

CLAUDIA R. BENITEZ-NELSON

University of South Carolina
Dept. of Earth & Ocean Sciences/Marine Science Program
701 Sumter Street, EWS 408
Columbia, SC 29208

FAX: (803) 777-6610
Phone: (803) 777-0018
email: cbnelson@geol.sc.edu
<http://www.seoe.sc.edu/cbnelson>

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EDUCATION:

Ph.D. Marine Chemistry and Geochemistry, Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program, February 1999
Thesis Title: *Phosphorus cycling in the Gulf of Maine: A Multi-tracer Approach*
Advisor: Dr. Ken Buesseler
B.S. Physical Chemistry, University of Washington, 1987 - 1992
B.S. Chemical Oceanography, University of Washington, 1987 - 1992

PROFESSIONAL EXPERIENCE:

2019 – present *Endowed Chair in Marine Studies, USC*
2019 – present *Carolina Distinguished Professor, USC*
2017 – present *Associate Dean for Instruction, Community Engagement, & Research, USC*
2012 – 2018 *College of Arts & Sciences Distinguished Professor in Marine Science, USC*
2010 – present *Professor, School of the Earth, Ocean & Environment, USC*
2010 – 2013 *Director, Marine Science Program, USC*
2005 – 2008 *Undergraduate Director, Marine Science Program, USC*
2006 – 2010 *Associate Professor with tenure, Department of Geology, USC*
2002 – 2006 *Assistant Professor, Department of Geology, University of South Carolina*
2002 – 2005 *Affiliate Graduate Faculty, Department of Oceanography, University of Hawaii*
1999 – 2001 *Full Graduate Faculty, Department of Oceanography, University of Hawaii*
1998 – 2001 *SOEST Young Investigator, University of Hawaii*
1998 – 2000 *NOAA/UCAR Postdoctoral Fellow in Climate and Global Change, University of Hawaii*
1993 - 1998 *Graduate Research Assistant, Woods Hole Oceanographic Institution*
1996 *Teaching Assistant, Woods Hole Oceanographic Institution*
1991 *Summer Student Fellow, Woods Hole Oceanographic Institution*

HONORS AND AWARDS:

2019 Marine Chemistry & Geochemistry H. Burr Steinbach Scholar, MIT/WHOI Joint Program
2017 - 2018 SEC Academic Leadership Development Program Fellow
2017 Sustaining Fellow, Association for the Sciences of Limnology & Oceanography
2016 SEC Faculty Achievement Award (1 each year from USC)
2016 Ada B. Thomas Outstanding Faculty Advisor of the Year Award
2015 American Association for the Advancement of Science (AAAS) Fellow
2015 Dennis and Jean Wiesenburg Distinguished Lecturer in Ocean Science, University of Southern Mississippi
2014 Sulzman Award for Excellence in Education and Mentoring, Biogeosciences Section. American Geophysical Union
2013 USC Distinguished Professor of the Year (USC's highest undergraduate teaching honor). Only 1 awarded each year,
2012 College of Arts & Sciences Distinguished Professor
2012, 2015 Mortar Board Excellence in Teaching Award, USC
2012 National Academies of Science/Humboldt Foundation Kavli Fellow
2011 MEL Distinguished Visiting Fellow, Xiamen, China.

2010	Selected as one of USC's Rising Stars (14 selected each year)
2008 – 2009	Marie Curie International Incoming Fellow (Spain)
2008	U.S. Fulbright Scholar (Spain)
2007	Freshman Advocate Award Finalist Honoree, USC
2006	Ocean Sciences Early Career Award, American Geophysical Union
2006	Doctoral Hooding and Commencement Ceremony Speaker, USC
2005	Faculty of the Year, National Award from the National Society of Collegiate Scholars (for outstanding undergraduate mentoring and leadership)
2005	USC Mungo Undergraduate Teaching Award (5 awarded each year)
2004	Finalist USC Mungo Undergraduate Teaching Award
2004	Nominee USC Mungo Graduate Teaching Award
2002	S. Carolina Alliance for Minority Participation (SCAMP) Outstanding Mentor
1998 – 2001	SOEST Young Investigator, University of Hawaii
1998 – 2000	NOAA/UCAR Postdoctoral Fellow in Climate and Global Change
1996 – 1998	Environmental Protection Agency STAR Graduate Fellowship
1993 – 1996	Office of Naval Research Graduate Fellowship.
1991	Woods Hole Oceanographic Institution Summer Student Fellow

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

American Geophysical Union	Oceanography Society
Geological Society of America	AAAS
American Chemical Society	American Society of Limnology and Oceanography

RESEARCH INTERESTS:

My research largely focuses on understanding the mechanisms that influence particle formation, composition, and the flux of particles from the surface ocean to the seafloor. Related to this broad theme is an emphasis on understanding carbon and phosphorus biogeochemistry under changing ocean conditions. My research is mainly field based and includes both open ocean and coastal regimes.

SELECTED GRANTS RECEIVED:

- LSAMP BD: University of South Carolina-Columbia LS SCAMP, NSF. Co-PIs: Matthews and Benitez-Nelson, \$1,075,000. FUNDED.
- Collaborative Research: Assessing the relative importance of small vs large particles as sources of nutrition to abyssal communities, NSF, PI: Drazen, Co-PIs: Benitez-Nelson, Popp, and Smith, 1/1/2018 – 12/31/2020 \$264,691 (CBN Portion).
- Elucidating Spatial and Temporal Variability in the Export and Attenuation of Ocean Primary Production using Thorium-234, NASA, PI: Buesseler, Co-PIs: Benitez-Nelson and Resplandy, 9/1/2018 – 8/31/2021 \$172,654 (CBN Portion).
- Determining sediment rates in storm water ponds to improve life cycle cost assessments associated with maintenance dredging. SC Sea Grant, PI: Smith, Co-PI: Benitez-Nelson, 3/1/2016 – 2/28/2018. \$123,799
- GEO-Scholar: Broadening undergraduate participation in the geosciences. NSF, PI: Benitez-Nelson, 7/01/2015-6/30/2020, \$599,383.
- Collaborative Research: Isotopic insights to mercury in marine food webs and how it varies with ocean biogeochemistry, NSF PI: Popp, Co-PIs: Benitez-Nelson and others, 8/1/2014-7/31/2017, \$362,164 (CBN portion).
- Collaborative Research: The Cariaco Basin Oceanographic Time Series Program. NSF, PI: R. Thunell, co-PI: C.R. Benitez-Nelson, 3/1/2014 – 2/28/2017, \$800,000.
- ICESCAPES 2011-2014. NASA, 2/23/2011-2/22/2014, PI: Benitez-Nelson, \$224,598.
- Collaborative Research: Chemical and Biological Characterizations of Phosphonate and Polyphosphate Dynamics in Marine Phytoplankton. NSF, PI: Benitez-Nelson, Co-PIs: Dyhrman and Ingall, 5/1/11-4/31/2014, \$811,997.

- Persistence and fate of domoic acid in the Santa Barbara Basin. NSF, PI: Benitez-Nelson, 1/01/2009-12/31/2011, \$499,383.
- Spatial and temporal variability in chlorophyll, primary production and export production in the Southern Ocean. NASA ROSES, PI: Mitchell, co-PI: Benitez-Nelson, 1/01/09 - 12/31/11, \$170,000 (CBN Portion)
- Collaborative Research: Nitrogen Fixation and its Coupling with Denitrification in the Eastern Tropical North Pacific. NSF, PI: Prahl, Co-PIs: Popp and Benitez-Nelson 10/1/07–9/30/10, \$257,612 (CBN Portion).
- ScienceQuest: A South Carolina Geoscience Initiative. NSF, PI: Benitez-Nelson, Co-PI: Owens, 3/1/06–2/28/10, \$153,641.
- Collaborative Research: Examining redox-sensitive phosphorus speciation and remineralization using X-ray and NMR spectroscopic methods. NSF. PI: Brandes, Co-PI: Ingall and Benitez-Nelson, 9/1/05 – 8/31/08, \$241,661. (CBN Portion)
- Influences of Cyclonic Eddy Activity on Planktonic Food Web Dynamics and Carbon Export in the Lee of Hawaii. NSF. PI: Benitez-Nelson, Co-PIs: Bidigare, Dickey, Leonard, Landry, 9/1/04 – 6/30/07, \$1,425,000.
- Future applications of ²³⁴Th in aquatic ecosystems. NSF. PI: Benitez-Nelson, 4/1/04-12/31/06, \$78,520.
- Phosphorus speciation in Cariaco Basin using chemical separation and ³¹P NMR, USC. PI: Benitez-Nelson 4/1/03-6/30/04, \$13,000.
- Radioisotopic Measurements to Determine Plankton Nutrient Sources and Carbon Export at Station ALOHA. NSF. PI: Benitez-Nelson 9/1/99 – 8/30/03, \$219,999.
- Elucidation of Atmospheric Nitrogen and Phosphorus Deposition Rates and Pathways to the Hawaiian Islands. Andrew W. Mellon Foundation, PI: Huebert, Co-PIs Blomquist and Benitez-Nelson. 1/1/00 – 12/31/02, \$600,000.

PUBLICATIONS (* Denotes graduate student or postdoc as author, **Denotes my undergraduate student as author) *H-Index Web of Science: 37, Google Scholar: 44, <https://orcid.org/0000-0002-1004-5048>*

127. Romero, S, Ka'apu-Lyons, C, Umhau, Blaire; **Benitez-Nelson, CR**, Close, H, Hannides, C, Drazen, J, Popp, B (2020) Deep zooplankton rely on small particles in response to low particle fluxes, *Limnology and Oceanography Letters*, submitted.
126. *Sarno, CT, **Benitez-Nelson, CR**, Ziolkowski, LA, Hendy, IL, *Davis, CV, Tappa, EJ, Thunell, RC (2020) The Impacts of Flood, Drought, and Turbidites on Organic Carbon Burial over the Past 2,000 years in the Santa Barbara Basin, California, *Paleoceanography*, submitted.
- 125.*Davis, CV, Benitez-Nelson CR (2020) Evidence for rapid trace element alteration in planktic foraminiferal shells from the Panama Basin: Manganese adsorption during vertical transport. *Marine Micropaleontology*, in revision.
124. *Bell, DW, Pellechia, P, Ingall, E.D., **Benitez-Nelson, CR** (2020) Resolving marine dissolved organic phosphorus (DOP) composition in a coastal estuary, North Inlet, South Carolina. *Limnology and Oceanography*, in revision.
- 123.*Davis, C.V., Fehrenbacher, J., **Benitez-Nelson, C.R.**, Thunell, R.C. (2020) Trace Element Heterogeneity across Individual Planktic Foraminifera from the Modern Cariaco Basin. *Journal of Foraminiferal Research*, accepted.
122. Hannides, C.C., Popp, B.N., Close, H.G., **Benitez-Nelson, C.R.**, Ka'apu-Lyons, C.A., Gloecker, K., Wallsgrove, N., Umahu, B., Drazen, J. (2020) Seasonal dynamics of midwater zooplankton and relation to particle cycling in the North Pacific Subtropical Gyre. *Progress in Oceanography*, accepted.
121. Humphries, MS, **Benitez-Nelson, CR**, Bizimis, M, Ralph, TJ, Larkin, ZT, McCarthy, TS (2020) Dust provenance and its role as a potential fertilising agent for the Okavango Delta, Botswana. *Earth Surface Processes and Landforms*, accepted.

120. Arias-Ortiz, A, Masque, P, Glass, Benson, L, Kennedy, H, Duarte, CM, Garcia-Orellana, J, **Benitez-Nelson, CR**, Humphries, MS, Ratefinjanahary, I, Ravelonjatovo, J Lovelock, CE (2020) Losses of soil organic carbon with deforestation in mangroves of Madagascar. *Ecosystems*, accepted.
119. **Davis, AN, *Davis, CV, Thunell, RC, Osborne, EB, Black, DE, **Benitez-Nelson, CR** (2019) Reconstructing 800 years of Carbonate Ion Concentration in the Cariaco Basin Using the Area-Density of Planktonic Foraminifera Shells, *Paleoceanography*, doi:10.1029/2019PA003698.
118. Osborne, EO, Thunell, RC, Gruber, N, Feely, RF, **Benitez-Nelson, CR** (2019) Climatic Modulation of Anthropogenic Ocean Acidification in the California Current, *Nature Geoscience*, 13, 43–49 (2020) doi:10.1038/s41561-019-0499-z.
117. *Umhau, B, Motta, LC, Benitez-Nelson, CR, Close, HG, Hannides, CC, Popp, BN, Blum, JD, Drazen, J, Grabb, KC (2019) Seasonal and spatial changes in carbon and nitrogen fluxes estimated using ^{234}Th : ^{238}U disequilibria in the North Pacific Subtropical Gyre, *Marine Chemistry*, 217, 103705.
116. *Davis, C.V., Ontiveros-Cuadras, J. F., **Benitez-Nelson, C.R.**, Schmittner, A., Tappa, E.J., Osborne, E.O, Thunell, R.C. (2019) Ongoing increase in Eastern Tropical North Pacific denitrification as interpreted through the Santa Barbara Basin sedimentary $\delta^{15}\text{N}$ record. *Paleoceanography*, 34: 1554-1567. doi:10.1029/2019PA003578
115. Lorenzoni, L, Thunell, RC, **Benitez-Nelson, CR**, Montes, E, Varela, R, Astor, Y, and Muller-Karger, F. (2019) From land to the ocean: the interplay between allochthonous and autochthonous contribution to particles in nepheloid layers of the Cariaco Basin, Venezuela, *Journal of Geophysical Research – Biogeoscience*, 124. <https://doi.org/10.1029/2019JG005288>
114. Motta, L.C., Blum, J.D., Johnson, M.W., Umhau, B., Popp, P, Washburn, S.J., Drazen, J., **Benitez-Nelson, C.R.**, Hannides, C.C., Close, H.G., Lamborg, C.H. (2019) Mercury cycling in the North Pacific Subtropical Gyre as revealed by mercury stable isotope ratios. *Global Biogeochemical Cycles*, 33, 777– 794. <https://doi.org/10.1029/2018GB006057>
113. Ontiveros-Cuadras, J.F., Thunell, R., Ruiz-Fernández, A.C., **Benitez-Nelson, C.R.**, Machain-Castillo, M.A., Tappa, E., Sanchez-Cabeza, J.A. (2019) Geochemical cycling of trace metals on the NW Mexican Margin: Variations in the OMZ during the last century, *Continental Shelf Research*, 176 (2019) 64–75.
112. Moore, W.S., Humphries, M.S., **Benitez-Nelson, C.R.**, Pillay, L. Higgs, C. (2019) Transport of solutes through beaches: Insights and limitations from radium isotope studies *Journal of Geophysical Research – Oceans*, <https://doi.org/10.1029/2018JC014772>
111. *Shi, X., **Benitez-Nelson, CR**, Cai, P., He, L., Moore, WS (2019) Development of a two-layer transport model in layered muddy - permeable marsh sediments using $^{224}\text{Ra}/^{228}\text{Th}$ disequilibrium, *Limnology and Oceanography*, <https://doi.org/10.1002/lno.11143>.
110. Muller-Karger, F., Astor, Y., **Benitez-Nelson, C.R.**, Buck, K., Fanning, K., Lorenzoni, L, Montes, E., Scranton, M., Rueda-Roa, D., Taylor, G., Thunell, R., Tappa, E., Vaerla, R. (2019) Scientific Legacy of the CARIACO Oceanographic Time-Series Program. *Annual Reviews in Marine Science*, 11, <https://doi.org/10.1146/annurev-marine-010318-095150>.
109. *Umhau, B, **Benitez-Nelson, C.R.**, Anderson, C, McCabe, K, Burrell, C. (2018) A time series of water column distributions and sinking particle flux of *Pseudo-nitzschia* and domoic acid in the Santa Barbara Basin, California. *Toxins*, Nov 17;10(11). pii: E480. doi: 10.3390/toxins10110480.
108. *Bell, DW, Denham, S., Smith, EM, **Benitez-Nelson, CR** (2018) Temporal variability in ecological stoichiometry and material exchange in a tidally-dominated estuary (North Inlet, South Carolina) and the impact on community nutrient status. *Estuaries and Coasts* <https://doi.org/10.1007/s12237-018-0430-7>.
107. *Schroer, WF, **Benitez-Nelson, CR**, Smith, EM, Ziolkowski, LA (2018) Drivers of sediment accumulation and nutrient burial in coastal stormwater detention ponds, South Carolina, USA, *Ecosystems*, <https://doi.org/10.1007/s10021-017-0207-z>.

106. **Benitez-Nelson CR** et al. (2018) Radioactivity in the Marine Environment Radioecology, *Limnology and Oceanography e- Lectures.*, 2018;8:170–228. doi: 10.1002/loe2.10007.
105. **Benitez-Nelson, CR** et al. (2018) Radioactivity in the Marine Environment Cosmogenic and Anthropogenic Radionuclides, *Limnology and Oceanography e- Lectures.* 2018;8:114–169. doi: 10.1002/loe2.10008.
104. **Benitez- Nelson, CR** et al. (2018) Radioactivity in the Marine Environment: Uranium- Thorium Decay Series. *Limnology and Oceanography e- Lectures.* 2018;8:59–113. doi: 10.1002/loe2.10009.
103. **Benitez-Nelson, CR** et al. (2018) Understanding the Basics of Marine Radioactivity, *Limnology and Oceanography e- Lectures.* 2018;8:1–58. doi: 10.1002/loe2.10010.
102. Humphries, M., **Benitez-Nelson, CR**, Bizimis, M., Finch, JM (2017) An aeolian sediment reconstruction of regional wind intensity and links to larger scale climate variability since the last deglaciation from the east coast of southern Africa, *Global and Planetary Change*, 156, 59-67. <https://doi.org/10.1016/j.gloplacha.2017.08.002>
101. *Bell, DW, Pellechia, P, Chambers, LR , Longo, AF, McCabe, KM, Ingall, ED, **Benitez-Nelson, CR** (2017) Isolation and molecular characterization of dissolved organic 1 phosphorus using electro dialysis-reverse osmosis and solution 31P-NMR. *Limnology & Oceanography Methods*, doi:10.1002/lom3.10171.
100. *Puigcorbé, V, Roca-Martí, M, Masqué, P, **Benitez-Nelson, CR**, Rutgers van der Loeff, Bracher, Moreau, S. (2017) Latitudinal distributions of particulate carbon export across the North Western Atlantic Ocean. *Deep-Sea Research I*, 129, 116-130, <https://doi.org/10.1016/j.dsr.2017.08.016>.
99. Buesseler, KO, Dai, M, Aoyama, M, **Benitez-Nelson, CR**, Charmasson, S, Higley, K, Maderich, V, Masque, P, Morris, PJ, Oughton, D, Smith, J. (2017) Fukushima Daiichi-derived radionuclides in the Ocean: transport, fate, and impacts, *Annual Reviews of Marine Science*, 9, 10.1146/annurev-marine-010816-060733.
98. Schnetzer, A, Lampe, R, **Benitez-Nelson, CR**, Marchetti, A, Osburn, C, Tatters, A (2017) Marine snow formation by the toxin producing diatom, *Pseudo-nitzschia australis*, *Harmful Algae*, 61, 23–30, <https://doi.org/10.1016/j.hal.2016.11.008>
97. Chambers, LR, Ingall, ED, Saad, EM, Longo, AF, Takeuchi, M, Tang, T, **Benitez-Nelson, CR**, Haley, SH, Dyhrman, ST, Brandes, J, Stubbins, A (2016) Enhanced Dissolved Organic Matter Recovery from Saltwater Samples with Coupled Electro dialysis and Solid Phase Extraction, *Aquatic Geochemistry*, doi:10.1007/s10498-016-9306-2.
96. Osborne, E, Thunell, R, Marshall, BJ, Holm, JA, Tappa, EJ, **Benitez-Nelson, CR**, Cai, WJ, and Chen, B (2016) Calcification of the planktonic foraminifera *Globigerina bulloides* and carbonate ion concentration: Results from the Santa Barbara Basin. *Paleoceanography*, 31, doi:10.1002/2016PA002933.
95. *Piper, M, **Benitez-Nelson, CR**, Frey, K, Mills, MM, Pal, S (2016) Dissolved and Particulate Phosphorus Distributions and Elemental Stoichiometry throughout the Chukchi Sea, *Deep-Sea Research II*, 130, 76-87, dx.doi.org/10.1016/j.dsr2.2016.05.009.
94. Saad, E, Longo, AF, Chambers, LR, Huang, R, **Benitez-Nelson, CR**, Dyhrman, ST, Diaz, JM, Ingall, ED, Tang, Y. (2016) Understanding marine dissolved organic matter production: Compositional insights from axenic cultures of *Thalassiosira pseudonana*, *Limnology & Oceanography*, doi:10.1002/lno.10367 .
93. Siegel, D, Buesseler, K, Behrenfeld, M, **Benitez-Nelson, CR**, Boss, E, Brzezinski, M, Burd, A, Carlson, C, D'Asaro, E, Doney, S, Perry, MJ, Stanley, R, Steinberg, D (2016) Prediction of the Export and Fate of Global Ocean Net Primary Production: The EXPORTS Science Plan, *Frontiers in Marine Science*, doi: 10.3389/fmars.2016.00022.
92. *Puigcorbé, V, Roca-Martí, M, Masqué, P, **Benitez-Nelson, CR**, Rutgers van der Loeff, M, Laglera, LM, Bracher, A, Cheah, W, Strass, V, Hoppem, M, Santos-Echeandía, J, Klaas, C (2016) Particulate organic carbon export across the Antarctic Circumpolar Current at 10°E: Differences north and south of the Antarctic Polar Front. *Deep-Sea Research II*, doi: 10.1016/j.dsr2.2016.05.016.

91. Stukel, MR, Kahru, M, **Benitez-Nelson, CR**, Décima, M, Goericke, R, Landry, MLR, Ohman, M (2015) Using Lagrangian-based process studies to test satellite algorithms of vertical carbon flux in the eastern North Pacific Ocean. *Journal of Geophysical Research-Oceans*, 120, doi:10.1002/2015JC011264.
90. Stukel, MR, **Benitez-Nelson, CR**, Decima, M., Taylor, AG, Buchwald, C, Landry, MR (2015) The biological pump in the Costa Rica Dome: An open ocean upwelling system with high new production and low export. *Journal of Plankton Research*, first published online November 30, 2015 doi: 10.1093/plankt/fbv097.
89. Reidhaar, PE, Lane, CS, **Benitez-Nelson, CR**, Gamble, DW (2015) Spatial and Temporal Variations in Pyrodinium bahamense Cyst Concentrations in the Sediments of Bioluminescent Mangrove Lagoon, St. Croix, U.S.V.I. *Estuaries and Coasts*, DOI 10.1007/s12237-015-0032-6.
88. *Puigcorbé, V., **Benitez-Nelson, C.R.**, Masqué, P., Verdeny, E., White, A.E., Popp, B.N., Prahl, F.G., Lam, P.J. (2015) Small particles drive summertime carbon and nutrient export in the Gulf of California and Eastern Tropical North Pacific. *Global Biogeochemical Cycles*, 29, 1309–1332, doi:10.1002/2015GB005134.
87. **Benitez-Nelson, CR** (2015) Ocean chemistry. The missing link in oceanic phosphorus cycling? *Science*, 348, 759-760.
86. Mills, M.M., Brown, Z.W., Lowry, K.E., van Dijken, G.L., Becker, S., Pal, S., **Benitez-Nelson, C.R.**, Downer, M.M., Strong, A.L., Swift, J.H., Pickart, R.S. (2015) Impacts of low phytoplankton $\text{NO}_3^-:\text{PO}_4^{3-}$ utilization ratios over the Chukchi Shelf, Arctic Ocean, *Deep-Sea Research II*, 118, Part A, 105–121, doi:10.1016/j.dsr2.2015.02.007
85. **McParland, E., **Benitez-Nelson, C.R.**, Taylor, G.T., Rollings, A., and Lorenzoni, L (2015) Cycling of suspended particulate phosphorus in the redoxcline of the Cariaco Basin. *Marine Chemistry*, 176, 64–74, doi:10.1016/j.marchem.2015.07.008.
84. Pinckney, J.L., **Benitez-Nelson, C.R.**, Thunell, R.C., Muller-Karger, F. Troccoli, L., and Varela, R. (2015) Changes in phytoplankton community structure in the 1 Cariaco Basin from 1995 to 2011 in response to changes in physical forcing. *Deep-Sea Research*, 101, 27-37. DOI: 10.1016/j.dsr.2015.03.004
83. Arrigo, KR, and 22 authors (including **C.R.Benitez-Nelson**) (2014) Phytoplankton blooms beneath the sea ice in the Chukchi sea. *Deep-Sea research II*, 105, 1-16. DOI: 10.1016/j.dsr2.2014.03.018.
82. Bograd, S.J., Pozo Buil, M., Di Lorenzo, E, Castro, C.G., Schroeder, I.D., Goericke, R., Anderson, C.A., **Benitez-Nelson, C.R.** and Whitney, F.A. (2014) Changes in Source Waters to the Southern California Bight, *Deep-Sea Research II*, <http://dx.doi.org/10.1016/j.dsr2.2014.04.009>.
81. *Madden, L., Bedward, J.C., Wiebe, E.N., **Benitez-Nelson, C.R.** (2014) Lessons Learned in Summer Camp: A Case Study of the Learning Paths of Three Campers. *Electronic Journal of Science Education*, 16(3).
80. Bellingier, B., Van Mooy, B.A.S., Cotner, J.B., Fredricks, H.F., **Benitez-Nelson, C.R.**, Thompson, J., Cotter, A., Knuth, M., Godwin, C. (2014) Physiological modifications by seston in response to physicochemical gradients within Lake Superior, *Limnology and Oceanography*, 59(3), 1011-1026 | DOI: 10.4319/lo.2014.59.3.1011.
79. Longo, A.F., Ingall, E.D., Diaz, J.M., Oakes, M., King, L.E., Mihalopoulos, K., Violaki, K., Avila, A., Nenes, A., **Benitez-Nelson, C.R.**, Brandes, J., McNulty, I. and Vine, D.J. (2014) European Aerosols Deliver Substantial Phosphorus to the Mediterranean Sea, *Geophysical Research Letters*, 41(11), 4043–4049, DOI: 10.1002/2014GL060555.
78. Scranton, M.I., Taylor, G.T., **Benitez-Nelson, C.R.**, Muller-Karger, F.M., Fanning, K., Lorenzoni, L., Montes, E., Vaerla, R. and Y. Astor (2014) Interannual and subdecadal variability in the nutrient geochemistry of the Cariaco Basin, *Oceanography Magazine*, 27(1):148–159, <http://dx.doi.org/10.5670/oceanog.2014.18>.
77. Lorenzoni, L., Taylor, G.T., Thunell, R.C., **Benitez-Nelson, C.R.**, Hansell, D.A., Montes, E., Masserini, R., Fanning, K., Variela, R Astor, Y., Guzman, L., and Muller-Karger, F.M.

- (2013) Spatial and seasonal variability in dissolved organic matter in the Cariaco Basin, Venezuela. *Journal of Geophysical Research: Biogeosciences*, 118, 1–12, doi:10.1002/jgrg.20075.
76. Rigaud, S., Puigcorbé, V., Camara-Mor, P., Casacuberta, N., Roca-Martí, M., Garcia-Orellana, J., **Benitez-Nelson, C.R.**, Masque, P., Church, T. (2013) An assessment of the methods, calculation and uncertainties in the determination of ^{210}Po and ^{210}Pb activities in seawater, *Limnology and Oceanography Methods*, 11:561-571, DOI: 10.4319/lom.2013.11.561.
 75. Stukel, M., M. D. Ohman, **C.R. Benitez-Nelson**, M. Landry (2013) Contributions of mesozooplankton to vertical carbon export in a coastal upwelling system. *Marine Ecology Progress Series*, 491:47-65, doi:10.3354/meps10453.
 74. Humphries, M., A. and **C. R Benitez-Nelson** (2013). Recent trends in sediment and nutrient accumulation rates in coastal, freshwater Lake Sibaya, South Africa, *Marine and Freshwater Research*, <http://dx.doi.org/10.1071/MF12313>.
 73. Montes, E., Altabet, M., Muller-Karger, F., Scranton M.I., Thunell R., **Benitez-Nelson, C.R.**, Lorenzoni L., Astor, Y. (2013) Biogenic nitrogen gas production at the oxic-anoxic interface in the Cariaco Basin, Venezuela, *Biogeosciences*, 10, 267–279, 2013.
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- *Sekula, E.N., **Benitez-Nelson, C.R.**, Thunell, R., Tappa, E., Styles, R.M. (2007) Phosphorus cycling in a suboxic basin. (Abstract ID: 541) 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- *DuBois, S.L., **Benitez-Nelson, C.R.**, Paneva, R., Berelson, W., Hammond, D., Paukert, A. (2007) Organic and inorganic phosphorus composition within sediments of San Pedro sediment traps (Abstract ID: 650) 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.

- *Lyons, G.C., **Benitez-Nelson, C.R.**, Thunell, R. (2007) Phosphorus composition of sinking particulates from Guaymus Basin, California. (Abstract ID: 861) 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- Orchard, E.D., Ammerman, J.W., **Benitez-Nelson, C.R.**, Lomas, M.W., Dyrhman, S.T. (2007) Polyphosphate Metabolism in the Marine Cyanobacteria *Trichodemsium* and *Crocospaera*. (Abstract ID: 350) 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- *Phillips, K., **C. R. Benitez-Nelson**, M. Henry (2006) ScienceQuest: An After-School Science Experience, SMEA-GAME Joint Conference, 20-22 October, Seabrook Island, SC.
- Stukel, M., M. Landry, and **C.R. Benitez-Nelson** (2006) Carbon export in the California current ecosystem. 2006 LTER All Scientists Meeting, 20-23 September, Estes, Colorado.
- *Maiti, K., **C. R. Benitez-Nelson**, J.L. Carroll (2006). Particle dynamics at the Barents Sea ice-margin. 2006 GSA Annual Meeting 22–25 October, Philadelphia, PA Vol. 38.
- *Ranhofer, M.L., **C.R. Benitez-Nelson**, R. Thunell, R. Styles. Distribution, Fluxes, and Potential Sources of Sinking Particulate Phosphorus in the Cariaco Basin, Venezuela. 2006 ASLO Summer Meeting.
- Noble, A.E., K. Maiti, **C. R. Benitez-Nelson**, M. A. Saito. Cobalt, Manganese, Cadmium and Iron Among the Hawaiian Islands: The Influence of Cyclonic Eddies and Hydrothermal Signals. 2006 ASLO Summer Meeting.
- Blake, D., **C. R. Benitez-Nelson**, J. Waples and K. Buesseler. A 12 Minute History of Thorium-234, 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS13A-02
- Carroll, J, K. Maiti and **C. R. Benitez-Nelson**. Seafloor Sediment Dynamics within the Barents Sea Marginal ice Zone. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS44M-03
- Chen, F., W. Cai, **C.R. Benitez-Nelson** and Y. Wang. Surface Water CO₂ Parameters and Air-sea Exchange Influenced By A Cold Cyclonic Eddy In The Lee Of Hawaii. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS16D-03
- Albritton, D., **C. R. Benitez-Nelson** and J. R. Carpenter. ScienceQuest: Increasing Diversity in the Geosciences Through Hands on Learning. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS33E-04
- Verdeny, E., P. Masque, J. Garcia-Orellana, J. Bruach-Menchen, **C.R. Benitez-Nelson** and K. Maiti 210Pb-210Po Derived Organic Carbon Export within Cold-Core Cyclonic Eddies in the lee of Hawaii. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS16D-06
- *Maiti, K, Y. Rii, **C. R. Benitez-Nelson** and R. Bidigare. Eddy Induced Biological Export in the lee of Hawaii. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS12H-04
- *Lyons, G., R. M. Styles, **C.R. Benitez-Nelson**, R. C. Thunell and L. Lorenzoni. Composition of Riverine Derived Particulate Phosphorus in the Cariaco Basin, Venezuela. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS35C-01
- Mahaffey, C., **C. R. Benitez-Nelson**, Y. Rii, R. Bidigare and D. M. Karl. Nitrogen dynamics within Hawaiian Lee Eddies: insights using a stable nitrogen isotope approach. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS16D-05
- Thunell, R., **C.R. Benitez-Nelson**, F. Muller-Karger, L. Lorenzoni, R. Varela and Y. Astor. Particulate Organic Carbon Cycling in an Upwelling Dominated Continental Margin: Results from the Cariaco Basin Ocean Time Series. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS32D-05
- Benitez-Nelson, C. R.**, R. Bidigare, T. Dickey, M. Landry and C. Leonard. E-Flux: Influences of Cyclonic Eddy Activity on Planktonic Food Web Dynamics and Carbon Export in the lee of Hawaii. 2006 AGU Ocean Sciences Meeting. *Eos Trans. AGU*, 87(36) Ocean Sci. Meet. Suppl., Abstract OS11G-02

- *Truesdale, K., **C. R. Benitez-Nelson**, R. Styles and E. Tappa. The effect of sediment trap poisons on particulate phosphorus integrity. 2004 AGU Fall Meeting, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS51C-1325
- Benitez-Nelson, C. R.**, L. O. O'Neill, and R. Thunell. Seasonal to interannual depth-dependent changes in phosphorus flux in Cariaco Basin, Venezuela. 2004 AGU Fall Meeting, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS33A-0574
- *Ranhofer, M. R., **C. R. Benitez-Nelson**, and R. Thunell. Characterization of phosphorus in sinking particles in Cariaco Basin, Venezuela. 2004 AGU Fall Meeting, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS33A-0575
- Ingall, E., J. Brandes, D. Paterson, P. Northrup and **C. R. Benitez-Nelson**. Microscale Phosphorus Distribution and Chemistry in Marine Particles: New Insights From X-ray Absorption Near Edge Structure (XANES) Spectroscopy and X-ray Microscopy. 2004 AGU Fall Meeting, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS44B-08
- Springer, A., Williams, D. F., Karabanov, E., Mock, C. J. and **C. R. Benitez-Nelson**. Paleotempestology upon the South Carolina Coastline: A Calibration of the Sedimentary Historical Record. 2004 Annual Geological Society of America Conference. Nov. 7-14th, Denver, CO. 2004
- *O'Neill, L. P. and **C. R. Benitez-Nelson**. Sediment trap inorganic and organic phosphorus composition across an oxic-anoxic interface. 2004. ASLO Summer Research Conference, June 2004.
- Ingall, E., J. Brandes, D. Paterson, P. Northrup, **C. R. Benitez-Nelson**. Examination of marine organic matter using x-ray microscopy and phosphorus x-ray absorption near edge structure (P-XANES) spectroscopy. 2004. ASLO Summer Research Conference, June 2004.
- Pellechia, P., **C. R. Benitez-Nelson**, C. R., L. Kolowith, and R. C. Thunell. The use of solid state ³¹P NMR and bloch decays to examine phosphorus speciation in an anoxic marine basin. 2004 45th ENC Experimental Nuclear Magnetic Resonance Conference, Pacific Grove, CA, April 18-24.
- Benitez-Nelson, C. R.**, L.O. O'Neill, P. Pellechia, and R. C. Thunell. Phosphorus speciation under anoxic conditions: Insights from the Cariaco Basin. 2004 ASLO/TOS Ocean Research Conference, Honolulu, HI, Feb. 16-20, published program, p. 16.
- Sheridan, C. C., M. R. Landry, **C. R. Benitez-Nelson**, and J. P. Montoya. A synthesis of Hawaii Ocean Time-series (HOT) mesozooplankton data from 1994-2002: Temporal variability in biomass and contribution to elemental cycles. 2003 JGOFS Open Science Conference, May 5-9 Washington D.C. (Best Student Presentation Award)
- Benitez-Nelson, C. R.**, T. K. Gregory, D. M. Karl. Upper ocean and mesopelagic particle export at Station ALOHA in the NPSG derived from ²³⁴Th. 2002 AGU Fall Meeting, San Francisco, CA, Dec. 5-12, published program, p. F175.
- Bidigare, R. R., M. P. Seki, C. L. Leonard, **C. R. Benitez-Nelson**, R. D. Vaillancourt and J. J. Polovina. Influence of cyclonic eddies on new production rates in the vicinity of the Hawaiian Islands. North Pacific Marine Science Organization (PICES) 10th Annual Meeting, 7-17 October 2001 (Victoria, INVITED).
- Sansone, F. J., **C. R. Benitez-Nelson**, E. H. DeCarlo, Z. Liangzhong, J. A. Heath and B. J. Huebert. Chemical composition of the steam plume resulting from the ocean lava entry at Kilauea Volcano, Hawaii. 2000 AGU Fall Meeting, San Francisco, CA, Dec. 15-19, published program, p. F1275.
- Benitez-Nelson, C. R.**, A. J. Cundiff, J. A. Heath and B. J. Huebert. Atmospheric P deposition to the Hawaiian Island Chain. 2000 AGU Fall Meeting, San Francisco, CA, Dec. 15-19, published program, p. F175.
- Benitez-Nelson, C. R.**, and D. M. Karl. Phosphorus cycling in the North Pacific Gyre. 2000 AGU Fall Meeting, San Francisco, CA., Dec. 15-19, published program, p. F192 (INVITED).
- Benitez-Nelson, C. R.**, D. M. Karl and K. O. Buesseler. ²³⁴Th derived carbon export at Station ALOHA. 2000 AGU Ocean Sciences meeting, San Antonio, TX, Jan. 24-28, published program, p. OS103.

- Benitez-Nelson, C. R.** and K. O. Buesseler. Upper ocean phosphorus cycling in the Gulf of Maine: Utilization of cosmogenic ^{32}P and ^{33}P . 1998 AGU Ocean Sciences meeting, San Diego, CA, Feb. 9-13, published program, p. OS81.
- Benitez-Nelson, C. R.** and K. O. Buesseler (1997). Utilization of ^{32}P , ^{33}P , ^7Be , and ^{210}Pb as tracers of tropospheric aerosol residence times and stratospheric exchange. *EOS*, **78(46)**, 108.
- Buesseler, K. O., L. Ball, J. Andrews, **C. Benitez-Nelson** and R. Belostock (1996). Upper ocean particulate export in the Arabian Sea. *EOS*, **77(46)**, 396.
- Benitez-Nelson, C. R.** and K. O. Buesseler. Phosphorus cycling and export production in the Gulf of Maine: A multi-tracer approach. 1996 Gulf of Maine Ecosystem Dynamics Meeting, New Brunswick, Canada, Sept. 16-20, published program.
- Buesseler, K. O., J. E. Andrews, L. A. Ball, R. A. Belostock, and **C. R. Benitez-Nelson**. Particle export fields in the Arabian Sea derived from ^{234}Th : ^{238}U disequilibria. 1996 AGU Ocean Sciences meeting, San Diego, CA, Feb. 12-16, published program, p. OS23.
- Buesseler, K. O., S. B. Moran, R. L. Edwards, J. A. Hoff, M. C. Hartman, J. E. Andrews, R. A. Belostock, and **C. R. Benitez** (1994). Residence time of colloids and particles along the shelf and slope of the NE USA derived from thorium isotopes. *EOS*, **75(44)**, 311.
- Benitez, C.** and K. O. Buesseler (1991). Determination of the sedimentation rate in the Black Sea over the last century using radionuclides. *EOS*, **72(51)**, 27.

INVITED PAPERS, SEMINARS, SYMPOSIA and WORKSHOPS:

- Invited Plenary, The building blocks of life: From oceanic to molecular scales and back again, 2018 Ocean Sciences Meeting, February 12 – February 16, Portland, Oregon.
- Invited Seminar, Neurotoxins in the Environment Understanding the Production, Cycling and Fate of Domoic Acid Along the California Coast. University of North Carolina-Wilmington, March 2017
- Invited Seminar, Neurotoxins in the Environment Understanding the Production, Cycling and Fate of Domoic Acid Along the California Coast. University of North Carolina-Charlotte, March 2017
- Invited Seminar, Neurotoxins in the Environment Understanding the Production, Cycling and Fate of Domoic Acid Along the California Coast. Duke Marine Lab, March 2017
- Keynote Speaker Earth: Our radioactive home. Facts versus Misconceptions. Xiamen China, June 2016
- Keynote Speaker, Junior Science and Humanities Symposium. Great Failures in Science. January 2016
- Invited Speaker, “Insights into phosphorus cycling across oxic-anoxic boundaries in marine systems,” Geological Society of American Annual Meeting, Baltimore, MD, November 2015
- Invited Speaker, “Elemental stoichiometry and the composition and flux of suspended and sinking material in a coastal marine ecosystem,” LDEO Colloquium, Columbia University, April 24, 2015.
- Denis and Jean Wiesenburg Distinguished Lecturer in Ocean Science, “Neurotoxins in the Environment. Understanding the cycling and fate of domoic acid in marine systems,” University of Southern Mississippi, April 9, 2015
- Invited Seminar, “Elemental stoichiometry and the composition and flux of suspended and sinking material in a coastal marine ecosystem,” Stennis Space Center and Marine Science University of Southern Mississippi Lecture Series, April 8, 2015
- Invited Seminar, “Navigating your way through a broken pipeline,” ADVANCE Speaker Series, Texas A&M University, Dec. 9, 2014.
- Invited Seminar, “Phosphorus Biogeochemistry and Elemental Stoichiometry in Sinking and Suspended Particulate Matter in the Cariaco Basin, Venezuela,” Department Oceanography, Texas A&M University, Dec. 8, 2014.
- Invited Seminar, “Phosphorus Biogeochemistry and Elemental Stoichiometry in Sinking and Suspended Particulate Matter in the Cariaco Basin, Venezuela,” Department of Marine,

Earth, and Atmospheric Sciences, North Carolina State University, Sept .22, 2014.

2013 USC New Student Convocation, Invited speaker, August 18, 2013

Keynote Speaker, “Starting discussions on climate change” World Association of Zoos and Aquariums annual meeting. Orlando, FL, Oct. 14, 2013.

Invited Seminar, “The Toxin Express, Understanding What controls the magnitude and variability of the downward transport of domoic acid in coastal waters” Marine Science Program, UC Santa Barbara, April 2013.

Invited Seminar, “The Toxin Express, Understanding What controls the magnitude and variability of the downward transport of domoic acid in coastal waters” Department of Earth Science, University of Southern California, April 2013.

Keynote Speaker, “Starting discussions on climate change” Association of Zoos and Aquariums, mid-year annual meeting, Charleston SC, April 9, 2013.

Invited Speaker, “Communicating science to non-scientists,” TEDX Columbia, Columbia, SC January 21, 2013.

Invited Speaker, “Marine Radioactivity” The Accidents at Fukushima Dai-Ichi: Exploring the Impacts of Radiation on the Ocean Conference, Tokyo, Japan, November 2012.

Invited Seminar, “The Toxin Express, Understanding What controls the magnitude and variability of the downward transport of domoic acid in coastal waters” Marine Sciences Department, University of North Carolina-Chapel Hill, October 2012.

Invited Seminar, “Understanding the Toxin Express, Rapid Downward Transport of Domoic Acid in Coastal Waters” School of Chemistry, University of KwaZulu-Natal, Durban, South Africa, November 2011.

Invited Speaker, “Phosphorus biogeochemistry, what have we learned and where do we need to go in the future.” Gordon Conference, Chemical Oceanography, August 2011, Andover, NH

Invited Speaker, “I want to grow up to be a ...” USC TRIO McNair Scholars Program Luncheon, Columbia, SC 2011.

Invited Speaker, “ The Ocean Twilight Zone.” OCB Scoping Workshop on GBF-OOI, May 23, 2011, Woods Hole, MA.

MEL Distinguished Visiting Fellow, “Phosphorus Cycling in Marine Systems,” State Key Laboratory of Marine and Environmental Science, Xiamen University, December 2010.

MEL Distinguished Visiting Fellow, “Fate and Transport of the Neurotoxin Domoic Acid to Depth,” State Key Laboratory of Marine and Environmental Science, Xiamen University, December 2010.

MEL Distinguished Visiting Fellow, “Nitrogen Fixation and its Potential Role in Particle Export,” State Key Laboratory of Marine and Environmental Science, Xiamen University, December 2010.

Invited Speaker, “When I grow up I want to be a ...”, USC Last Lecture Series, November 2010, Columbia, SC.

Invited Speaker, “Life after Graduate School, ” Dissertations in Chemical Oceanography (DISCO XXII), sponsored by the National Science Foundation, October 2010, Honolulu, HI.

Invited Speaker, “Dangers of the deep: Possible long-term impacts of harmful algal blooms, “ National Geographic Explorer’s Club, September 2010, Columbia, SC.

Invited Speaker, “I want to grow up to be a Marine Scientist”, College of Arts & Sciences New Student Convocation, August 2010, Columbia, SC.

Invited Seminar, “Understanding the Toxin Express: A Historical Record of Rapid Downward Transport of Domoic Acid in Coastal Waters,” University of Texas, February 2010, Austin, Texas.

Invited Speaker, joint with Ken Buesseler, “What goes up must come down... but when or where?” 2009 AGU Chapman Conference on the Biological Pump in the Oceans. September 2009, Brockenhurst, Hampshire, England.

Invited Seminar, “The role of mesoscale eddies on particle export” Institut de Ciències del Mar, CSIC, July 2009 Barcelona, Spain.

Invited Seminar, “Recent advances in understanding the biogeochemical cycling of phosphorus in the oceans,” National Oceanography Centre, University of Southampton, March 2009 Southampton, England.

Invited Seminar, “The biogeochemical cycling of phosphorus in modern day marine systems”, Ocean and Climate Processes Research Group (GEPOC) Seminar, Universitat Autònoma de Barcelona, February 2009 Barcelona, Spain.

Invited Tutorial, “Short-lived radionuclides as tracers of particle flux in the oceans: A look towards the future.” ASLO Winter Meeting, January 2009, Nice, France.

Invited Speaker, “Climate Change and the Oceans,” USC’s Citizen’s School of the Environment, April 2008, USC, Columbia, SC.

Invited Speaker, “Transport and fate of the marine biotoxin, domoic acid, in the Santa Barbara Basin, California,” Regional Workshop for Harmful Algal Blooms in California Coastal Waters, April 2008, Costa Mesa, CA.

Invited Speaker, “Phosphorus Cycling in the Coastal Zone,” Distinguished Role Model Lecture, Bodega Marine Laboratory, August 2007, Bodega Bay, CA.

Invited Seminar, “Water Column Phosphorus Cycling in Continental Margins: Insights from sequential extraction and ³¹P NMR,” Duke University, February 2007, Durham, NC.

Invited Seminar, “Phosphorus Cycling in a Continental Margin Ecosystem,” University of Georgia, November 2006, Athens, GA.

Invited Speaker, “Particulate phosphorus dynamics in coastal environments,” Society for Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference, October 2006, Tampa, FL.

Invited Seminar, “Particulate Phosphorus Cycling in Continental Margins,” University of Vermont, September 2006, Burlington, VT.

Invited Speaker, Doctoral and Master’s Commencement Address, May 2006, USC.

Invited Seminar, “Open Ocean Eddies Bring Life to the Desert,” Eastern Carolina University, April 2006, Greenville, NC.

Invited Seminar, “Open Ocean Eddies Bring Life to the Desert,” Louisiana State University, March 2006, Baton Rouge, LA.

Invited Seminar, “Eddy Biogeochemistry in the lee of the Hawaiian Islands,” Skidaway Institute of Oceanography, March 2006, Savannah, GA.

Invited Lecture, “The Day After Tomorrow: Global Climate Change over the next century?” Last Lecture Series, Carolina Scholars Association, Oct. 2005, USC.

Invited Seminar, “Phosphorus biogeochemistry and export in marine systems,” Hall-Bonner Lecture Series (Joint between Hampton University, Virginia Institute of Marine Sciences, and Old Dominion University) April 2005, Hampton, VA.

Invited Speaker, “The ocean’s role in global climate change,” AGU Lecturer, National Science Teacher’s Association, April 2004, Atlanta GA.

Invited Speaker, “Nutrient Cycling in the Ocean: Why is it important?,” Celebrating women in science in SC, University of South Carolina, March 2004, Columbia, SC.

Invited Seminar, “Particulate Phosphorus cycling across and oxic/anoxic interface: Implications for past, present, and future changes in nutrient limitation,” Stanford University, March 2004, Stanford, CA.

Invited Seminar, “Particulate Phosphorus cycling across and oxic/anoxic interface: Implications for past, present, and future changes in nutrient limitation,” USGS Water Resources Division, March 2004, Menlo Park, CA.

Invited Seminar, “Phosphorus speciation in the Cariaco Basin,” Fort Johnson Seminar Series, January 2004, Charleston SC.

Invited Speaker, “Moving beyond phosphate: Are plankton consuming (and sinking) more than we think?” Gordon Conference, Chemical Oceanography, August 2003, Tilton NH

Invited Seminar, “A reinterpretation of Carbon and phosphorus cycling in the open ocean”, MIT May 2003, Boston MA.

Invited Seminar, "Are open oceans really biological deserts? A new perspective on phosphorus and carbon cycling in the North Pacific", University of Connecticut, March 2003, Groton, CT

Invited Seminar, "Atmospheric Deposition of Phosphorus and Trace Metals", Harvard University, November 2002, Boston, MA

Invited Participant, Coastal ocean processes and observatories: Advancing coastal research, May, 2002 Savannah, GA.

Invited Participant, NOAA National Exploration and Education Workshop, September, 2002 Charleston, SC.

Invited Profile, Minorities in Aquatic Sciences, 2002, <http://www.aslo.org/mas/profiles.html>

Invited Speaker, "'Export Production' at Station ALOHA," 2002 BATS/HOT Time-series Summit, April 2002, Vancouver BC.

Invited Speaker, "Phosphorus cycling in the North Pacific Gyre," 2000 AGU Fall Meeting, San Diego, CA

Invited Seminar, "Atmospheric cycling and atmospheric deposition of P," Princeton University, October 2000, Princeton, NJ

Invited Speaker, "Phosphorus cycling in a coastal ecosystem using short-lived radionuclides," Dissertations Symposium on Chemical Oceanography (DISCO XV), May 1999, Honolulu, Hawaii.

Invited Seminar, "Atmospheric mixing and upper-ocean phosphorus cycling using short-lived radioisotopes," University of Washington, April 1999, Seattle, Washington.

Invited poster, "Phosphorus cycling in the Gulf of Maine: A Multi-tracer Approach" EPA STAR Symposium, June 1998, Arlington, Virginia.

PROFESSIONAL ACTIVITIES:

- 2020 – present Editorial Committee, *Oceans*
- 2018 – present Editorial Committee, *Oceanography Magazine*
- 2017 – present Chair, International SCOR Committee on Capacity Building.
- 2017 – present AGU Ocean Sciences, Secretary Marine Geochemistry Elected
- 2016 – present Member, International SCOR Committee on Capacity Building.
- 2016 – present Member, U.S. National Committee for the Scientific Committee on Oceanic Research (SCOR)
- 2015 – present Senior Editor, *Limnology & Oceanography Letters*
- 2015 – present Board Member, Association of Public and Land-grant Universities' Board on Oceans, Atmosphere, and Climate
- 2015 – 2019 Editorial Committee, *Annual Review of Marine Science*
- 2015 – 2018 Member, SCOR Working Group 146 Radioactivity in the Ocean, 5 Decades Later (RiO5)
- 2014 Chair, Committee of Visitors review the Division of Ocean Sciences, Integrative Programs Section: Oceanographic Centers, Facilities, and Equipment programs
- 2013 and 2014 NSF GRF Review Panel
- 2013 – 2019 Board Member, Ocean Studies Board, National Academy of Sciences (<http://dels.nas.edu/global/osb/About-Us>)
- 2012 – 2015 At Large Board member (elected), Association for the Sciences of Limnology and Oceanography (ASLO)
- 2011 – 2013 U.S. Carbon Cycle Scientific Steering Group (<http://www.carboncyclescience.gov/ccssg.php>)
- 2009 – 2012 Science Advisory Board (SAB) Environmental Protection Agency
- 2008 – 2011 National Science Foundation, Advisory Committee to the Geosciences (AC-GEO)
- 2008 – 2015 Associate Editor, *Limnology and Oceanography Methods*
- 2008 – 2011 Co-Chair, 2011 ASLO Winter Meeting (1900 attendees) San Juan, Puerto Rico, Feb 13th-19th, 2011.
- 2007 – 2010 Council Member (elected), Chemical Oceanography Representative. *Oceanography Society*
- 2010 Session Chair, Nitrogen Cycling Near Oxygen Minima Zones: Linking Observations to Global Models of Nitrogen Fixation in the Anthropocene, 2010 Ocean Sciences Meeting, Portland Oregon
- 2007 Session Chair, Conundrums and Controversies: What contributes to the vertical flux of carbon in aquatic ecosystems? ASLO Winter Meeting Santa Fe, NM
- 2006 Session Chair, Eddies and Fronts: Mesoscale Physical-Biological-Biogeochemical Linkages in the Open Ocean, ASLO/AGU/TOS Ocean Sciences Meeting, Honolulu HI
- 2006 – 2017 Associate Editor, *Marine Chemistry*
- 2006 – 2007 ASLO 2007 Winter Meeting Organization Committee
- 2006 Committee of Visitors, NSF Geoscience Directorate Ocean Sciences Division.
- 2005 Guest Editor for Marine Chemistry. Includes papers from FATE workshop
- 2004 Chair and Organizer, Future Applications of ²³⁴Th in Aquatic Ecosystems (International Workshop with 45 participants), August 16-19th, Woods Hole, MA
- 2004 Session Chair, General Contributions in Oceanography, AGU Fall Meeting,
- 2002 Session Chair, Marine Biogeochemistry, AGU Fall Meeting

Panel Service and Reviewer of numerous proposals each year from the Australia Research Council, NSF (Ocean Division, Hydrology, CAREER, ADVANCE, International Programs), NASA, NOAA, NERC, Science Foundation of Ireland.

Reviewer of manuscripts for Biogeosciences, Continental Shelf Research, Deep-Sea Research I & II, Earth and Planetary Science Letters, Environmental Science & Technology, Journal of Geophysical Research –atmospheres & -oceans, Geochimica et. Cosmochimica Acta, Geophysical Research Letters, Global Biogeochemical Cycles, Journal of Marine Research, Limnology and Oceanography, Limnology and Oceanography-Methods, Marine Chemistry, Nature, Nature Geoscience, Science.

TEACHING, STUDENT ADVISING, and OUTREACH & SERVICE at USC:

Even Years: Chemical Oceanography MSCI/GEOL 782
Required Graduate Core Course
Introduction to Oceanography MSCI 101 Honors
Required Undergraduate Core Course

Odd Years: Environmental Radiochemistry MSCI/GEOL 524
Undergraduate Major Credit Course – developed by CBN
Introduction to Oceanography MSCI 101 Non-Honors
Required Undergraduate Core Course – developed by CBN

Undergraduate Advisor: I regularly advise 30-35 undergraduates in the SEOE including Honor's College and non Honor's College students.

Undergraduate Research Mentor: I have mentored over 40 undergraduates in my laboratory including more than 15 Magellan Scholars.

Thesis Advisor:

- Lauren O'Neill, M.S. USC Marine Science Program 2004
Now an Assistant Professor, College of New Jersey
- Melissa Ranhofer, M.S. USC Dept. of Geological Sciences 2005
Now an Adjunct Assistant Professor, Furman University
- Kanchan Maiti, Ph.D. USC Dept. of Geological Sciences 2007
Now an Assistant Professor, LSU
- Gabrielle Lyons, M.S. USC Dept. of Geological Sciences 2008
Ph.D., Florida A&M
- Suzanne Dubois, M.S. USC Dept. of Geological Sciences 2008
Now a Research Scientist, 3M Corporation
- Emily Sekula-Wood, Ph.D. USC Dept. of Earth & Ocean Sciences 2010
Now a Research Scientist, Exxon-Mobil, Houston TX
- Chris Burrell, M.S. USC Dept. of Earth & Ocean Sciences, 2011
Principal chemist for Ecolab in the energy service division at Nalco Champion, Houston TX
- Sharmila Pal, M.S. USC Marine Science Program, 2012. Now an Instructor at Seattle Community College.
- Annie Opseth, M.S. USC Marine Science Program, 2014. Now an Environmental Chemist at Badger Technical Services
- Meryssa Piper, M.S. USC Marine Science Program, 2015. Now a Lab Manager for the University of South Carolina
- Viena Puigcorbe, Ph.D. Universitat Autònoma Barcelona, Spain (Joint with Dr. Pere Masque). Now a Postdoctoral Fellow at Edith Cowan University
- William Schroer, M.S. USC Geological Sciences. Now a PhD student at UGA
- Doug Bell, Ph.D., USC Marine Science Program, Now a Sea Grant Knauss Fellow
- Blaire Umhau, Ph.D. USC Marine Science Program, Now an Assistant Scientist SEA

Caitlyn Sarno, M.S. USC Marines Sciences. Now a PhD student at
UMass Amherst
Kelly McCabe, MS in progress USC Marine Science

Postdoctoral Advisor: Elisabet Verdeny Jan 2009 to Nov. 2010
Now an Instructor at Universitat Autònoma de Barcelona
Clarissa Anderson Oct. 2009 to Dec. 2010
Now the Executive Director at Southern California Coastal
Ocean Observing System (SCCOOS)
Catherine Davis May 2018 to May 2020
Now a postdoctoral Fellow at Yale University

UNIVERSITY SERVICE:

2017 -2018 Chemical Oceanography Search, USC
2017 -2018 Presidential Excellence Initiative Committee, USC
2017 Chair, SEOE DBER Faculty Search
2016 – 2017 COVE, College of Arts & Sciences, USC
2016 – 2017 PFAC Advisory Committee, SEOE
2015 – 2016 College of Arts & Sciences Dean Search Committee, USC
2015 – 2016 Chair, Tenure and Promotion Committee, EOS, USC
2014 – 2017 Member, Undergraduate Committee Marine Science
2014 – 2016 SEOE Tenure and Promotion Development Committee, USC
2013 – 2015 Member, College of Arts & Sciences Academic Planning Committee, USC
2012 – 2015 Vice President for Research, Breakthrough Awards Committee, USC
2012 – present McNair Trio Program Mentor, USC
2012 – present Honors College Faculty Fellow/Advisor, USC
2012 Director School of the Earth, Ocean, and Environment, Search Committee, USC
2011 – 2013 Internal Research Advisory Board, Vice President for Research, USC
2011 Vice President for Research Search Committee, USC
2010 – 2013 *Director*, Marine Science Program, USC
2010 College of Arts and Sciences Associate Dean Search Committee, USC
2009 – 2010 Chair, Faculty Advisory Committee, School of Earth, Ocean, and Environment,
USC
2009 – present Hollings Scholarship Advisor, USC
2006 – 2014 UDALL Scholarship Committee, USC (Chair 2007-2008)
2005 – 2008 *Undergraduate Director*, Marine Science Program, USC
2004 – 2012 National Society of Collegiate Scholars, USC Faculty Advisor
2003 – 2010 S.C. Governor School Mentor (on sabbatical Fall 2008- Sp. 2009)
2002 – present Team Leader and Organizer, ScienceQuest
2004 – 2008 Academic Responsibilities Committee, USC
2003 – 2008 MSPHD's Mentor (National program to increase minority M.S. and Ph.D.
participation in Earth Science)
2002 – 2008 Women's Soccer Club, Faculty Advisor
2002 – 2007 Upward Bound Mentor (under-represented high schooler works in my lab for a
few weeks in the summer)
2002 – 2003 SCAMP undergraduate research advisor (South Carolina Alliance for Minority
Participation): Tiffany Hall (2002 Outstanding Researcher), Susan Morvey
(2003)
2000 & 2001 Head Judge, Pacific High School Science Symposium