
CÉDRIC G. FICHOT

CURRICULUM VITAE

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EDUCATION

- 2013 Ph.D. Marine Science, University of South Carolina, Marine Science Program
 Advisor: Dr. Ronald Benner
- 2004 M.S. Oceanography, Dalhousie University, Department of Oceanography
 Advisor: Dr. William L. Miller
- 2000 B.S. Oceanography, Florida Institute of Technology

PROFESSIONAL APPOINTMENTS AND EXPERIENCE

- 2016-present Assistant Professor, Boston University, Department of Earth and Environment
 BU Affiliations: Center for Remote Sensing (CRS), BU Marine Program (BUMP), Biogeoscience Program.
- 2014-2016 Delta Science Postdoctoral Fellow, California Institute of Technology, Jet Propulsion Laboratory
- 2013 Research Associate, University of South Carolina, Department of Biology
- 2005-2007 Laboratory Technician, University of Georgia, Department of Marine Sciences

PRINCIPAL FIELDS OF INTEREST

Aquatic Biogeochemistry and Photochemistry: fluxes and cycling of dissolved organic matter (DOM) and carbon (DOC) along the land-ocean continuum, effects of ultraviolet radiation on aquatic biogeochemical cycling, impacts of climate change and human activities.

Aquatic Optics and Remote Sensing: ocean color and thermal remote sensing, optical algorithm development and validation, radiative transfer modeling.

Water Quality: remote sensing of water quality indicators in lakes, rivers, and estuaries.

Coastal Vulnerability: impacts of climate change and human activities on suspended sediment dynamics in nearshore systems, assessing of habitat suitability of seagrass ecosystems.

FUNDED GRANTS AND FELLOWSHIPS

(Total Funds to **Cédric G. Fichot** at BU: ~\$2.5M)
(Grant amounts shown below are amounts awarded to BU)

12. *Coupling remote sensing imagery and numerical models to quantify the resilience of coastal marshes to climate change*. PI: Sergio Fagherazzi, Co-I: **Cédric G. Fichot** and Mark Friedl. NASA: Earth System Science for Building Coastal Resilience. \$962,075 (period 2023-2027)
11. *LakeSense: a portal for nationwide remotely sensed lake water quality indicators to inform benefit-cost analyses for federal and state-level rulemaking*. PI: Christoph Nolte, Co-PI: **Cédric G. Fichot**. NASA: Water Resources Applications. \$449,143 (period 2023-2027).

10. *Assessing Remote Sensing Data to Monitor Shoreline Change*. PI: **Cédric G. Fichot**. Department of the Interior: National Park Service. \$22,997 (period 2022-2023).
9. *ILTER: Plum Island Ecosystems, the impact of changing landscapes and climate on interconnected coastal ecosystems* Senior Personnel: PI: Anne Giblin, Co-I/Senior Personnel: **Cédric G. Fichot**. NSF: Long Term Ecological Research (ILTER). \$42,077 (period 2022-2028).
8. *Collaborative Research: Distribution and Cycling of Carboxyl-Rich Alicyclic Molecules (CRAM) in the Ocean*. PI: Karl Kaiser. Co-PI & BU PI: **Cédric G. Fichot**. NSF Ocean Sciences: Chemical Oceanography. \$398,730 (period 2022-2025).
7. *The export of terrigenous dissolved organic carbon (DOC) from boreal terrestrial ecosystems to the Arctic Ocean and its vulnerability to environmental change*. PI: **Cédric G. Fichot**. NASA: Carbon Cycle Science. \$861,006 (period 2021-2024).
6. *Quantifying the fate of dissolved organic carbon from stable and degrading marshes in the Mississippi River Delta using airborne imaging spectroscopy and export modeling*. PI: **Cédric G. Fichot** and Ph.D. Student *Joshua Harringmeyer. NASA: Future Investigators in NASA Earth & Space Science (FINESST). \$133,936 (period 2020-2023).
5. *Delta-X: Enabling Deltas to Thrive in a Century of Rising Seas*. PI: Mark Simard. Co-I & BU PI: **Cédric G. Fichot** and Sergio Fagherazzi. NASA: Earth Venture Suborbital (EVS)-3. \$664,529 (period 2019-2022).
4. *A quantitative assessment and correction scheme for the effects of CDOM photobleaching on the remote sensing of water quality*. PI: **Cédric G. Fichot**. NASA Remote Sensing of Water Quality. \$430,653 (period 2018-2021).
3. *Seasonal evolution of the coastal thermal front and small eddies in the Great Lakes as characterized by satellite SST and SAR imagery and numerical modeling*. PI: **Cédric G. Fichot**. Subcontracted from Jet Propulsion Laboratory. \$34,999 (period 2017-2018).
2. *Delta Science Fellows Program*. PI: **Cédric G. Fichot**. California Sea Grant. \$169,376 (period 2014-2016).
1. *Dean's Dissertation Fellowship*. **Cédric G. Fichot**. Graduate School, University of South Carolina. \$25,000 (period 2012).

RESEARCH

PUBLICATIONS

ISI Web of Science: 1,917 citations, h-index 23; Google Scholar: 2,699 citations, h-index 27 (updated July 27, 2023)

In progress

(*graduate student, §undergraduate student, †technician, ‡visiting scholar, ^graduate student committee)

Fichot, C.G., ‡S. Jin, S. Fagherazzi, S. Lohrenz, S. Epps (In preparation). Climate-driven decline in nearshore sediment availability to Louisiana salt marshes. *Nature Geoscience*.

*Zhu, X. and **C. G. Fichot**. (In preparation) Photobleaching is a major sink of CDOM and regulator of the light field in the global ocean. *Geophysical Research Letters*

^Conroy, T., K.R. Bryan, and **C.G. Fichot** (In preparation). The spatial scales of cross shelf suspended sediment transport from small mountainous river plumes derived from satellite ocean color data. *Remote Sensing of Environment*.

Nghiem J. A., G. Li, ‡J. P. Harringmeyer, G. Salter, **C.G. Fichot**, Michael P. Lamb (Submitted). Predicting floc settling velocity in rivers and freshwater wetlands. *Earth Surface Dynamics*.

[^]Tuzcu-Kokal A., [‡]J. P. Harringmeyer, O. Cronin-Golomb, M.W. Weiser, J. Hong, N. Ghosh, [§]J. Swanson, X. Zhu, N. Musaoglu, and **C. G. Fichot**[†] (Submitted). Capturing the dynamics of dissolved organic carbon (DOC) in tidal saltmarsh estuaries using remote-sensing-informed models. *JGR-Biogeosciences*.

*Weiser, M.W., [§]J. Swanson, *J. Hong, [†]N. Ghosh, [‡]J.P. Harringmeyer, K. Kaiser and **C. G. Fichot**. (Submitted) *Instant DOC*: Improving estimates of Dissolved Organic Carbon (DOC) concentration from *in situ* fluorescence across estuaries and coastal wetlands. *Environmental Science and Technology*.

In print

(*graduate student, [§]undergraduate student, [†]technician, [‡]visiting scholar, [^]graduate student committee)

55. Lønborg, C., C. Carreira, G. Abril, S. Agustí, V. Amaral, A. Andersson, J. Arístegui, P. Bhadury, M. Bernardi Bif, A. Borges, S. Bouillon, M.L. Calleja, L.C. Cotovicz Jr, S. Cozzi, M. Doval, B. Eyre, **C.G. Fichot**, E. García-Martín, A. Garzon-Garcia, M. Giani, R. Gonçalves-Araujo, R. Gruber, D.A. Hansell, F. Hashihama, D. He, J.M. Holding, W.R. Hunter, J.S.P. Ibánhez, V. Ibello, S. Jiang, G. Kim, K. Klun, P. Kowalczyk, A. Kubo, C.W. Lee, C.B. Lopes, F. Maggioni, P. Magni, C. Marrase, P. Martin, S.L. McCallister, R. McCallum, P.M. Medeiros, X.A.G. Morán, F. Muller-Karger, A. Myers-Pigg, M. Norli, J.M. Oakes, H. Osterholz, H. Park, J. Rosentreter, D. Rueda-Roa, C. Santinelli, Y. Shen, E. Teira, T. Tinta, G. Uher, M. Wakita, N. Ward, K. Watanabe, Y. Xin, Y. Yamashita, L. Yang, J. Yeo, H. Yuan, Q. Zheng, M.L. Paulsen, X.A. Álvarez-Salgado (*preprint*). A global database of dissolved organic matter (DOM) measurements in coastal waters (CoastDOM v.1). *Earth System Science Data*. <https://doi.org/10.5194/essd-2023-348>
54. *Harringmeyer, J., [†]N. Ghosh, *M. Weiser, D. Thompson, M. Simard, S. Lohrenz, and **C. Fichot**. (2024) A hyperspectral view of the nearshore Mississippi River Delta: characterizing suspended particles in coastal wetlands using imaging spectroscopy. *Remote Sensing of Environment*. 301, 113943, <https://doi.org/10.1016/j.rse.2023.113943>
53. *Zhu, X., *M.W. Weiser, *J.P. Harringmeyer, K. Kaiser, S. Bélanger, C. Anderson and **C. G. Fichot**. (2024) The apparent quantum yield matrix (AQY-M) of CDOM photobleaching in estuarine, coastal, and oceanic surface waters. *Science of the Total Environment*. 912, 168670. <https://doi.org/10.1016/j.scitotenv.2023.168670>
52. [^]Cortese, L., C. Donatelli, X. Zhang, J.A. Nghiem, M. Simard, C.E. Jones, M. Denbina, **C.G. Fichot**, *J.P. Harringmeyer, and S. Fagherazzi. (2024) Coupling numerical models of deltaic wetlands with AirSWOT, UAVSAR, and AVIRIS-NG remote sensing data, *Biogeosciences*. <https://doi.org/10.5194/bg-21-241-2024>
51. [^]Muskherjee S., J. D. Hedley, **C.G. Fichot**, J. Laliberté and S. Bélanger (2023). Optical closure in highly absorptive coastal waters: significance of inelastic scattering processes. *Optics Express*. 31, 35178-35199. <https://doi.org/10.1364/OE.501732>
50. Jiang, D., B. Matsushita, N. Pahlevan, D. Gurlin, **C.G. Fichot**, *J. Harringmeyer, G. Sent, Ana C. Brito, V. Brotas, M. Werther, V. Mascarenhas, M. Blake, P. Hunter, A. Tyler, and E. Spyarakos (2023). Estimating the concentration of total suspended solids in inland and coastal waters from Sentinel-2 MSI: A semi-analytical approach. *ISPRS Journal of Photogrammetry and Remote Sensing*. 204, 362-370. <https://doi.org/10.1016/j.isprsjprs.2023.09.020>
49. Jin, S., Fagherazzi, S., Fichot, C.G., Wu, X., Liu, Y.X., Zheng, X. et al. (2023) Drivers of suspended sediment dynamics along the shorelines of the Yellow River Delta detected from satellite data. *Earth Surface Processes and Landforms*, 1–12. <https://doi.org/10.1002/esp.5683>

48. **Fichot, C.G.**, M. Tzortziou, and A. Mannino (2023). Remote sensing of dissolved organic carbon (DOC) stocks, fluxes and transformations along the land-ocean aquatic continuum: advances, challenges, and opportunities. *Earth Science Reviews*, 242, 104446. <https://doi.org/10.1016/j.earscirev.2023.104446>
47. Brewin, R.J.W., S. Sathyendranath, G. Kulk, M-H. Rio, J.A. Concha, T.G. Bell, A. Bracher, **C. Fichot**, T.L. Frölicher, M.Galí, D.A. Hansell, T.S. Kostadinov, C. Mitchell, A. R. Neeley, E. Organelli, K. Richardson, C. Rousseaux, F. Shen, D. Stramski, M. Tzortziou, A.J. Watson, C.I. Addey, M. Bellacicco, H. Bouman, D. Carroll, I. Cetinić, G. Dall’Olmo, R. Frouin, J. Hauck, M. Hieronymi, C. Hu, V. Ibello, B. Jönsson C.E. Kong, Ž. Kovač, M. Laine, J. Lauderdale, S. Lavender, E. Livanou, J. Llort, L. Lorinczi, M. Nowicki, N.A. Pradisty, S. Psarra, D.E. Raitsos, A.B. Ruescas, J.L. Russell, J. Salisbury, R. Sanders, J.D. Shutler, X. Sun, F.G. Taboada, G. Tilstone, X. Wei, D.K. Woolf (2023). Ocean carbon from space: current status and priorities for the next decade. *Earth Science Reviews*, 240, 104386. <https://doi.org/10.1016/j.earscirev.2023.104386>
46. Lehmann, M.K., D. Gurlin, N. Pahlevan, K. Alikas, J. Anstee, S.V. Balasubramanian, C.C.F Barbosa, C. Binding, A. Bracher, M. Bresciani, A. Burtner, Z. Cao, A.G. Dekker, C. Di Vittorio, N. Drayson, R.M Errera, V. Fernandez, D. Ficek, **C.G. Fichot**, P. Gege, C. Giardino, A.A. Gitelson, S.R. Greb, H. Henderson, H. Higa, A.I. Rahaghi, C. Jamet, D. Jiang, T. Jordan, K. Kangro, J.A. Kravitz, A.S. Kristoffersen, R. Kudela, L. Li, M. Ligi, H. Loisel, S. Lohrenz, R. Ma, D.A. Maciel, T.J. Malthus, B. Matsushita, M. Matthews, C. Minaudo, D.R. Mishra, S. Mishra, T. Moore, W.J. Moses, H. Nguyễn, E.M.L.M Novo, S. Novoa, D. Odermatt, D.M. O'Donnell, L.G. Olmanson, M. Ondrusek, N. Oppelt, S. Ouillon, F.W. Pereira, S. Plattner, A.R. Verdú, S.I. Salem, J.F Schalles, S.G.H Simis, E. Siswanto, B. Smith, I. Somlai-Schweiger, M.A Soppa, E. Spyarakos, E. Tessin, H.J van der Woerd, A. Vander Woude, R.A. Vandermeulen, V. Vantrepotte, M.R. Wernand, M. Werther, K. Young, L. Yue (2023). GLORIA - A globally representative hyperspectral *in situ* dataset for optical sensing of water quality. *Sci Data*, 10, 100. <https://doi.org/10.1038/s41597-023-01973-y>
45. Thompson, D.R., N. Bohn, P.G. Brodrick, N. Carmon, M.L. Eastwood, R. Eckert, **C.G. Fichot**, *J.P. Harringmeyer, H.M. Nguyen, M. Simard, and A.K. Thorpe (2022). Atmospheric lengthscales for global VSWIR imaging spectroscopy. *Journal of Geophysical Research: Biogeosciences*, 127 (6), e2021JG006711. [doi:10.1029/2021JG006711](https://doi.org/10.1029/2021JG006711)
44. Greenberg, E., D.R. Thompson, D. Jensen, P.A. Townsend, N. Queally, A. Chlus, **C.G. Fichot**, *J.P. Harringmeyer, M. Simard (2022). An Improved Scheme for Correcting Remote Spectral Surface Reflectance Simultaneously for Terrestrial BRDF and Water-Surface Sunlint in Coastal Environments. *Journal of Geophysical Research: Biogeosciences*, 127 (3), e2021JG006712. [doi:10.1029/2021JG006712](https://doi.org/10.1029/2021JG006712)
43. ^sCronin-Golomb, O., *J. Harringmeyer, *M. Weiser, *X. Zhu, [†]N. Ghosh, A. Novak, I. Forbrich and **C.G. Fichot** (2022). Modeling benthic solar exposure (UV and visible) in dynamic coastal systems to better inform seagrass habitat suitability. *Science of the Total Environment*, 812, 151481. [doi:10.1016/j.scitotenv.2021.151481](https://doi.org/10.1016/j.scitotenv.2021.151481)
42. Mejia, F.H., C.E. Torgersen, and **C.G. Fichot** (2022). Keeping an eye on water quality from the sky. *Frontiers for Young Minds*, 10, 619716. [doi:10.3389/frym.2022.619716](https://doi.org/10.3389/frym.2022.619716)

41. Nerma, V, S. Lohrenz, S. Chakraborty, and **C.G. Fichot** (2021). Underway Hyperspectral Bio-Optical Assessments of Phytoplankton Size Classes in the River-Influenced Northern Gulf of Mexico. *Remote Sensing*, 13 (17), 3346. [doi:10.3390/rs13173346](https://doi.org/10.3390/rs13173346)
40. *Harringmeyer, J., D.R. Thompson, K. Kaiser, M. Gierach, C. Cash and **C.G. Fichot** (2021). Detection and sourcing of CDOM in urban coastal waters with UV-visible imaging spectroscopy. *Frontiers in Environmental Science*, 9:647966. [doi:10.3389/fenvs.2021.647966](https://doi.org/10.3389/fenvs.2021.647966)
39. Massicotte, P., R.M.W. Amon, D. Antoine, P. Archambault, S. Balzano, S. Bélanger, R. Benner, D. Boeuf, A. Bricaud, F. Bruyant, G. Chaillou, M. Chami, B. Charrière, J. Chen, H. Claustre, P. Coupel, N. Delsaut, D. Doxaran, J. Ehn, **C. Fichot**, M-H Forget, P. Fu, J. Gangon, N. Garcia, B. Gasser, J-F Ghiglione, G. Gorsky, M. Gosselin, P. Gourvil, Y. Gratton, P. Guillot, H.J. Heipieper, S. Heussner, S.B. Hooker, Y. Huot, C. Jeanthon, W. Jeffrey, F. Joux, K. Kawamura, B. Lansard, E. Leymarie, H. Link, C. Lovejoy, C. Marec, D. Marie, J. Martin, J. Martín, G. Massé, A. Matsuoka, V. McKague, A. Mignot, W.L. Miller, J-C Miguel, A. Mucci, K. Ono, E. Ortega-Retuerta, C. Panagiotopoulos, T. Papakyriakou, M. Picheral, L. Prieur, P. Raimbault, J. Ras, R.A. Reynolds, A. Rochon, J-F Rontani, C. Schmechtig, S. Schmidt, R. Sempéré, Y. Shen, G. Song, D. Stramski, E. Tachibana, A. Thirouard, I. Tolosa, J-É Tremblay, M. Vaitlingom, D. Vaultot, F. Vaultier, J.K. Volkman, H. Xie, G. Zheng, and M. Babin (2021). The MALINA oceanographic expedition: How do changes in ice cover, permafrost and UV radiation impact biodiversity and biogeochemical fluxes in the Arctic Ocean? *Earth System Science Data*, 13, 1561–1592. [doi:10.5194/essd-13-1561-2021](https://doi.org/10.5194/essd-13-1561-2021)
38. Jiang, S., B. Matsushita, N. Pahlevan, D. Gurlin, M.K. Lehmann, **C.G. Fichot**, J. Schalles, H. Loisel, C. Binding, Y. Zhang, K. Alikas, K. Kangro, M. Uusõue, M. Ondrusek, S. Greb, W. J. Moses, S. Lohrenz, D. O'Donnell (2021). Remotely estimating total suspended solids concentration in clear to extremely turbid waters using a novel semi-analytical method. *Remote Sensing of Environment*. 258:112386. [doi:10.1016/j.rse.2021.112386](https://doi.org/10.1016/j.rse.2021.112386)
37. ‡Jin, S., Y. Liu, S. Fagherazzi, ‡H. Mi, G. Qiao, W. Xu, C. Sun, Y. Liu, B. Zhao, and **C.G. Fichot** (2021). River body extraction from sentinel-2A/B MSI images based on an adaptive multi-scale region growth method. *Remote Sensing of Environment*. 7:604893. [doi:10.1016/j.rse.2021.112297](https://doi.org/10.1016/j.rse.2021.112297)
36. Tanioka, T., **C.G. Fichot**, and K. Matsumoto (2020). Toward Determining the Spatio-Temporal Variability of Upper-Ocean Ecosystem Stoichiometry From Satellite Remote Sensing. *Frontiers in Marine Science*, 7:604893. [doi: 10.3389/fmars.2020.604893](https://doi.org/10.3389/fmars.2020.604893)
35. *Zhu, X., W.L. Miller, and **C.G. Fichot** (2020). Simple Method to Determine the Apparent Quantum Yield Matrix of CDOM Photobleaching in Natural Waters. *Environmental Science and Technology*, 54(21): 14096–14106. [doi:10.1021/acs.est.0c03605](https://doi.org/10.1021/acs.est.0c03605)
34. ‡Mi, H., **C.G. Fichot**, K.R. Bryan, G. Qiao, and S. Fagherazzi (2020). Rapid shoreline flooding enhances water turbidity by sediment resuspension: an example in a large Tibetan lake. *Earth Surface Processes and Land Forms*, 45(15): 3780-3790. [doi:10.1002/esp.5000](https://doi.org/10.1002/esp.5000)
33. Li, Y., **C.G. Fichot**, L. Geng, M.G. Scarratt, H. Xie (2020). The contribution of methane photoproduction to the oceanic methane paradox. *Geophysical Research Letters*, 47 (14). [doi:10.1029/2020GL088362](https://doi.org/10.1029/2020GL088362)
32. Balasubramanian, S. V., N. Pahlevan, B. Smith, C. Binding, J. Schalles, H. Loisel, D. Gurlin, S. Greb, K. Alikas, M. Randla, M. Bunkei, W. Moses, H. Nguyễn, M.K. Lehmann, D. O'Donnell, M. Ondrusek, T-H.Han, **C.G. Fichot**, T. Moore, E. Boss(2020). Robust

- algorithm for estimating total suspended solids (TSS) in inland and nearshore coastal waters. *Remote Sensing of Environment*, 246. [doi:10.1016/j.rse.2020.111768](https://doi.org/10.1016/j.rse.2020.111768)
31. ^Zhang, X., **C.G. Fichot**, §C. Baracco, §R. Guo, S. Neugebauer, Z. Bengtsson, N. Ganju, S. Fagherazzi (2020). Determining the drivers of suspended sediment dynamics in tidal marsh-influenced estuaries using high-resolution ocean color remote sensing. *Remote Sensing of Environment*, 240. [doi: 10.1016/j.rse.2020.111682](https://doi.org/10.1016/j.rse.2020.111682)
 30. **Fichot, C.G.**, K. Matsumoto, B.M. Holt, M.M. Gierach, K. Tokos (2019). Assessing change in the overturning behavior of the Laurentian Great Lakes using remotely sensed lake surface water temperatures. *Remote Sensing of Environment*, 235. [doi:10.1016/j.rse.2019.111427](https://doi.org/10.1016/j.rse.2019.111427)
 29. ‡Mi, H., S. Fagherazzi, G. Qiao, Y. Hong, and **C.G. Fichot** (2019). Climate change leads to a doubling of turbidity in a rapidly expanding Tibetan lake. *Science of the Total Environment*, 688, 952-959. [doi:10.1016/j.scitotenv.2019.06.339](https://doi.org/10.1016/j.scitotenv.2019.06.339)
 28. Jensen, D., M. Simard, K. Cavanaugh, Y. Sheng, **C.G. Fichot**, T. Pavelsky, R. Twilley (2019). Improving the Transferability of Suspended Solid Estimation in Wetland and Deltaic Waters with an Empirical Hyperspectral Approach. *Remote Sensing*, 11(13), 1629. [doi:10.3390/rs11131629](https://doi.org/10.3390/rs11131629)
 27. Thompson, D., K. Cawse-Nicholson, Z. Erickson, **C.G. Fichot**, C. Frankenberg, B-C. Gao, M. Gierach, R.O. Green, N. Vijay, A. Thompson (2019). A unified approach to estimate land and water reflectances with uncertainties for coastal imaging spectroscopy. *Remote Sensing of Environment*, 231. [doi:10.1016/j.rse.2019.05.017](https://doi.org/10.1016/j.rse.2019.05.017)
 26. Needham, D., E.B. Fichot, E. Wang, L. Berdjeb, J. Cram, **C.G. Fichot**, J. Fuhrman (2018). Dynamics of finely resolved, abundant symbiotic marine plankton and other interacting microbes via automated high-frequency sampling. *The ISME Journal*, 12: 2417–2432. [doi: 10.1038/s41396-018-0169-y](https://doi.org/10.1038/s41396-018-0169-y)
 25. Whelan, M.E., S.T. Lennartz, T.E. Gimeno, R. Wehr, G. Wohlfahrt, Y. Wang, L.M.J. Kooijmans, T.W. Hilton, S. Belviso, P. Peylin, R. Commane, W. Sun, H. Chen, L. Kuai, I. Mammarella, K. Maseyk, M. Berkelhammer, K-F Li, D. Yakir, A. Zumkehr, Y. Katayama, J. Ogée, F.M. Spielmann, F. Kitz, B. Rastogi, J. Kesselmeier, J. Marshall, K-M Erkkilä, L. Wingate, L.K. Meredith, W. He, R. Bunk, T. Launois, T. Vesala, J.A. Schmidt, **C.G. Fichot**, U. Seibt, S. Saleska, E.S. Saltzman, S.A. Montzka, J.A. Berry, and J.E. Campbell (2018). Reviews and syntheses: Carbonyl sulfide as a multi-scale tracer for carbon and water cycles. *Biogeosciences*, 15: 3625-3657. [doi:10.5194/bg-15-3625-2018](https://doi.org/10.5194/bg-15-3625-2018)
 24. Shen, Y., R. Benner, K. Kaiser, **C.G. Fichot**, and T.E. Whitledge. (2018). Pan-Arctic distribution of bioavailable dissolved organic matter and linkages with productivity in ocean margins. *Geophysical Research Letters*, 45: 1490–1498. [doi:10.1002/2017GL076647](https://doi.org/10.1002/2017GL076647)
 23. Cao, F., M. Tzortziou, C. Hu, A. Mannino, **C.G. Fichot**, R. Del Vecchio, R. Najjar, M. Novak (2018). Remote sensing retrievals of colored dissolved organic matter and dissolved organic carbon dynamics in North American estuaries and their margins. *Remote Sensing of the Environment*, 205: 151-165. [doi:10.1016/j.rse.2017.11.014](https://doi.org/10.1016/j.rse.2017.11.014)
 22. Trinh, R. C., **C.G. Fichot**, M.M. Gierach, B. Holt, N.K. Malakar, G. Hulley, & J. Smith (2017). Application of Landsat 8 for Monitoring Impacts of Wastewater Discharge on Coastal Water Quality. *Frontiers in Marine Science*, 4. [doi:10.3389/fmars.2017.00329](https://doi.org/10.3389/fmars.2017.00329)
 21. Lu, C-J., R. Benner, **C.G. Fichot**, H. Fukuda, Y. Yamashita and H. Ogawa (2016). Sources and Transformations of Dissolved Lignin Phenols and Chromophoric Dissolved Organic

- Matter in Otsuchi Bay, Japan. *Frontiers in Marine Science*, 3:85. [doi:10.3389/fmars.2016.00085](https://doi.org/10.3389/fmars.2016.00085)
20. Shen, Y., **C.G. Fichot**, S. Liang, and R. Benner (2016). Biological hot spots and the accumulation of marine dissolved organic matter in a highly productive ocean margin. *Limnol. Oceanogr.*, [doi:10.1002/lno.10290](https://doi.org/10.1002/lno.10290)
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 18. **Fichot, C.G.**, R. Benner, K. Kaiser, Y. Shen, R.M.W. Amon, H. Ogawa, and C-J. Lu (2016). Predicting dissolved lignin phenol concentrations in the coastal oceans from chromophoric dissolved organic matter (CDOM) absorption coefficients. *Frontiers in Marine Science*, 3:7. [doi:10.3389/fmars.2016.00007](https://doi.org/10.3389/fmars.2016.00007)
 17. **Fichot, C.G.**, B. Downing, B. Bergamaschi, L. Windham-Myers, M. Marvin-DiPasquale, D. Thompson, and M. Gierach (2016). High-resolution remote sensing of water quality in the San Francisco Bay-Delta Estuary. *Environmental Science and Technology*, 50, 573–583. [doi:10.1021/acs.est.5b03518](https://doi.org/10.1021/acs.est.5b03518)
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 4. **Fichot, C.G.**, and R. Benner (2011). A novel method to estimate DOC concentrations from CDOM absorption coefficients in coastal waters. *Geophysical Research Letters*, 38(3).
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 3. **Fichot, C.G.**, and W.L. Miller (2010). An approach to quantify depth-resolved marine photochemical fluxes using remote sensing: Application to carbon monoxide (CO) photoproduction. *Remote Sensing of Environment*, 114: 1363-1377. [doi:10.1016/j.rse.2010.01.019](https://doi.org/10.1016/j.rse.2010.01.019)
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 1. **Fichot, C.G.**, S. Sathyendranath, and W.L. Miller (2008). SeaUV and SeaUVc: Algorithms for the retrieval of diffuse attenuation coefficients (UV/Visible domain) from ocean color. *Remote Sensing of Environment*, 112(4): 1584-1602. [doi:10.1016/j.rse.2007.08.009](https://doi.org/10.1016/j.rse.2007.08.009)

Datasets

(*graduate student, †technician)

ORNL DAAC = Oak Ridge National Laboratory Distributed Active Archive Center for Biochemical Dynamics, a NASA Earth Observing System Data and Information System (EOSDIS)

6. **Fichot, C.G.**, †N. Ghosh, *J. Harringmeyer, and *M. Weiser. 2022. *Delta-X: Particulate Organic Carbon Concentration from Water Samples, MRD, LA, 2021*. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/2073>
5. **Fichot, C.G.** and *J. Harringmeyer. (2022) *Delta-X: AVIRIS-NG L3-derived Water Quality, TSS, and Turbidity, MRD, LA 2021, V3*. ORNL DAAC, Oak Ridge, TN, USA.
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4. **Fichot, C.G.** and *J. Harringmeyer (2023). *Delta-X: In Situ Water Surface Reflectance across MRD, LA, USA, 2021, V3*. ORNL DAAC, Oak Ridge, TN, USA.
<https://doi.org/10.3334/ORNLDAAC/2076>.
3. **Fichot, C.G.** and *J. Harringmeyer. (2022) *Delta-X: In situ Beam Attenuation and Particle Size from LISST-200X, 2021*. ORNL DAAC, Oak Ridge, TN, USA.
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2. **Fichot, C.G.**, *J. Harringmeyer, and *M. Weiser. (2022) *Delta-X: In Situ Water Quality Indicators across MRD, LA, USA, 2021, V2. 2022. ORNL DAAC, Oak Ridge, TN, USA.* <https://doi.org/10.3334/ORNLDAAAC/2080>.
1. **Fichot, C.G.**, †N. Ghosh, *J. Harringmeyer, and *M. Weiser. (2022) *Delta-X: Total Suspended Solids Concentration across MRD, LA, USA, 2021, V2. ORNL DAAC, Oak Ridge, TN, USA.* <https://doi.org/10.3334/ORNLDAAAC/2075>.

PRESENTATIONS

Invited Presentations

- 2022 *Recent Progress in the Quantification of CDOM Photobleaching to Improve the Remote Sensing of DOC in the Global Surface Ocean.* (ORAL). European Space Agency (ESA)/PML/NASA Ocean Carbon from Space Workshop: Remote.
- 2021 *Modeling benthic solar irradiance to inform seagrass habitat suitability in a mesotidal estuary.* (Virtual Seminar). Québec Ocean and Universities of Quebec: Remote
- 2020 *Understanding change at the land-water interface: Insights from aquatic optics, remote sensing and models* (Seminar). Department of Marine Sciences, University of Georgia, Athens, Georgia, USA
- 2020 *Drivers of Optical Variability in the Plum Island Estuary* (Workshop). PIE-LTER annual Meeting: Woods Hole, Massachusetts, USA
- 2020 *Remote Sensing of Water Quality in Inland Waters: Opportunities and Challenges* (Workshop). PLACES Workshop: Remote
- 2017 *Future ocean-color missions for lakes* (Workshop). Lakes and Climate: The Role of Remote Sensing, Laboratoire d'Etudes en Géophysique et Océanographie Spatiales (LEGOS), Toulouse, France.
- 2016 *Exploiting the optical and chemical signatures of organic matter in coastal systems* (Seminar). Observatoire Midi-Pyrénées: Toulouse, France
- 2014 *Assessing the Fate of Terrigenous Dissolved Organic Carbon in River-influenced Ocean Margins* (Conference). AGU Fall Meeting: San Francisco, California, USA
- 2013 *Linking Optical and Chemical Properties of Dissolved Organic Matter in Natural Water.* (Workshop). ASLO Emerging Issue Workshop: New Orleans, Louisiana, USA
- 2012 *Fate and transformations of terrigenous dissolved organic matter in the ocean* (Seminar). Dissertations Symposium in Chemical Oceanography (DISCO): Kauai, Hawaii, USA

Conference Presentations

(*graduate student, §undergraduate student, †technician, ‡visiting scholar, ^graduate student committee)

- 2023 ^Li Z., **C. G. Fichot**, R. Saint-Louis, Z. Lu, H. Xie. (2023) *Production of light hydrocarbon gases and dissolved organic matter from long-term photodegradation of polyethylene microplastics in aqueous solutions* (POSTER). Québec Ocean Conference
- 2023 *Weiser M., §J. Swanson, †N. Ghosh, *J. Hong, K. Kaiser, **C. G. Fichot**. (2023) *Relating Dissolved Organic Matter (DOM) reactivity to composition in a marsh-influenced mesotidal estuary* (ORAL). Aquatic Sciences Meeting 2023: Palma De Mallorca, Spain
- 2023 *Zhu, X. and **C. Fichot**. (2023) *Quantifying the global sink of CDOM by photobleaching in the surface ocean using remote sensing* (ORAL). NASA Ocean Biology and Biogeochemistry Workshop: College Park, MD.
- 2023 *Harringmeyer, J., †N. Ghosh, *M. Weiser, **C. G. Fichot**. (2023) *Mapping Concentration and Carbon Content of Total Suspended Solids in the Coastal Marshes and Estuaries of*

- Louisiana Using Imaging Spectroscopy (ORAL). NASA Ocean Biology and Biogeochemistry Workshop: College Park, MD.
- 2023 * **Fichot, C.G.**, K. Kaiser, J. Hong, S. Zuidema, A. Shiklomanov, **C. G Fichot**. (2023) *Assessing the lateral transfer of dissolved organic carbon (DOC) from boreal-arctic landscapes to the Arctic Ocean using observations and models*. (ORAL). NASA Ocean Biology and Biogeochemistry Workshop: College Park, MD.
- 2023 *Weiser M., [§]J. Swanson, *J. Hong, [†]N. Ghosh, **C. G. Fichot**. (2023) *High-Frequency Measurements of DOC Concentrations From Water Quality Sonde in the Plum Island Estuary*. (ORAL). PIE-LTER annual meeting: Woods Hole, MA
- 2022 *Harringmeyer, J., [†]N. Ghosh, *M. Weiser, D. Thompson, *X. Zhu, **C. G. Fichot**. (2022) *Characterizing the physical properties and carbon content of suspended particles along a vulnerable coastline using IOPS retrieved from imaging spectroscopy* (POSTER). Ocean Optics XXV: Vietnam.
- 2022 Mukherjee, S., J. Hedley, **C. Fichot**, J. Laliberté, S. Bélanger. (2022) *Significance of inelastic scattering in optical closure of CDOM-rich coastal waters* (ORAL). Ocean Optics XXV: Vietnam.
- 2022 *Weiser, M.W., *J. Hong, [†]N. Ghosh, *J.P. Harringmeyer, [§]J. Swanson, L. Florsheim, and **C.G. Fichot**. (POSTER) *Dissolved Organic Matter Dynamics Across the Coastal Plum Island Estuary*. NSF LTER All Scientists Meeting 2022.
- 2022 *Zhu, X. and **C. Fichot**. (2022) *Quantifying CDOM photobleaching and its effects on apparent optical properties in the global surface ocean* (ORAL). Ocean Optics XXV: Vietnam.
- 2022 *Hong, J. and **C. Fichot** (2022). *A comparison of terrigenous dissolved organic carbon fluxes in the different tributaries of Great Slave Lake (Mackenzie River watershed)* (ORAL). ABoVE 8th Science Team Meeting; Fairbanks, Alaska, USA.
- 2022 **Fichot, C.G.**, K. Kaiser, *J. Hong, A. Shiklomanov, M. Friedl (2022). *NEW PROJECT: The export of terrigenous dissolved organic carbon from boreal terrestrial ecosystems to the Arctic Ocean and its vulnerability to environmental change* (ORAL). ABoVE 8th Science Team Meeting; Fairbanks, Alaska, USA.
- 2022 Thompson, D., **C. Fichot**, M. Gierach, E. Greenberg, *Harringmeyer, J., D. Jensen, M. Simard. (2022) *Remote Spectral Atmosphere and Surface Estimation Across the Land/Ocean Interface* (ORAL). Ocean Sciences Meeting (Remote)
- 2022 **Fichot, C.G.**, [‡]S. Jin, S. Fagherazzi, S. Lohrenz. (2022) *Recent decline in wind-driven nearshore sediment availability to Louisiana salt marshes revealed by ocean-color time series* (ORAL). Ocean Sciences Meeting (Remote)
- 2022 ^Conroy, T., K. Bryan, **C. Fichot**. (2022) *The variability of small mountainous river plumes revealed from 20-years of quasi-daily ocean color data* (POSTER). Ocean Sciences Meeting (Remote)
- 2022 *Zhu, X. and **C. Fichot**. (2022) *Constraining the variability of the apparent quantum yield matrix of CDOM photobleaching in natural waters* (POSTER). Ocean Sciences Meeting (Remote)
- 2022 *Harringmeyer, J., [†]N. Ghosh, *M. Weiser, D. Thompson, *X. Zhu, **C. Fichot**. (2022) *Beyond TSS concentration: using hyperspectral imagery to retrieve suspended sediment properties in nearshore coastal systems* (ORAL). Ocean Sciences Meeting (Remote)
- 2022 *Harringmeyer, J., K. Kaiser, D. Thompson, M. Gierach, C. Cash, **C. Fichot**. (2022) *Detection and sourcing of chromophoric dissolved organic matter (CDOM) in urban*

- coastal waters with UV-visible imaging spectroscopy (POSTER). Ocean Sciences Meeting (Remote)
- 2022 [§]Cronin-Golomb, O., **C. Fichot**, *J. Harringmeyer, *M. Weiser, [†]N. Ghosh, *X. Zhu, A. Novak, and I. Forbrich. (2022) *Modeling benthic solar exposure (UV-visible) in dynamic coastal systems to better inform seagrass habitat suitability (ORAL)*. Ocean Sciences Meeting (Remote)
- 2022 Verma, N., S. Chakraborty, and **C. Fichot**. (2022) *Bio-Optical Characterization of Phytoplankton Community Composition Using Underway Hyperspectral Data in the River-Influenced Northern Gulf of Mexico (ORAL)*. Ocean Sciences Meeting (Remote)
- 2021 **Fichot, C.G.**, [‡]S. Jin, S. Fagherazzi, S. E. Lohrenz, Y. Liu. (2021) *Recent decline in wind-driven wave energy decreases nearshore sediment availability to Louisiana salt marshes (ORAL)*. AGU Fall Meeting: New Orleans, Louisiana, USA, EP34C-07
- 2021 Simard, M. C. Jones, M.W. Denbina, D. Jensen, T. Oliver-Cabrera, A. Christensen, E. Castaneda, A. Rovai, R. Twilley, P. Passalacqua, K.A. Wright, M.P. Lamb, T. Pavelsky, S. Fagherazzi, **C.G. Fichot**, E. Rodriguez, L. Giosan, D.R. Thompson, and Delta-X. (2021) *Delta-X: Resolving Hydrological and Ecological Processes in the Mississippi River Delta (ORAL)*. AGU Fall Meeting: New Orleans, Louisiana, USA, H13G-04
- 2021 *Harringmeyer, J.P., K. Kaiser, D.R. Thompson, M.M. Gierach, C.L. Cash and **C.G. Fichot**. (2021) *Detection and Sourcing of Chromophoric Dissolved Organic Matter (CDOM) in Urban Coastal Waters with UV-Visible Imaging Spectroscopy. (ORAL)* AGU Fall Meeting: New Orleans, Louisiana, USA, GC11A-07
- 2021 *Harringmeyer, J.P., [†]N. Ghosh, *M.W. Weiser, D.R Thompson, *X. Zhu and **C.G. Fichot**. (2021) *Mapping Suspended Sediment Properties in the Louisiana Delta Using Airborne Imaging Spectroscopy for Modeling of Sediment Dynamics. (ORAL)* AGU Fall Meeting: New Orleans, Louisiana, USA, EP34C-06
- 2021 Greenberg, E., D.R. Thompson, D. Jensen, P.A. Townsend, N. Queally, A. Chlus, **C.G. Fichot**, and *J.P. Harringmeyer. (2021) *Combined Sun Glint and Vegetation BRDF Correction over Heterogeneous Wetland Land Cover. (POSTER)* AGU Fall Meeting: New Orleans, Louisiana, USA, GC15B-0692
- 2020 **Fichot, C.G.** and K Kaiser. (2020) *Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Biogeochemistry of Urban Systems II Posters (POSTER)*. Ocean Sciences Meeting: San Diego, CA
- 2020 **Fichot, C.G.**, [‡]K. Sun, K. Kaiser, C.L. Cash. (2020) *An improved fluorescence-based tracer of wastewater effluent for use in urban coastal waters. (POSTER)* Ocean Sciences Meeting: San Diego, CA
- 2020 *Harrington, J., K. Kaiser, D. Thompson, M. Gierach, C. Cash, **C.G. Fichot**. (2020) *Can imaging spectroscopy facilitate the detection of wastewater effluent in coastal waters(POSTER)* Ocean Sciences Meeting: San Diego, CA. ME24C-0111
- 2020 [§]Cronin-Golomb, O. and **C. Fichot**. (2020) *Towards understanding how UV exposure influences "Zostera marina" seagrass habitat suitability in coastal New England. (POSTER)* Ocean Sciences Meeting: San Diego, CA
- 2020 *Weiser, M., K. Kaiser, and **C.G. Fichot**. (2020) *Concentrations and Reactivities of Refractory Carboxyl-rich Alicyclic Molecules (CRAM) in Contrasting Natural Waters. (POSTER)* Ocean Sciences Meeting: San Diego, CA

- 2020 *Zhu, X., W.L Miller, and **C.G. Fichot** (2020) *Photobleaching of CDOM: A new approach to quantify apparent quantum yield matrices applicable to spectral photochemical models*. (POSTER) AGU/ASLO Ocean Sciences Meeting: San Diego, CA
- 2020 Bélanger, S., Araujo, C., Cusson, M., Blot, C., Danhiez, F. P., Desrochers, **C. Fichot**, Y. Gendreau, *J.P. Harringmeyer, G. Ifimov, J. Laliberté, B. Légaré, R. Leger-Daigle, J. Lemarchand, R. Mabit, J. Mayrand, S. Mukherjee, C. Nozais, R. Soffer, S. Velasquez, and *M.W. Weiser. (2020) *WaterSat Imaging Spectrometer Experiment (WISE) for optically shallow and coastal waters assessment* (POSTER). Ocean Sciences Meeting, AGU, San Diego, CA
- 2019 **Fichot, C.G.** (2019) *Assessing Change in the Overturning Behavior of the Laurentian Great Lakes Using Remotely Sensed Lake Surface Water Temperatures* (ORAL). North American Lake Management: Burlington, VT
- 2018 **Fichot, C.**, D. Thompson, K. Kaiser, M. Gierach, C. Cash, J. Smith. (2018) *Remote sensing of UV reflectance to facilitate the assessment of water quality in an urban coastal ocean* (POSTER). Ocean Optics Conference: Dubrovnik, Croatia
- 2018 Holt, B., R.C. Trinh, **C.G. Fichot**, M.M. Gierach. (2018) *Overview of Satellite Observations of Surfacing Wastewater Plumes on Coastal Water Quality in Southern California* (POSTER). Ocean Sciences Meeting: Portland, OR
- 2017 **Fichot, C.G.**, K. Matsumoto, B. Holt, M.M. Gierach and K. Tokos. (2017) *Assessing change in the overturning behaviors of the Laurentian Great Lakes using remote sensing* (ORAL). AGU Fall Meeting: New Orleans, Louisiana, USA. H42G-03
- 2017 **Fichot, C.G.**, K. Kaiser, R. Trinh, J.M. Duran, M.M. Gierach, B. Holt, and C. Cash. (2017) *Impacts of a wastewater diversion event on the water quality of Santa Monica Bay, California: Insights from remote sensing and the optical properties and compositional indicators of DOM* (POSTER). Third International International Ocean Colour Science Conference: Lisbon, Portugal
- 2016 **Fichot, C.**, C. Lee, M. Gierach, B. Bergamaschi, and B. Downing. (2016) *Facilitating Water Quality Monitoring in the San Francisco Bay-Delta Estuary with Remote Sensing: New Advances and Challenges* (ORAL). National Water Quality Monitoring Conference, 10th: Tampa, FL
- 2015 **Fichot, C.** (2015) *Monitoring Water Quality in the San Francisco Bay-Delta Using High-resolution* (POSTER). State of the Estuary Conference, 12th: Oakland, CA
- 2015 **Fichot, C.**, B. Downing, B. Bergamaschi, L. Windham-Myers, M. Marvin-DiPasquale, D.R. Thompson, and M. Gierach. (2015) *High-resolution remote sensing for water quality monitoring in the California Bay-Delta* (POSTER). International Ocean Color Science Conference: San Francisco, CA
- 2014 **Fichot, C.G.**, B.D. Downing, L Windham-Myers, M.C. Marvin-DiPasquale, B.A. Bergamaschi, D.R. Thompson, and M.M. Gierach. (2014). *Remote sensing of water quality and contaminants in the California Bay-Delta* (ORAL). AGU Fall Meeting: San Francisco, CA. H41E-0881
- 2014 **Fichot, C.**, B. Downing, M. Gierach, L. Windham-Myers, M. Marvin-DiPasquale, B. Bergamaschi, D. Thompson, and E. Boss. (2014) *Toward the remote sensing of water quality and contaminants in the California Delta* (ORAL). Ocean Optics Conference XXII: Portland, ME

- 2014 Gierach, M., **C. Fichot**, D. Thompson, and R. Green. (2014) *Application of hyperspectral airborne prism imagery to evaluate coastal and inland environments in California*. (POSTER) Ocean Optics Conference XXII: Portland, ME
- 2014 Leeuw, T., E. Boss, P. Hill, B. Downing, **C. Fichot**. (2014) *Remote sensing of TSM from the ground up: A synthesis of ground, aircraft, and satellite reflectance data*. (POSTER) Ocean Optics Conference XXII: Portland, ME
- 2013 Shen, Y., **C.G. Fichot**, R. Benner. *Net dissolved organic carbon accumulation in a river-influenced ocean margin* (ORAL). Aquatic Sciences Meeting: New Orleans, Louisiana, USA
- 2013 Schalles, J.F., J.J. Alberts, **C.G. Fichot**, L.W. Urban. (2013) *Sources and dynamics of dissolved organic carbon outwelling on the Georgia Coast into the South Atlantic Bight: research and student training* (ORAL). Aquatic Sciences Meeting: New Orleans, Louisiana, USA
- 2013 **Fichot, C.G.**, Benner, R. (2013) *Transformations and fates of terrigenous DOM in a river-influenced ocean margin* (ORAL). Aquatic Sciences Meeting: New Orleans, Louisiana, USA
- 2012 Shen, Y., **C.G. Fichot**, R. Benner. (2012) *Floodplain influences on dissolved organic matter composition and export from the lower Mississippi-Atchafalaya river system* (POSTER). Ocean Sciences Meeting: Salt Lake City, Utah, USA
- 2012 **Fichot, C.G.**, and R. Benner. (2012) *The spectral slope coefficient of CDOM ($S_{275-295}$) as a tracer of terrigenous DOC in river-influenced ocean margins* (ORAL). Ocean Sciences Meeting: Salt Lake City, Utah, USA
- 2010 **Fichot, C.G.**, S. Lohrenz, W.L. Miller, and R. Benner (2010) *Dynamics of DOM optical properties and chemical composition in a river-dominated ocean margin (northern Gulf of Mexico)*. (ORAL) Ocean Optics Conference XX: Anchorage, Alaska, USA
- 2010 **Fichot, C.G.**, W.L. Miller, S. Lohrenz, L.C. Powers, and R. Benner (2010) *Photodegradation of dissolved organic carbon in a river-dominated ocean margin* (POSTER). AGU Ocean Sciences Meeting: Portland, Oregon. CO45A-19.
- 2009 Reader, H.E., W.L. Miller, and **C.G. Fichot** (2009) *Modeling photochemical production of carbon dioxide and biologically labile carbon using remotely sensed ocean colour*. (POSTER) ASLO Aquatic Sciences Meeting: Nice, France.
- 2009 Miller, W.L., and **C.G. Fichot** (2009) *Training the SeaUV/SeaUVc algorithms for improved inshore estimates of UV optics and photochemical and photobiological rate calculations*. (POSTER) ASLO Aquatic Sciences Meeting: Nice, France.
- 2009 Miller, W.L., H. Reader, and **C.G. Fichot** (2009) *Estimating Photochemical Contributions to Coastal Carbon Cycles from Remote Sensing*. 2nd NACP All-Investigators Meeting: San Diego, CA.
- 2008 Miller, W.L., M.A. Moran, **C.G. Fichot**, and E.A. Johnson. (2008) *Photobiogeochemistry of carbon monoxide (CO) in the coastal ocean: from genes to space*. (ORAL) Ocean Sciences Meeting: Orlando, Florida, USA.
- 2008 **Fichot, C.G.**, and W.L. Miller, (2008) *CDOM dynamics in the global ocean: What we learn from decadal time-series of satellite-derived CDOM absorption coefficients* (ORAL). Ocean Sciences Meeting: Orlando, Florida, USA.
- 2007 Miller, W.L., and **C.G. Fichot** (2007) *Using ocean color to quantify the significance of marine photochemistry to CO and carbon cycling in the South Atlantic Bight*. US North American Carbon Program/Joint NACP Meetings: Colorado Springs, CO.

- 2007 Miller, W.L. and **C.G. Fichot** (2007) *Examining the 10-year variability in DOM photochemistry from SeaWiFS data*. European Geophysical Union General Assembly: Vienna, Austria
- 2006 **Fichot, C.G.** and W.L. Miller (2006) *Classification of the world's ocean based on its surface CDOM dynamics and their regulating processes* (POSTER). Ocean Optics XVIII Conference: Montreal, Quebec
- 2006 Miller, W.L. and **C.G. Fichot** (2006) *Variability and depth resolved photochemistry from nine years of SeaWiFS data*. AGU Fall Meeting: San Francisco, CA.
- 2006 Miller, W.L. and **C.G. Fichot** (2006) *Using Remote Sensing to Calculate Photochemical Carbon Oxidation in the Coastal Ocean*. AGU/ASLO Ocean Sciences Meeting: Honolulu, HI.
- 2006 **Fichot, C.G.** and W.L. Miller (2006) *Remote sensing of UV diffuse attenuation coefficients and CDOM absorption coefficients: Algorithms and applications in marine photochemistry* (ORAL). AGU/ASLO Ocean Sciences Meeting: Honolulu, Hawaii.
- 2005 Miller, W.L., **C.G. Fichot**, L.A. Ziolkowski, and S.C. Johannessen. (2005) *Calculating the total impact of photochemistry on dissolved organic carbon cycling in the Georgia Bight using ocean color*. ASLO Aquatic Sciences Meeting: Salt Lake City, Utah, USA.
- 2004 **Fichot, C.G.** and W.L. Miller (2004) *CDOM on the global scale: Implementation of an improved algorithm (SEAUV) to 7 years of SeaWiFS data* (POSTER). Ocean Optics XVII: Fremantle, Western Australia
- 2004 Miller, W.L. and **C.G. Fichot** (2004) *Estimation of depth-resolved photoproduction rates for carbon monoxide (CO) using SeaWiFS imagery: Spatial and seasonal variability at global scales*. (POSTER) Ocean Optics XVII: Fremantle, Western Australia.
- 2004 **Fichot, C.G.**, and W.L. Miller (2004) *Remote sensing of UV diffuse attenuation and gelbstoff (CDOM) absorption for use in photochemistry* (POSTER). ASLO/TOS Ocean Research Conference: Honolulu, Hawaii

HONORS, AWARDS, AND FELLOWSHIPS

- 2015 Outstanding Postdoctoral Research Award: Jet Propulsion Laboratory, California Institute of Technology
- 2014 Delta Science Fellow: California Sea Grant, 2014-2016
- 2013 Chief Scientist Training Course: NSF-UNOLS
- 2012 Selected Participant: Dissertations Symposium in Chemical Oceanography XVIII (DISCO): NSF and NOAA
- 2012 Dean's Dissertation Fellowship: University of South Carolina, Graduate School
- 2013 USC Outstanding Dissertation Award: The Graduate School, University of South Carolina
- 2012 NASA Group Achievement Award: NASA ICESCAPE Project
- 2012 First-prize, oral presentation: Graduate Student Day, University of South Carolina
- 2009 Outstanding Teaching Award: Marine Science Program, University of South Carolina
- 2004 Best Student Paper Award: Ocean Optics XVII: Fremantle, Western Australia

TEACHING & MENTORING

TEACHING (Developed Courses in **BOLD**)

2016-present ***Aquatic Optics and Remote Sensing***, EE 422/622, Instructor
Boston University, Spring Semesters

2017-present ***Bio-Optical Oceanography***, BI/EE 591, Instructor
Boston University, Alternating Fall Semesters

2018-present ***Remote Sensing of Environment***, EE 302, Instructor
Boston University, Alternating Fall Semesters

2008 ***The Ocean Environments***, Teaching Assistant
University of South Carolina

2008 ***Coastal Environments***, Teaching Assistant
University of South Carolina

MENTORING

***Graduate Students: Fichot Lab**

(Contributed to 6 publications in print and 17 conference presentations)

(§confirmed upcoming graduate student in Fall 2023)

2023-present §**Abigail Whittington** (Ph.D.), Earth and Environment, Boston University
expected start date: Fall 2023 expected graduation: 2028-2029

2023-present §**Hangjie Lin** (Ph.D.), Earth and Environment, Boston University
expected start date: Fall 2023 expected graduation: 2028-2029

2023-present **Sachini Ranasinghe** (Ph.D.), Earth and Environment, Boston University
expected graduation: 2028

2021-present **Jiyeong Hong** (Ph.D.), Earth and Environment, Boston University
expected graduation: 2026

2018-present **Matthew Weiser** (Ph.D.), Earth and Environment, Boston University
expected graduation: 2024

2018-present **Joshua Harringmeyer** (Ph.D.), Earth and Environment, Boston University
expected graduation: 2024

2017-2023 **Xiaohui Zhu** (Ph.D.), Earth and Environment, Boston University
Dissertation title: Quantifying chromophoric dissolved organic matter
(CDOM) photobleaching in the global surface ocean. Defense June 2023.

^Graduate Students: Committees

(Contributed to 2 conference presentations)

Boston University, Department of Earth & Environment, Boston, USA

2021-present **Sarah Black** (Ph.D., Committee Member)

2021-present **Luca Cortese** (Ph.D., Committee Member)

2021-present **Yiyang Xu** (Ph.D., Committee Member)

2020-present **Taylor Adams** (Ph.D., Committee Member)

2019-2022 **Claudia Mazur** (Ph.D., Committee Member)

2018-2020 **Xiaohe Zhang** (Ph.D., Committee Member)

2016-2022 **Emily Chua** (Ph.D., Committee Member)

2016-2017 **Irene Palazzoli** (M.S., Committee Member)

Other Institutions

2022-present **Zhaozhao Li** (Ph.D., Committee Member)

Université du Québec à Rimouski (UQAR), Rimouski, QC, Canada

- 2020-present Ted Conroy (Ph.D., Committee Member)
University of Waikato, Hamilton, New Zealand
- 2020-present Soham Muskerjee (Ph.D., Committee Member)
Université du Québec à Rimouski (UQAR), Rimouski, QC, Canada
- 2019-2021 Kelly Luis (Ph.D., Committee Member)
University of Massachusetts, School for the Environment, Boston, USA
- 2017 Ludivine Conte (Ph.D., Committee Member)
Laboratoire Sciences du Climat et Environnement, Gif-sur-Yvette, France

‡*Visiting Scholars Hosted*

(Contributed to 3 publications in print and 3 conference presentations)

- 2023-present Aylin Tuzcu Kokal (Ph.D.): Istanbul Technical University, Turkey
- 2018-present Kunpeng Sun (Ph.D.): Qingdao University, China
- 2018-present Song Jin (Ph.D.): Nanjing University, China
- 2017-present Huan Mi (Ph.D.): Tongji University, China

§*Undergraduate Student Research (at BU)*

(Contributed to 2 publications in print and 3 conference presentations)

- 2023-present Sophia Riaz-Sekowski
- 2022-present Jeanna Cooper
- 2022 Jaydi Swanson
- 2022 Lucas Flosheim
- 2022 Dain Kim (Honors Thesis, BA/MA)
- 2021-present Halle Cooper
- 2019-2021 Olivia Cronin-Golomb (Honors Thesis, BA/MA)
- 2018 Tian Li
- 2018 Yuhua Situ
- 2018 Carly Baracco
- 2017-2018 Ruizhe Guo

High School Student Research

- 2021-2022 Venkat Ranjan (RISE program)
- 2020-2021 Anika Nath

Informal Advising

- 2016-2017 Rebecca Trinh (Ph.D.): Columbia University
- 2016 Christine Elowitz: NASA DEVELOP intern, Jet Propulsion Laboratory
- 2015-2016 Rebecca Trinh: NASA DEVELOP intern, Jet Propulsion Laboratory
- 2013 Chia-Jung Lu (Ph.D.): Visiting from Japan, University of South Carolina
- 2009-2013 Yuan Shen (M.S.), University of South Carolina
- 2012 Dandan Duan (Ph.D.): Visiting from China, University of South Carolina
- 2011 Yulong Zhang (Ph.D.): Visiting from China, University of South Carolina
- 2010-2012 Elise Kennedy (undergraduate), University of South Carolina
- 2009 Chris Parusa (undergraduate), University of South Carolina

Student Awards & Fellowships Earned Under CGF Mentorship

- BU College of Arts and Sciences Dean's Fellowship:
Joshua Harringmeyer (2018), Abigail Whittington (2023)
- BU Marine Science Program Warren-McLeod Summer Research Fellowship:
Matthew Weiser (2021), Xiaohui Zhu (2022), Joshua Harringmeyer (2023)

ASLO Registration Grant:

Olivia Cronin-Golomb (2019)

BU College of Arts and Sciences Student Academic Enhancement Fund:

Olivia Cronin-Golomb (2019)

NASA FINESST Grant:

Joshua Harringmeyer (2019)

BU Earth & Environment Outstanding Teaching Fellow Award:

Joshua Harringmeyer (2019)

BU Marine Science Program Lara D. Vincent Research Assist. Fund for Original Research:

Olivia Cronin-Golomb (2019)

BU Undergraduate Research Opportunities Program (UROP):

Olivia Cronin-Golomb (2019-2022), Dain Kim (2021), Jaydi Swanson (2022),
Halle Cooper (2021)

SERVICE

OUTREACH

2018-2021 Research presentations to BU Academy High School
2018 Research presentation to BU Upward Bound Math Science Program (UBMS)

DEPARTMENT LEVEL

2021-2022 Marine Science Position Search Committee
2020 Earth and Environment Chair Ad-hoc committee
2020 Judge at BU Biogeoscience Student Symposium
2019-2021 Department of Earth and Environment Graduate Admission Committee
2019-2020 BU Biogeoscience Student Award Selection Committee
2017-2019 BU's Earth and Environment Warren McLeod Fellowship Committee

COLLEGE LEVEL

2021-present BU's College of Arts and Sciences Natural Sciences Curriculum Committee

NATIONAL AND INTERNATIONAL SCIENCE COMMUNITY

Lead Science Advisor

2016-present NASA Digital Earth Virtual Environment and Learning Outreach Project (DEVELOP) Program, Massachusetts Node at Boston University **initiated program at Boston University

Reviewer

Journals: Biogeochemistry, Biogeosciences, Deep-Sea Research II, Earth System Science Data, Estuarine Coastal and Continental Shelf Research, Frontiers, Geochimica et Cosmochimica Acta, Geophysical Research Letters, Global Biogeochemical Cycles, Journal of Geophysical Research-Oceans, Limnology and Oceanography, Marine Chemistry, Nature Communications, Optics Express, Remote Sensing of Environment, Science Advances, Science of the Total Environment

Proposal Review

Ad hoc: National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), New York/Connecticut SeaGrant, Belgian Earth Observation Programme (STEREO III), American Chemical Society

Panels: NSF (Chemical Oceanography), NASA (Remote Sensing of Water Quality, New Investigator Program, Earth and Space Science Fellowship (NESSF))

Workshop/Conference Session Chair

2022 Session Co-Chair: *DOC from space*. European Space Agency (ESA)/ PML/NASA's Ocean Carbon from Space Workshop: Remote. Co-Chair with Dennis Hansel.

2020 Session Co-Chair: *Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Biogeochemistry of Urban Systems*. Ocean Sciences Meeting: San Diego, California, USA. Co-Chair with Karl Kaiser

2012 Session Chair: *The Nitrogen Cycle*. DISCO Symposium: Kauai, Hawaii, USA

2006 Session Chair: *Recent advances in the study of chromophoric dissolved organic matter*. Ocean Optics XVII: Montreal, Quebec, Canada

FIELD WORK AND CAMPAIGNS

Research cruises (~300 days at sea, *supported by funds awarded to C.G. Fichot)

2022-2023 *Bermuda Atlantic Time Series Station (BATS): NSF Carboxyl-Rich Alicyclic Molecules (CRAM) project
R/V Atlantic Explorer: December 2022 (10 days)

2016 Oregon Coast: Coastal Carbon in Winter (CCAW) project
US R/V *Oceanus*: January-February 2016 (10 days)

2013 *Middle Atlantic Bight: **UNOLS Chief Scientist Training Cruise**
US R/V *Endeavor*: October 2013 (7 days)

2010 Chukchi Sea: NASA Impacts of Climate change on the Eco-Systems and Chemistry of the Arctic Pacific Environment (ICESCAPE) Project
US R/V *Healy*: June-July 2010 (6 weeks)

2009-2010 Northern Gulf of Mexico: NSF GulfCarbon Project
US R/V *Cape Hatteras*: March 2010 (2 weeks); US R/V *Hugh Sharp*: November 2009 (2 weeks); US R/V *Cape Hatteras*: July 2009 (2 weeks); US R/V *Cape Hatteras*: April 2009 (2 weeks); US R/V *Cape Hatteras*: January 2009 (2 weeks)

2008 Beaufort Sea: Canadian Circumpolar Flaw Lead (CFL) project
CCGS *Amundsen*: June-July 2008 (4 weeks)

2005-2006 South Atlantic Bight: NASA Impacts of Climate change on the Eco-Systems and Chemistry of the Arctic Pacific Environment (ICESCAPE) Project
US R/V *Cape Hatteras*: May 2006 (2 weeks); US R/V *Walton Smith*: November 2005 (2 weeks); US R/V *Cape Hatteras*: July 2005 (2 weeks)

2003 North Atlantic Ocean: Canadian Surface-Ocean Lower-Atmosphere Study
CCGS *Martha Black*: October-November 2003 (6 weeks)

2002 Gulf of Maine: NSF project.
US R/V *Endeavor*: June-July 2002 (4 weeks)

2001 Gulf of Mexico: NSF Surface Water Iron Speciation Study (SWISS) Project
US R/V *Pelican*: August 2001 (2 weeks)

1999 Florida Atlantic Coast: B.S. Honors Project
US R/V *Delphinus*: May 1999 (4 days)

Field work (*supported by funds awarded to C.G. Fichot)

- 2022-present *Northwest Territories, Canada: NASA Carbon Cycle Science project
Small boats (35 days)
- 2021 *Louisiana Coast, USA: NASA Delta-X project
Small boats (30 days)
- 2019 Nam Theun-2 Reservoir, Laos
Small boats (10 days)
- 2018-present *Plum Island Estuary, Massachusetts, USA: PIE-LTER projects
LTER boat Growler: 5-10 days yearly
- 2015 Santa Monica Bay, California, USA: Hyperion Sewage Treatment Plant
Diversion Monitoring
R/V *La Mer*: August-November 2015
- 2007 Sapelo Island, Georgia, USA: GA Sea Grant project
Small boat UGA Marine Institute: May-June 2007
- 2004 Nova Scotia Estuaries, Canada: NSERC Project.
Small fishing boat: April 2004