

OCE6934, Ref#90356, Practical IDL Programming	Spring 2003
OCE6934, Ref# 17172, Optical Oceanography	Spring 2010

OCE6934, Ref# 90356, Practical IDL Programming	Fall 2010
OCE6934, Ref# 16698, Environ. Optics & Remote Sens.	Spring 2011
*OCE4930, Ref# 92020, Deepwater Horizon: Whole Story (UG)	Fall 2011
*OCE6934, Ref# 91966, Remote Sensing in Oceanography	Fall 2011
*OCE6934, Ref# 86692, Deepwater Horizon: Whole Story (G)	Fall 2011
OCE6934, Ref# 21613, Marine Resource Remote Sensing	Spring 2012
OCE6934, Ref# 15656, Optical Oceanography	Fall 2013
OCE6934, Practical IDL Programming	Spring 2014
OCE6934, Readings in Optical Oceanography	Fall 2014
OCE6934, Ref# 94911, Marine Resource Remote Sensing	Fall 2015
OCE6934, Optical Oceanography	Fall 2016
OCE6934, Practical IDL Programming	Spring 2017
OCE6934, Readings in Optical Oceanography	Fall 2017
*OCE6934, Biological Oceanography	Fall 2017
OCE6934, Marine Resource Remote Sensing	Spring 2018
OCE6934, Optical Oceanography	Fall 2019
*OCE6934, Biological Oceanography	Fall 2019
OCE6934, Marine Resource Remote Sensing	Spring 2020

Many Directed Research, Independent Study, MS Thesis, and PhD Dissertation courses from Spring 2009 to Fall 2020

*courses taught by others where Hu gave lectures

Master's Thesis Advisory Committees

Hu as major or co-major advisor

Junpeng Liu (**graduated at OUC**, co-major advisor: Ming-Xia He of Ocean University of China): Spring 2007 – Fall 2010, thesis title: "A multi-satellite service system to monitor *Ulva prolifera* blooms and their marine environment off Qingdao, China". 86pp, in Chinese with English abstract.

Feng Yu (**graduated at OUC**, co-major advisor: Ming-Xia He of Ocean University of China): Spring 2007 – Fall 2010, thesis title: "Satellite remote sensing of *Ulva prolifera* in coastal waters off Qingdao, China". 73 pp, in Chinese with English abstract.

Daniel Sensi (**graduated at USF/CMS**): Fall 2010 – Fall 2012, thesis title: "Optical Detection and Classification of Phytoplankton Taxa through Spectral Analysis", 71 pp. Manuscript in preparation.

Ryan Lloyd (**graduated at USF/CMS**): Fall 2010 – Fall 2012, thesis title: "Remote Sensing of Whitings in the Bahamas", 117 pp. Manuscript in preparation.

Robert Hardy (**graduated at USF/CMS**): Spring 2010 – Fall 2014, thesis title: "Assessments of Surface-Pelagic Drift Communities and Behavior of Early Juvenile Sea Turtles in the Northern Gulf of Mexico". Published 3 papers as

co-author and made 2 presentations. Won the Outstanding Thesis and Dissertation (OTD) Award from USF for the 2014-2015 academic year.

Jacqueline Long **(graduated at USF/CMS)**: Fall 2013 – Fall 2016, thesis title: Whitings in SW Florida coastal waters. Published 3 papers as 1st author. Recipient of Sackett Prize award (one student per year) in 2018.

Chih-Wei Huang (**graduated at USF/CMS):** Fall 2016 – Spring 2019.

Alex Manos (**In progress at USF/CMS**): Fall 2019 – present.

Hu as thesis committee member

Ana Odriozola (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Spring 2003 – Spring 2006, thesis title: "On the Orinoco River plume in the Caribbean". Published 1 paper as 1st author (Odriozola et al., 2007) and another one as coauthor.

Haiying Zhang (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Spring 2004 – Fall 2006, thesis title "Remote detection of red tides using a fuzzy k-mean classification". Manuscript published in a conference proceeding.

Bredan O'Connor (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 2011 – Summer 2013, thesis title: "Assessment of the Mississippi River diversions and characterization of the oil from the Deepwater Horizon oil spill". Made a presentation at the GoMRI conference in New Orleans, January 2013.

Lewis Stuwart (**graduated at USF/CMS, Dec 2017),** major advisor: David Naar of USF).

Doctor's Dissertation Advisory Committees

Hu as major or co-major advisor

Kun Yu (**graduated at Nanjing Univ.**, **visiting student at USF 2009 - 2011**, co-major advisor: Ying Wang of Najing University, China): Fall 2007 - Spring 2012, dissertation title: "Different lowland plain wetlands formation and a decadal vegetation coverage". 160 pp, in Chinese with English abstract. Published 2 papers as 1st author (Yu et al., 2011; Yu and Hu, 2013), 1 paper as coauthor, and another one in preparation.

Lian Feng (**graduated at Wuhan Univ.**, **visiting student at USF 2010 - 2012**, co-major advisor: Xiaoling Chen of Wuhan University, China): Fall 2008 - Spring 2013, dissertation title: "Remote sensing of the Poyang Lake and its environment". Published 7 papers as 1st author and 4 papers as coauthor. Won Top-10 Student Researcher Award (2012) and Top-5 Student Innovation Award (2012) at Wuhan University.

Brian Barnes (**graduated at USF/CMS in Dec 2013**), Fall 2009 – Fall 2013, dissertation title: "On the combined Effects of Light and Temperature on Coral Bleaching: A case study of the Florida Reef Tract using satellite and in situ data". USF/CMS Knight Fellowship winner (Fall 2012); published 5 papers as 1st author and 3 papers as co-author from dissertation. Won the

Outstanding Thesis and Dissertation (OTD) Award from USF for the 2013-2014 academic year. Made numerous presentations in professional meetings.

Lin Qi (**Graduated at Nanjing Institute of Geography and Limnology in Nov 2014).** Dissertation title: "Remote sensing of phytoplankton pigment concentrations in Taihu Lake: Algorithm development and applications". Published 3 first-authored papers and 1 coauthored paper. One paper was highlighted by IOCCG in its November 2014 news bulletin.

Mengqiu Wang **(Graduated at USF/CMS in August 2018)**: Fall 2013 – Aug 2018, Dissertation topic: Remote sensing of pelagic Sargassum. Published 6 manuscripts as 1st author and 7 papers as co-author. Recipient of numerous fellowships and awards.

Shuangling Chen **(Graduated at USF/CMS in fall 2018)**: Fall 2013 – Fall 2018, Dissertation topic: Remote sensing of surface pCO2 in the Gulf of Mexico. Published 5 manuscripts as 1st author and two as coauthor. USGS graduate assistantship recipient 2014 – 2016 and winner of several scholarships.

Shaojie Sun **(Graduated at USF/CMS in fall 2018)**: Fall 2013 – Fall 2018, Dissertation topic: oil spill remote sensing. Published 6 papers as 1st author and several others as co-author. NASA fellowship recipient since Fall 2016.

Yingjun Zhang (**in progress at USF/CMS):** Fall 2016 – present.

Jing Shi (**in progress at USF/CMS):** Fall 2019 – present.

Yao Yao (**in progress at USF/CMS):** Fall 2019 – present.

David Puig Moreno (**in progress at USF/CMS**): Fall 2020 – present.

Hu as dissertation committee member

Bisman Nababan (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 1998 – Spring 2005, dissertation title: "Bio-optical variability of surface waters in the Northeastern Gulf of Mexico", 167pp. Published two papers as 1st author and two others as co-author.

Zhiqiang Chen (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 2000 – Fall 2006, dissertation title: "Monitoring water quality in Tampa Bay: Coupling *in situ* and remote sensing". Published 4 papers as 1st author, 4 papers as co-author.

Marina Marrari (**graduated at USF/CMS**, major advisor: Kendra Daly of USF), Fall 2002 – Spring 2008, dissertation title: "Characterization of the Western Antarctic Peninsula Ecosystem: Environmental Controls on the Zooplankton Community". 174pp. Published 3 papers as 1st author.

Carrie Wall (**graduated at USF/CMS**, major advisor: David Mann of USF), Fall 2008 - Fall 2012, dissertation title: "Shelf-scale Mapping of Fish Distribution Using Active and Passive Acoustics", 164 pp. Published 3 papers from dissertation as 1st author with 2 in preparation, and published 2 papers as coauthor and 2 others in preparation.

Kara Radabaugh (**graduated at USF/CMS**, major advisor: Ernst Peebles of USF), Fall 2009 – Spring 2013, dissertation title: "Light-Environment Controls and Basal Resource Use of Planktonic andBenthic Primary Production", 189pp. Published 1 paper as 1st author, submitted 2, and had one in preparation.

Inia Soto (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 2006 – Fall 2013, dissertation title: "On the Harmful Algal Blooms of the West Florida Shelf and Campeche Bank: Visualization and Quantification using Remote Sensing Methods". Published 3 papers as 1st author, 2 as coauthor

Sennai Habtes (**graduated at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 2006 – Fall 2014, dissertation title: "Variability in the Spatial and Temporal Patterns of Larval Scombrid Abundance in the Gulf of Mexico"

Brian Zielinski (**graduated at USF/CMS**, major advisor: John Paul of USF), Fall 2008 – Fall 2014, dissertation title: "Using Gene Expression as a Tool to Understand Biogeochemical Cycling in Various Marine Communities", Published 2 papers as co-author, and several others in preparation.

Maria Vega-Rodriguez (**graduated in fall 2016 at USF/CMS**, major advisor: Frank Muller-Karger of USF), Fall 2010 – Fall 2016, dissertation title: "Influence of temperature and water quality variability on coral reef diversity in the Florida Keys". Won ARCS Scholar award in 2012.

Katie Wirt (**defended in February 2016**, major advisor: Pam Muller of USF), Fall 2011 – spring 2016, dissertation title: "Critical Habitat of *Acropora spp.* On reefs of Florida, Puerto Rico and the U.S. Virgin Islands". Published 1 paper as 1st author.

Ellen Hudson-Heck (**in progress at USF/CMS**, major advisor: Robert Byrne of USF), Fall 2016 – present.

Mentor of post-doctorate researcher:

Dr. Jun Zhao, USF/CMS, Fall 2010 – Fall 2012. Focused on algal blooms and light penetration on the West Florida Shelf and Florida Keys, published 3 papers as 1st author and 2 papers as coauthor.

Dr. Chengfeng Le, USF/CMS, Fall 2010 – Spring 2013. Focused on estuarine water quality and blooms to assist management decision support, published 6 papers as 1st author and 1 paper as coauthor.

Dr. Minwei Zhang, USF/CMS, Fall 2013 – Fall 2018. Focused on atmospheric correction of airborne and satellite sensors.

Dr. Brian Barnes, USF/CMS, Spring 2014 – spring 2017. Focused on ocean color algorithm and data products of coastal oceans as well as their applications in addressing Earth science questions.

Dr. Lian Feng, USF/CMS, Spring 2015 – Summer 2017. Focused on algorithm development and global ocean data quality.

Dr. Lin Qi, USF/CMS, January 2015 – July 2015. Focused on coastal algal blooms and water quality

Dr. Mengqiu Wang, USF/CMS, August 2018 – present. Continued PhD work on Sargassum remote sensing and dynamics.

Dr. Shaojie Sun, USF/CMS, December 2018 – August 2019. Focused on oil spills and other pollutions.

Dr. Min Xu, USF/CMS, June 2020 – present. Algal blooms in estuaries and coastal waters

Dr. Shuai Zhang, USF/CMS, October 2020 – present. GEE applications in aquatic science.

10. Synergistic Activities

2015 – 2017, Editor-in-Chief, *Remote Sensing of Environment*

2008 – 2014, Topical Editor (ocean optics and remote sensing), *Applied Optics*

Member of AGU, AAAS, ASLO, and APS

Visiting professorship at Wuhan University and Ocean University of China

Reviewer of professional journals: *Remote Sensing of Environment*, *Applied Optics*, *Nature Communications, International Journal of Remote Sensing, Limnology & Oceanography*, *Marine Chemistry*, *Journal of Geophysical Research, Geophysical Research Letters*, *Oceanography*, *Progress in Oceanography, Journal of Oceanography, Chinese Science Bulletin, IEEE Geosci. & Remote Sens., Journal of Applied Remote Sensing, Journal of Phycology, Continental Shelf Research, etc.*

Reviewer and panelist of NASA, NOAA, and NSF proposals

Convener of international conference sessions

Host of two international workshops on HABs research

Host of visiting scholars from India, Trinidad, China, Iraq, Mexico

Developer of Virtual Systems for data processing and information sharing

Service provider (satellite-based data products) to > 60 countries

Member, International Ocean Color Coordination Group

Member, Products and Service Committee, GCOOS

Member, Data Management Committee, SECOORA

Member, NASA GEO-CAPE mission science definition team

Member, Water Quality and Harmful Algal Blooms Teams, Gulf of Mexico Alliance, 2010 –

Member, Program Committee, Asia-Pacific Remote Sensing Symposium, fall 2012

Member, Program Committee, Second International Conference on Global Change and the Environment in Asia and Pacific (GCEAP, 28-29 Oct 2010)

Member, Advisory Committee of NASA/GSFC Ocean Ecology Lab

Member, USF Honors and Awards Committee, 2011 – 2015

Member, USF Research Misconduct Committee, 2011 –

Member, USF/CMS Faculty Evaluation Committee, spring 2011

Chair, USF/CMS Curriculum Committee, 2011 –

Member, NSF OOI Program Advisory Committee, 2012 –