

## CLAUDIA R. BENITEZ-NELSON

University of South Carolina  
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September 28, 2020

### 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

**CURRENT POSITION:** As an Associate Dean, I have direct oversight of five departments (Biological Sciences, Mathematics, School of the Earth, Ocean & Environment, Psychology and Statistics). This role includes day to day interactions with Chairs and Directors, recruitment and retention, and tenure and promotion as well as general oversight of budgets, graduate student support, etc. I also handle all Courses and Curriculum activities for the College, which includes creation of new academic degree programs, modification of existing programs, new course development, enrollment management, and serving as a liaison with the Honors College and Admissions.

**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 blue water and coastal regimes.

### 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

### MEMBERSHIP IN PROFESSIONAL SOCIETIES:

American Geophysical Union

Oceanography Society

Geological Society of America

AAAS

American Chemical Society

American Society of Limnology and Oceanography

## 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 UofSC)
2016	Ada B. Thomas Outstanding Faculty Advisor of the Year Award, UofSC
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	UofSC Distinguished Professor of the Year (UofSC's highest undergraduate teaching honor). Only 1 awarded each year,
2012	College of Arts & Sciences Distinguished Professor, UofSC
2012, 2015	Mortar Board Excellence in Teaching Award, UofSC
2012	National Academies of Science/Humboldt Foundation Kavli Fellow
2011	MEL Distinguished Visiting Fellow, Xiamen, China.
2010	Selected as one of UofSC'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, UofSC
2006	Ocean Sciences Early Career Award, American Geophysical Union
2006	Doctoral Hooding and Commencement Ceremony Speaker, UofSC
2005	Faculty of the Year, National Award from the National Society of Collegiate Scholars (for outstanding undergraduate mentoring and leadership)
2005	UofSC Mungo Undergraduate Teaching Award (5 awarded each year)
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

## SELECTED GRANTS RECEIVED:

- LSAMP BD: University of South Carolina-Columbia LS SCAMP, NSF. Co-PIs: Matthews and Benitez-Nelson, 8/15/2019 – 9/14/2022, \$1,075,000.
- 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 – 12/31/2021 \$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, 7/01/2015-6/30/2021, \$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 <sup>234</sup>Th in aquatic ecosystems. NSF. PI: Benitez-Nelson, 4/1/04-12/31/06, \$78,520.
- Phosphorus speciation in Cariaco Basin using chemical separation and <sup>31</sup>P 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: 38, Google Scholar: 46,*  
[https://orcid.org/0000-0002-1004-5048;](https://orcid.org/0000-0002-1004-5048)  
<https://scholar.google.com/citations?user=nEuGaD4AAAAJ&hl=en>

132. Estapa, M., Buesseler, K, Durkin, CA, Omand, M, **Benitez-Nelson, CR**, Roca-Martí, M, Breves, E, Kelly, RP, Pike, S (2020) Biogenic sinking particle fluxes at Ocean Station Papa. *Elementa*, submitted.
131. \*McCabe, K, Smith, E, Lang, S, Osburn, C, **Benitez-Nelson, C** (2020) Particulate and dissolved organic matter in storm water runoff influences oxygen demand in urbanized headwater catchments, *Environmental Science and Technology*, submitted.
130. Buesseler, KO, **Benitez-Nelson, CR**, Roca-Marti, M, Wyatt, AM, Laure Resplandy, L, Clevenger, SJ, Drysdale, JA., Estapa, ML, Pike, S, Umhau, BP (2020) High resolution spatial and temporal measurements of particulate organic carbon flux using thorium-234 in the NE Pacific Ocean during the EXPORTS Program, *Elementa*, accepted.
129. Zhou, K., Dai, M., Xiu, P., Wang, L., Hu, J., **Benitez-Nelson, CR** (2020) Transient enhancement and decoupling of carbon and opal export in cyclonic eddies, *Journal of Geophysical Research-Oceans*, accepted.

128. \*Davis, CV, Livsey, CM, Palmer, HM, Hull, PM, Thomas, E, Hill, TM, **Benitez-Nelson, CR** (2020) Extensive morphological variability in asexually produced planktic foraminifera. *Science Advances*, 6, eabb8930. <https://advances.sciencemag.org/content/6/28/eabb8930>.
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*, <https://doi.org/10.1002/lo12.10163>
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 and Paleoclimatology*, 35, e2020PA003849. <https://doi.org/10.1029/2020PA003849>
125. \*Davis, CV, **Benitez-Nelson CR** (2020) Evidence for rapid trace element alteration of planktic foraminiferal shells from the Panama Basin: Manganese adsorption during vertical transport. *Marine Micropaleontology*, 157, 101872 <https://doi.org/10.1016/j.marmicro.2020.101872>.
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*, <https://doi.org/10.1002/lno.11552>
123. \*Davis, CV, Fehrenbacher, J., **Benitez-Nelson, CR**, Thunell, R.C. (2020) Trace Element Heterogeneity across Individual Planktic Foraminifera from the Modern Cariaco Basin. *Journal of Foraminiferal Research*, in press.
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*, 182, 102266, <https://doi.org/10.1016/j.pocean.2020.102266>.
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*, <https://doi.org/10.1002/esp.4840>.
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*, <https://doi.org/10.1007/s10021-020-00500-z>.
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*, <https://doi.org/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) <https://www.nature.com/articles/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  $^{234}\text{Th}$ : $^{238}\text{U}$  disequilibria in the North Pacific Subtropical Gyre, *Marine Chemistry*, 217, 103705. <https://doi.org/10.1016/j.marchem.2019.103705>.
116. \*Davis, CV, Ontiveros-Cuadras, JF, **Benitez-Nelson, CR**, Schmittner, A, Tappa, EJ, Osborne, EO, Thunell, RC (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. <https://doi.org/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-Cuadrada, JF, Thunell, R., Ruiz-Fernández, AC, **Benitez-Nelson, CR**, Machain-Castillo, MA, Tappa, E, Sanchez-Cabeza, JA (2019) Centennial OMZ changes in the NW Mexican Margin from geochemical and foraminiferal sedimentary records, *Continental Shelf Research*, 176 (2019) 64–75. <https://doi.org/10.1016/j.csr.2019.02.009>.
112. Moore, WS, Humphries, MS, **Benitez-Nelson, CR**, 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, CR**, 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. <https://doi.org/10.3390/toxins10110480>.
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. <https://doi.org/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. <https://doi.org/10.1002/loe2.10009>.
103. **Benitez-Nelson, CR** et al. (2018) Radioactivity in the Marine Environment: Understanding the Basics of Marine Radioactivity, *Limnology and Oceanography e-Lectures.* 2018;8:1–58. <https://doi.org/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*, <https://doi.org/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, <https://doi.org/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 Electrodialysis 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. \*Puigcorb , V, Roca-Mart , M, Masqu , P, **Benitez-Nelson, CR**, Rutgers van der Loeff, M, Laglera, LM, Bracher, A, Cheah, W, Strass, V, Hoppem, M, Santos-Echeandia, 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**, D cima, 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**, D cima, 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. \*Puigcorb , V, **Benitez-Nelson, C.R**, Masqu , P, Verdeny, E, White, AE, Popp, BN, Prahl, FG, Lam, PJ (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, MM, Brown, ZW, Lowry, KE, van Dijken, GL, Becker, S, Pal, S, **Benitez-Nelson, CR**, Downer, MM, Strong, AL, Swift, JH, Pickart, RS (2015) Impacts of low phytoplankton NO<sub>3</sub><sup>-</sup>:PO<sub>4</sub><sup>3-</sup> 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, CR**, Taylor, GT, 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, JL, **Benitez-Nelson, CR**, Thunell, RC, 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 **Benitez-Nelson, CR**) (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, SJ, Pozo Buil, M, Di Lorenzo, E, Castro, CG, Schroeder, ID, Goericke, R, Anderson, CA, **Benitez-Nelson, CR** and Whitney, FA (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, JC, Wiebe, EN, **Benitez-Nelson, CR** (2014) Lessons Learned in Summer Camp: A Case Study of the Learning Paths of Three Campers. *Electronic Journal of Science Education*, 16(3).
80. Bellinger, B, Van Mooy, BAS, Cotner, JB, Fredricks, HF, **Benitez-Nelson, CR**, 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.
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- Roca Martí, M., Estapa, ML, Masque, P, **Benitez-Nelson, CR**, Buesseler, KO (2020) Polonium-210 and Lead-210 as tracers of particle export and attenuation on the first EXPORTS cruise at Station PAPA, Ocean Sciences Meeting, Abstract: OB11B-02, San Diego, CA February 2020.
- Romero, S. Ka'apu-Lyons, CA, Umhau, B., **Benitez-Nelson, CR.**, Hannides, CC, Close, HG, Jeffrey Drazen, J., Popp, BN (2020) Deep zooplankton rely on small particles in response to low fluxes, Ocean Sciences Meeting, Abstract: OB12A-06, San Diego, CA February 2020.

- Zhou, K, **Benitez-Nelson, CR**, Huang, J., Xiu, P., Sun, Z., Dai, M. (2020) Decoupling between particulate carbon and biogenic silica export within North Pacific Subtropical Gyre cyclonic eddies, Ocean Sciences Meeting, Abstract: OB14E-0416, San Diego, CA February 2020.
- Close, HG, Wojtal, PK, Henderson, LC, **Benitez-Nelson, CR**, Buesseler, KO, Estapa, ML, Pike, SM, Popp, BN, Roca-Marti, M (2020) Estimating relative flux of phytodetritus, fecal pellets, and bacterial biomass using compound-specific isotope analysis of amino acids at Station Papa (EXPORTS), Ocean Sciences Meeting, Abstract: OB14E-0419, San Diego, CA February 2020.
- Buesseler, KO, **Benitez-Nelson, CR**, Jade Clevenger, S, Drysdale, J, Roca Martí, M, Pike, SM, Resplandy, L, Umhau, B, Wyatt, A (2020) OB14E-0422 Expanding our Use of Thorium-234 as a Particle Flux Tracer in the EXPORTS Program, Ocean Sciences Meeting, Abstract: OB14E-0419, San Diego, CA February 2020.
- Jade Clevenger, S, Buesseler, KO, **Benitez-Nelson, CR**, Drysdale, J (2020) Updates to the classic small volume (2-4L) <sup>234</sup>Th analysis protocol, Ocean Sciences Meeting, Abstract: OB24F-0523, San Diego, CA February 2020.
- \*McCabe, K., Smith, E, **Benitez-Nelson, CR** (2019) Influence of stormwater management on organic matter dynamics and oxygen demand in urbanizing headwater catchments of a coastal plain river. 2019 AGU Fall Meeting, December 9-13, 2019 San Francisco, CA.
- Moore, WS, Frankle, JD\*, Lang, SQ, **Benitez-Nelson, CR** (2019) Enormous excess <sup>223</sup>Ra in fluids from the Lost City hydrothermal field. 2019 Goldschmidt Meeting, August 18-23, 2019, Barcelona, Spain
- \*\*Davis, AN, Thunell, RC, Tappa, EJ, **Benitez-Nelson, CR**, Black, DE, Osborne, EO, and Davis, CV (2019) Reconstructing Ocean Acidification Using Fossil Planktonic Foraminifera in the Cariaco Basin. 2019 Ocean Sciences Meeting, February 25 – February 29, San Juan, Puerto Rico
- \*McCabe, KM, Smith, EM, **Benitez-Nelson, CR** (2019) Effects of stormwater management practices on nonpoint source BOD loading to coastal waters in South Carolina, Geological Society of America, Southeastern Section, 2019. Charleston, SC
- Buesseler, KO, Benitez-Nelson, CR, Burt, WJ, Clevenger, SJ, Drysdale, J, Francois, R, Pike, S, Resplandy, L, Roca-Martí, L, Blaire Umhau, BP, Wyatt, A (2019) EXPORTS: using high resolution studies of thorium-234 at Ocean Station PAPA to elucidate spatial and temporal variability in particle export and attenuation, 2019 Ocean Sciences Meeting, February 25 – February 29, San Juan, Puerto Rico
- \*\*Weirich, N, McCabe, K.; **Benitez-Nelson, C.**; Smith, E. (2018). Are stormwater ponds hot spots of BOD<sub>5</sub> production? 2018 South Carolina Water Resources Conference, October, 2018, Columbia, SC.
- \*Schroer, W. F.; **Benitez-Nelson, C.**; Smith, E.; Ziolkowski, L. (2018). Drivers of Sediment Accumulation in South Carolina stormwater ponds, 2018 South Carolina Water Resources Conference, October, 2018, Columbia, SC.
- Zhou, K, Huang, J., Xiu, P., **Benitez-Nelson, C.R.**, Sun, Z., Dai, M. (2019) Particulate carbon and silica export mediated by cyclonic eddies at Station ALOHA. The Fourth Xiamen Symposium on Marine Environmental Sciences, January 2019, Xiamen China.
- Popp, B.N, Hannides, C.S., Close, H.H, **Benitez-Nelson, C.R.**, Umhau, B. and Drazen, J.C. (2018) Compound-specific isotope analyses reveal varying seasonal zooplankton-particle interactions. (Abstract ID: XXX), 2018 Goldschmidt Conference, August 2018, Boston MA.
- Benitez-Nelson, C.R. (2018) The building blocks of life: From oceanic to molecular scales and back again, 2018 Ocean Sciences Meeting, February 12 – February 16, Portland, Oregon. INVITED PLENARY
- Bell, DW, Pellechia, P, Ingall, E.D., **Benitez-Nelson, CR**. (2018). Dissolved Organic Phosphorus Composition: New Insights from Electrodialysis-Reverse Osmosis Isolation and Solution <sup>31</sup>P-NMR Analysis (Abstract ID: BN14B-1030) 2018 Ocean Sciences Meeting, February 12 – February 16, Portland, Oregon



- Drazen, J.C, Romero-Romero, Lyons, C, Gloeckler, K., Close, H.G., **Benitez-Nelson, C.R.**, Popp, B. N. (2018) Evaluating variations in the importance of small particles as a food source to the mesopelagic micronekton from the central gyre to the equator in the North Pacific. (Abstract ID: ME34A-0960), 2018 Ocean Sciences Meeting, February 12 – February 16, Portland, Oregon.
- Shanahan, M, Wilsom, AM, Smith, EM, **Benitez-Nelson, CR** (2017) Impact of Coastal Development and Marsh Width Variability on Groundwater Quality in Estuarine Tidal Creeks H43J-1781. AGU Fall Meeting, Dec 11-15, 2017 New Orleans, LA.
- \*Bell, DW, Denham, S, Smith, EM, **Benitez-Nelson, CR**. Invited, Nov. 2017. Evaluating seasonal community nutrient status with ecological stoichiometry in a salt marsh tidal creek. CERF 2017 Biennial Conference, November, Providence, RI
- Van Meerssche, E., Pinckney, J, **Benitez-Nelson, CR**, Greenfield, D, (2017) The influence of the environmental factors on the allelopathic effect of domoic acid on natural phytoplankton communities. The 9<sup>th</sup> U.S. HAB conference, November, Baltimore, MD
- \*Schroer, W. F.; **Benitez-Nelson, C.**; Smith, E.; Ziolkowski, L. (2017). Coastal Stormwater Detention Ponds: Sediment, Accumulation, and Nutrient Sequestration (Abstract ID: 29040), 2017 ASLO Winter Meeting, February 26 – March 3, Honolulu, HI.
- Drazen, J.C.; Gloeckler, K., Choy, C.A., Close, H.G., Hannides, C. C., **Benitez-Nelson, C.R.**, Umhau, B., Popp, B. N., (2017) Small Plankton may Form a Previously Overlooked Food Source for Mesopelagic Zooplankton and Micronekton (Abstract ID: 29671), 2017 ASLO Winter Meeting, February 26 – March 3, Honolulu, HI.
- Close, H. G.; Ka'apu-Lyons, C. A., Grabb, K. C., Bour, A. L., Wallsgrove, N., Umhau, B. P., **Benitez-Nelson, C.R.**, McCarthy, M.D., Drazen, J.C., Popp, B.N. (2017) Heterotrophic Influence on Organic Matter at Epipelagic vs. Mesopelagic Depths Reflected in Compound Specific Stable Isotope Patterns. (Abstract ID: 30048), 2017 ASLO Winter Meeting, February 26 – March 3, Honolulu, HI.
- Van Meerssche, E., Pinckney, J, Greenfield, D, **Benitez-Nelson, CR** (2016) The allelopathic effect of domoic acid on a natural phytoplankton community composition. The 17<sup>th</sup> conference on Harmful Algae, Brazil.
- \*\*Palmer, ER, Hannides, CS, Drazen, JC, Popp, BN, **Benitez-Nelson, CR** (2016). Zooplankton Phosphorus concentrations and Redfield stoichiometry in the central tropical North Pacific, Geological Society of America Southeastern Section, 65th Annual Meeting. 31 March 2016 – 1 April 2016, Columbia, SC.
- \*Umhau, B, Motta, LC, Blum, Popp, BN, Ka'apu-Lyons, C., **Benitez-Nelson, CR**. (2016). Latitudinal changes in <sup>234</sup>Th derived mercury, carbon, and nutrient particle fluxes in the central Tropical North Pacific, Geological Society of America Southeastern Section, 65th Annual Meeting. 31 March 2016 – 1 April 2016, Columbia, SC.
- Hannides, CC Popp, BN, Drazen, J, Close, HG, **Benitez-Nelson, CR** Grabb, CZ, Umhau, B, Ka'apu-Lyons, CA, , K (2016) B31A-03: Midwater Zooplankton Response to Seasonality in Export Flux in the North Pacific Subtropical Gyre, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- Grabb, KC, **Benitez-Nelson, CR**, Drazen, J Close, HG. Hannides, CC, Ka'apu-Lyons, CA, Umhau, B, Popp, B (2016) B34A-0331: Characterizing seasonal contribution of particles from the surface ocean to the mesopelagic food web through amino acid compound specific isotopic analysis and <sup>234</sup>Thorium measurements, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- \*Bell, D, Denham, S, Smith, E, **Benitez-Nelson, CR**, Richardson, TL (2016) B54A-0402: Beyond the Blue: C:N:P relationships across tidal and seasonal time-scales within a salt-marsh estuary, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- \* Umhau, B, Motta, LC, **Benitez-Nelson, CR**, Close, HG, Hannides, CC, Popp, BN, Blum, JD, Drazen, J, Grabb, KC (2016) CT21A-01: Characterization of Mercury Particle Flux Using <sup>238</sup>U:<sup>234</sup>Th Disequilibria in the North Pacific Subtropical Gyre, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA

- Motta, LC, Blum, JD, Popp, P, Drazen, J, Hannides, CC, Close, HG, Umhau, B., **Benitez-Nelson, CR.** (2016) CT41A-04 Mercury Stable Isotopes Reveal Deep Methylation of Mercury and its Uptake into the Open Ocean Food Web, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- Scranton, MI, Taylor, GT, Thunell, R, Tappa, E, **Benitez-Nelson, CR,** Muller-Karger, F, Lorenzoni, L, Astor, Y (2016) ME34D-0825: Anomalous  $\delta^{13}\text{C}$  in POC at the chemoautotrophy maximum in the Cariaco Basin, 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- Lorenzoni, L, Muller-Karger, ME, Rueda-Roa, DT, Thunell, R., Scranton, MI, Tylor, GT, **Benitez-Nelson, CR,** Montes, E, Astor, YM, Rojas, J (2016) OD14B-2420: The CARIACO Ocean Time-Series: two decades of oceanographic observations to understand linkages between biogeochemistry, ecology, and long-term environmental variability. 2016 Ocean Sciences Meeting, February 22-26, New Orleans, LA
- Osborne, E., Thunell, R., Bizimis, M, Buckley, W, **Benitez-Nelson, C,** Chartier, C (2015) A History of Warming Sea Surface Temperature and Ocean Acidification Recorded by Planktonic Foraminifera Geochemistry from the Santa Barbara Basin, California, (Abstract ID: PP33C-2321) 2015 FALL AGU Meeting, San Francisco, CA.
- Osborne, E., Thunell, R., Gruber, N., **Benitez-Nelson, C.,** and Cai, W., (2015) Planktonic foraminiferal shell thickness as a carbonate ion concentration proxy, SCOR Workshop on the Biology of Planktonic Foraminifera, Catalina Island, CA, September 2015
- Benitez-Nelson, C.R.,** Thunell, R., Pinckney, J., Lorenzoni, L., Montes, E., Muller-Karger, F, Scranton, M., Taylor, G., Varela, R., Astor, Y. (2015) Elemental Composition (C, N and P) of Sinking and Suspended Particulate Matter in the Cariaco Basin, Venezuela. February 2015 ASLO Winter Meeting Granada, Spain
- Scranton, M., Taylor, G., Muller-Karger, F., Lorenzoni, L., Fanning, K., Thunell, R., **Benitez-Nelson, C.R.,** Astor, Y, Varela, R. (2015) A source for “missing” oxidant and reductant at the redox interface of the Cariaco Basin. February 2015 ASLO Winter Meeting Granada, Spain
- Osborne, E., Bizimis, M., Wei-Jun Cai, WJ, Wang, YC, Iglesias-Rodriguez, D., **Benitez-Nelson, CR,** Holm, JA, Thunell, RC (2014) Planktonic foraminiferal response to ocean acidification in the Santa Barbara Basin over the last century. 2014 FALL AGU Meeting, San Francisco, CA.
- 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., Vine, D.J. (2014) Aerosol Phosphorus Composition: New Insights from Synchrotron X-ray Spectroscopy. 2014 FALL AGU Meeting, San Francisco, CA.
- Taylor, GTT, Scranton, MI, Thunell, R, **Benitez-Nelson, CR,** Lorenzoni, L Astor, Y, Varela, R. and Muller-Karger, F. (2014) Atypical Behavior of the Biological Carbon Pump in an Oxygen-Depleted Water Column: The Cariaco Basin Case Study. Ocean Carbon & Biogeochemistry Summer Workshop, July 21-24, 2014, Woods Hole, MA.
- Benitez-Nelson, CR,** Thunell, R, Pinckney, J, Lorenzoni, L., Montes, E., Muller-Karger, F., Scranton, M., Taylor, GTT, Varela, R, Astor, Y. (2014) Elemental Composition (C, N and P) of Sinking and Suspended Particulate Matter in the Cariaco Basin, Venezuela. Ocean Carbon & Biogeochemistry Summer Workshop, July 21-24, 2014, Woods Hole, MA.
- Lorenzoni, L, Muller-Karger, F, Montes, E, Taylor, G, Thunell, R, Scranton, M, **Benitez-Nelson, CR,** Astor, Y., Varela, R., Troccoli, L. Fanning, K. (2014) The CARIACO Ocean Time-Series: 19 years of international collaboration in ocean biogeochemistry and ecological research. Ocean Carbon & Biogeochemistry Summer Workshop, July 21-24, 2014, Woods Hole, MA.
- \*Maldonado, D. A., Kepler, C., **Benitez-Nelson, C.R.,** Greenfield, D.I. (2014) Coupling phytoplankton assemblage composition and physiology with seasonal nitrogen and phosphorus levels in Charleston Harbor and Winyah Bay, SC (Abstract ID: 13369). 2014 Ocean Sciences Meeting, Honolulu, HI

- \*Bell, D. W., **Benitez-Nelson, C. R.**, Ingall, E. D., Longo, A., Chambers, L. R. (2014) Dissolved organic phosphorus characterization across a riverine/oceanic interface isolated using electro dialysis and reverse osmosis. (Abstract ID: 15525) 2014 Ocean Sciences Meeting, Honolulu, HI.
- Benitez-Nelson, C. R.**; \*\*McParland, E., \*Opseth, A.; Taylor, G. T.; Thunell, R. C (2014), Phosphorus Cycling across the oxic/anoxic interface of the Cariaco Basin (Abstract ID: 15584) 2014 Ocean Sciences Meeting, Honolulu, HI.
- Scranton, M.I., Taylor, G.T., Muller-Karger, F.M., Lorenzoni, L., Montes, E., Fanning, K., Thunell R.T., **Benitez-Nelson, C.R.**, Astor, Y. and R. Vaerla (2014) Interannual and subdecadal variability in hydrography and nutrient concentrations in the Cariaco Basin. European Geophysical Union General Assembly April 2014, Vienna, Austria.
- Osborne, E.B; Thunell, R.C., **Benitez-Nelson, C.R.**; Cai, W-J. 2013. Foraminiferal Area Density as a Proxy for Changing Ocean Acidity in the California Current System. Paper presented at the AGU Winter Meeting, San Francisco CA. USA December 2013, 2013AGUFMPP11C1848O.
- \*\*Downer, M. M.; Pal, S.; **Benitez-Nelson, C.**; Bennett, M. (2013) Phosphorus distributions in the Chukchi Sea (Abstract ID: 11072). ASLO Winter Meeting, New Orleans, Louisiana.
- \*\*McParland, E. L.; Benitez-Nelson, C. R.; Lorenzoni, L.; Rollings, A. (2013) Understanding the composition of phosphorus in suspended particles of the Cariaco Basin (Abstract ID: 11168). ASLO Winter Meeting, New Orleans, Louisiana.
- Pinckney, J.; **Benitez-Nelson, C. R.**; Thunell, R.; Muller-Karger, F.; Lorenzoni, L.; Troccoli, L.; Varela, R. (2013) Climate driven changes in phytoplankton diversity and community composition in the Cariaco Basin (1995-2011) (Abstract ID: 11379). ASLO Winter Meeting, New Orleans, Louisiana.
- Benitez-Nelson, C.R.**; Anderson, C. R.; Thunell R.; Sekula-Wood, E.; Siegel, D.(2013) Increasing *Pseudo-nitzschia* abundance and domoic acid toxicity of sinking particles in the Santa Barbara Basin associated with changes in source waters (Abstract ID: 11598). ASLO Winter Meeting, New Orleans, Louisiana.
- Benitez-Nelson, CR**, Thunell, RC, Sekula-Wood, E, Siegel, D., Anderson, C (2012), Increasing *Pseudo-nitzschia* Abundance and Domoic Acid Toxicity of Sinking Particles in the Santa Barbara Basin Associated with Changes in Source Waters. CalCOFI Conference, 3-5 December 2012, Pacific Grove, CA
- Kanakidou, M., Duce, R., Prospero, J., Baker, A.R., **Benitez-Nelson, C.R.**, Dentener, F.J., Hunter, K.A., Kubilay, N., Liss, P.S., Mahowald, N., Okin, G., Sarin, M. Surapipith, V., Tegen, I., Tsigaridis, K., Uematsu, M., van Aardenne, J., Zamora, L.M., Zhu, Y. (2012) Fluxes of Organic N and P in the Ocean, American Meteorological Association 93<sup>rd</sup> annual conference, Austin, TX, Jan. 6-10, 2013.
- Finch, J., S. Pillay, M. Humphries, T., Hill, **C.R. Benitez-Nelson** (2012) A new record of past environmental change from the Mfabeni Peatland, South Africa: stratigraphy, chronology and sediment characterization. South African Society for Quaternary Research Conference, Gobabeb, Namibia, Sept. 13-16, 2012.
- Humphries, M.S., J. Finch, J., **C.R. Benitez-Nelson**, S. Pillay (2012) Chemical sedimentation, peat formation, and development of a paleoenvironmental record for the subtropical coastal plain of Maputaland, South Africa. 9<sup>th</sup> INTECOL International Wetlands Conference, Orlando Florida, June 4-8, 2012.
- Bargu, S., M. W. Silver, M. D. Ohman, C.R. Benitez-Nelson, D.L. Garrison (2011) The mystery behind Hitchcock's film "The Birds": The Cause Revealed? 6<sup>th</sup> Symposium on Harmful Algae in the United States, Austin Texas, Nov 13-17, 2011.
- \*Anderson, C. Kudela, R., Shulman, I., Penta, B., Chao, Y., Siegel, D., **C.R. Benitez-Nelson** (2011) Are numerical models the way forward for HAB prediction in California? 6<sup>th</sup> Symposium on Harmful Algae in the United States, Austin Texas, Nov 13-17, 2011.
- \*Anderson, C.; Kudela, R.; **Benitez-Nelson, C.**; Lane, J.; Caho, Y.; Siegel, D. (2011) Merging MODIS Ocean Color and a Downscaled Regional Ocean Model to Predict Harmful Algal

- Blooms for Coastal California WCRP OSC Climate Research in Service to Society, Denver, CO 24-28 October 2011.
- \*Bennett, M. A; Ranhofer, M.; Benitez-Nelson, C.; Thunell, R.; Plessinger, W.; Tappa, E. (2011) Bioavailability of P across and oxic/anoxic boundary (Abstract ID: 8027) 2011 ASLO Winter Meeting, San Juan, Puerto Rico.
- \*Pal, S.; **Benitez-Nelson, C.**; Carbon and phosphorus dynamics in the Chukchi Sea (Abstract ID: 8159) 2011 ASLO Winter Meeting, San Juan, Puerto Rico.
- \*Anderson, C.; Kudela, R.; **Benitez-Nelson, C.**; Lane, J.; Hayashi, K.; Sekula-Wood, E.; Burrell, C.; Siegel, D.; Goodman, J.; Brzezinski, M. (2011) Is there a link between the 2009-2010 Central pacific ENSO Event and prolonged Harmful Algal Blooms in Central California? (Abstract ID: 8544) ASLO Winter Meeting, San Juan, Puerto Rico.
- Puigcorb , V.; Masqu , P.; **Benitez-Nelson, C.**; Bode, A.; Scharek, R.; Fern ndez de Puelles, M. L; Latasa, M. (2011) Determination of POC Export using a combination of  $^{234}\text{Th}/^{238}\text{U}$  and  $^{210}\text{Po}/^{210}\text{Pb}$  disequilibria in the NW Mediterranean (Abstract ID: 8608) ASLO Winter Meeting, San Juan, Puerto Rico.
- \*Burrell, C. T; Anderson, C.; **Benitez-Nelson, C. R.**; Thunell, R.; Tappa, E. (2011) Degradation of the marine toxin Domoic Acid in coastal systems (Abstract ID: 8933) ASLO Winter Meeting, San Juan, Puerto Rico.
- Joye, S. B; Crespo-Medina, M.; Hunter, K. S; Vossmeier, A.; Beer, L.; Bowles, M. W; Asper, V.; Diercks, A.; Teske, A. P; Benitez-Nelson, C. (2011) The Microbial Slime Highway: Oil Transport to the benthos and consequences on microbial Dynamics in Deep Gulf of Mexico Sediments. (Abstract ID: 9090) ASLO Winter Meeting, San Juan, Puerto Rico.
- Madden, L., Bedward, J.C., Wiebe, E.N., **Benitez-Nelson C.R.** (2011) Lessons Learned in Summer Camp: A Case Study of the Learning Paths of Three Campers. 2011 National Association for Research in Science Teaching (NARST) Conference., April 3-6, 2011, Orlando Florida.
- Thunell, R., **C.R. Benitez-Nelson**, F. Muller-Karger, L. Lorenzoni, G. Taylor and M. Scranton. The Cariaco Basin Ocean Time Series: Production, Flux and Remineralization of Biogenic Material. 2010 AGU Fall Meeting. *Eos Trans. AGU, XX(XX)* AGU Meet. Suppl., Abstract.
- \*Sekula-Wood, E., **Benitez-Nelson, CR**, Bograd, S and Anderson, C. (2010) Is Climate Driving Decadal Trends in Toxic Blooms in the California Current System?. East Pacific Ocean Conference, Mt. Hood, OR 22-25 September 2010.
- \*Sekula-Wood, E., **Benitez-Nelson, CR**, Bograd, S and Anderson, C. (2010) Long-Term Trends in Regional Domoic Acid Events Associated with Large-Scale Variability in the California Current System. 14<sup>th</sup> International Conference on Harmful Algae, Hersonissos-Crete, Greece on 1-5 November 2010.
- \*Pal, S., **Benitez-Nelson, C. R.**, Emerson, S. R., Murray, J. W., Kavanaugh, M. T. (2010) Particulate Carbon Export in the North Pacific Ocean Using Th-234-U-238 Disequilibrium. 2010 Ocean Sciences Meeting, Portland Oregon, CO35B-10
- White, A. **Benitez-Nelson, C. R.**, Foster, R.A., Popp, B. N., Prahl, F. G. (2010) Nitrogen Fixation in the Gulf of California and the Eastern Tropical North Pacific: Interannual Variability of Diazotrophic Productivity, Community Composition and Potentially Limiting Factors. 2010 Ocean Sciences Meeting, Portland Oregon, IT11A-07
- \*Verdeny, E., **Benitez-Nelson, C.R.**, Masque, P., Puigcorb , V., White, A., Prahl, F.G., Popp, P.N., Foster, R.A., Arthur, K. (2010) The role of community structure and nitrogen fixation on particle export in the Gulf of California and the eastern tropical North Pacific Ocean. 2010 Ocean Sciences Meeting, Portland Oregon, IT11A-08
- Benitez-Nelson, C.R.** (2010) Understanding marine phosphorus composition and the potential impact on particle export in oligotrophic regions (Invited). **Invited** 2010 Ocean Sciences Meeting, Portland Oregon, IT13A-01.
- \*Anderson, C., Kudela, R. M, **Benitez-Nelson, C.R.**, Sekula-Wood, E., Chao, Y., Siegel, D. A., Washburn, L., Langlois, G. (2010) Testing Toxin Prediction Models in a California HAB Hotspot. 2010 Ocean Sciences Meeting, Portland Oregon, IT35G-05.

- Dyhrman, S., **Benitez-Nelson, C.R.**, Haley, S., Orchard, S., Pellechia, P. (2010) Microbial production of phosphonate in marine systems. 2010 Ocean Sciences Meeting, Portland Oregon. IT14A-06
- \*Maiti, K., Buesseler, K.O., **Benitez-Nelson, C.R.**, Cochran, K, Dai, M, Dehairs, F., Masque, P., Miller, LA, Bradley, M., Morris. PJ, Miquel, JC, Peine, F, Planchon, F, Rutgers van der Loeff, M, Santschi, PH Turnewitsch, T, Waples, JT (2010) Total and Particulate Thorium-234 Results From GEOTRACES Intercalibration Cruises. 2010 Ocean Sciences Meeting, Portland Oregon, CO23A-02.
- \*Sekula-Wood, E., **Benitez-Nelson, C.R.**, Anderson, C, Schnetzer, A., Guillocheau, N, Morton, S., Siegel, D. Thunell, R. (2009) A Historical Record of Vertical Domoic Acid Fluxes from Santa Barbara Basin (CA). November, The Fifth Symposium on Harmful Algae, Ocean Shores, WA.
- Casacuberta, N., Masque, P., Garcia-Orellana J., **Benitez-Nelson C.R.**, Anguita, M., Gasa, J., Garcia-Tenorio, R. (2009)  $^{210}\text{Pb}$  and  $^{210}\text{Po}$  biokinetics in chicken and the radiological implications to population. International Topical Conference on Po and Radioactive Pb Isotopes, October, Seville, Spain
- Stukel, M., M. Landry, and **C.R. Benitez-Nelson** (2009) Trophic Cycling and Carbon Export in the California Current Ecosystem. 2009 LTER All Scientists Meeting, 14-16 September, Estes, Colorado.
- \*Maiti, K., Buesseler, K.O., Benitez-Nelson, C.R., Lamborg, C.H., Owens, S. (2009)  $^{234}\text{Th}$  Excess and Particle Remineralisation below the Euphotic zone. 2009 AGU Chapman Conference on the Biological Pump in the Oceans. September, Brockenhurst, Hampshire, England.
- Benitez-Nelson, C.R.**, Verdeny, E., Masque, P., White, A. Popp, B., Prahl, F., Foster, R. (2009) Investigating the Role of Nitrogen Fixation in Exporting Particulate Carbon to Depth. 2009 AGU Chapman Conference on the Biological Pump in the Oceans. September, Brockenhurst, Hampshire, England.
- Wejnert, K.E., Thunell, R.C., **Benitez-Nelson, C.R.** (2009) P/Ca in planktonic foraminifera as a new proxy for marine  $\text{PO}_4$ : Results from the Cariaco Basin. 2009 Goldschmidt Conference, June, Davos, Switzerland.
- Silver, M.W., Bargu, S.B., **Benitez-Nelson, C.R.**, Coale, S. L. Roberts, K.J., Garcia, A.C. (2009) Domoic acid toxins in the oceanic Pacific: Natural components and enhanced presence in iron fertilized communities. 2009 ASLO Winter Meeting, Nice, France.
- Bargu, S.B., Silver, M.W., Garcia, A.C. Coale, S. L. Roberts, K.J. **Benitez-Nelson, C.R.** (2009) *Pseudo-nitzschia* and domoic acid in naturally iron-riched and iron-poor areas of the Subarctic Pacific. 2009 ASLO Winter Meeting, Nice, France.
- Benitez-Nelson, C R** (2009) Short-lived radionuclides as tracers of particle flux in the oceans: A look towards the future. **Invited** 2009 ASLO Winter Meeting, Nice, France.
- Villa, M, Puigcorbe, V; Verdeny, E, Garcia-Solsona, E, Bruach, J M; Garcia-Orellana, J, **Benitez-Nelson, C R**, Masque, P (2009) Testing the potential of  $^{90}\text{Y}/^{90}\text{Sr}$  Disequilibria in estimating oceanic POC export over daily timescales. 2009 ASLO Winter Meeting, Nice, France.
- Verdeny, E, Masqué, P, **Benitez-Nelson, C R**, Garcia-Orellana, J, Villa, M, Miquel, J, Stewart, G, Alonso-González, I, Baltar, F, Arístegui, J (2009) Examining the influence of mesoscale eddies and atmospheric deposition on particle export fluxes using  $^{234}\text{Th}$  and  $^{210}\text{Po}$ . 2009 ASLO Winter Meeting, Nice, France.
- Mahowald, NM, Jickells, TD, Baker, AR, Artaxo, P, **Benitez-Nelson, C**, Bergametti, G, Bond, T, Chen, Y, Cohen, DD, Herut, B, Kubilay, N, Losno, R, Maenhaut, W A, McGee, K, Okin, G, Siefert, R, Tsukuda, S, Luo, C. Human Perturbation of Atmospheric Phosphorus (2008) *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS14B-08.
- Benitez-Nelson, C. R.**, Sekula, E.. Schnetzer, A., Caron, D. Anderson, C. Thunell, R., Morton, S, Gully, J., Burns, J Ferry, J. (2008) 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 Workshop Proceedings, April 2-3, 2008. INVITED
- Thunell, R C, **Benitez-Nelson, C R**, Muller-Karger, F, Lorenzoni, L, Fanning, K, Scranton, M, Varela, R, Astor, Y, (2008) Silicon cycling in the Cariaco Basin, Venezuela: Seasonal variability in silicate availability and the Si:C:N composition of sinking particles. 2008 Ocean Sciences Meeting, Orlando Fl.
- Richardson, T L, Ranhofer, M L, **Benitez-Nelson, C R** (2008) Taxon-specific dissolved organic phosphorus utilization by estuarine phytoplankton determined using an enzyme-labeled fluorescence approach.. 2008 Ocean Sciences Meeting, Orlando Fl.
- Verdeny, E, Masque, P, Garcia-Orellana, J, **Benitez-Nelson, C R**, Maiti, K, Buesseler, K O, (2008) Examining particle flux within mesoscale eddies using  $^{210}\text{Pb}$ - $^{210}\text{Pb}$  disequilibrium. 2008 Ocean Sciences Meeting, Orlando Fl.
- \*DuBois, S L, **Benitez-Nelson, C R**, Berelson, W, Hammond, D; Paneva, R. (2008) Characterization of inorganic and organic phosphorus species in the San Pedro Basin, California. 2008 Ocean Sciences Meeting, Orlando Fl.
- \*\*Herron, S E, **Benitez-Nelson, CR**, Thunell, R. (2008) Insights into sediment trap fluxes: Possible underestimation of opal fluxes in the Santa Barbara and Cariaco Basins. 2008 Ocean Sciences Meeting, Orlando Fl.
- Stukel, M R, Landry, M R, **Benitez-Nelson, C R**, Goericke, R (2008) Carbon export and the fate of primary productivity in the California Coastal Current Ecosystem. 2008 Ocean Sciences Meeting, Orlando Fl.
- Diaz, J M, Ingall, E I, **Benitez-Nelson, C R**, Brandes, J A (2008) A Novel mechanism for marine phosphorus sequestration via burial and transformation or diatom-derived polyphosphate in sediments. 2008 Ocean Sciences Meeting, Orlando Fl.
- \*Lyons, G C; Benitez-Nelson, C R; Thunell, R; Phosphorus composition of sinking particles from Guaymas Basin, Gulf of California. 2008 Ocean Sciences Meeting, Orlando Fl.
- \*Maiti, K., **Benitez-Nelson, C.R.**, M.W. Lomas, and J. W. Krause (2007) Estimates of Export production in Sargasso Sea During Winter Storms Prior to Seasonal Stratification, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract OS11B-0501.
- Lorenzoni, L. Muller-Karger, F. E., Thunell, R.C., Tappa, E., **Benitez-Nelson, C.R.**, Hollander, D., Varela, R., Astor, Y., and C. Hu (2007) The CARIACO Time Series: Carbon fluxes in a tropical, continental upwelling margin, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract OS43C-02.
- Muller-Karger, F., Varela, R., Thunell, R. C., Scranton, M. I.; Taylor, G. T., Astor, Y. M., **Benitez-Nelson, C. R.**, Lorenzoni, L., Tappa, E. J., Goni, M. A., Rueda, D. T., and C. Hu (2007) Importance of Bottom Nepheloid Layers on the Transport and Delivery of Sediment to the Eastern Cariaco Basin, Venezuela, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract OS43C-08.
- \*Lyons, G., **Benitez-Nelson, C.R.**, Thunell, R. (2007) Phosphorus Composition of Sinking Particles from Guaymas Basin, Gulf of California, Estuarine Research Foundation Conference, 4-8 November, 2007, Providence, RI.
- \*Sekula, E., **Benitez-Nelson, C.R.**, Thunell, R., Morton, S., Burns, J., Ferry, J. (2007) Persistence of the Marine Biotxin Domoic Acid at Depth in the Santa Barbara Basin, California, Estuarine Research Foundation Conference, 4-8 November, 2007, Providence, RI.
- Lorenzoni L., Muller-Karger F.E., Thunell R.C., Tappa E., **Benitez-Nelson C.R.**, Hollander D., Varela R., Astor Y. and Hu C. (2007) Influence of small scale rivers on the transport and delivery of sediment to the eastern Cariaco Basin, Venezuela. Joint IMBER/LOICZ Continental Margins Open Science Conference 17-21 Sept. 2007, Shanghai, China. Science highlight, [http://www.imber.info/Science\\_highlight/Lorenzoni\\_Feb08.html](http://www.imber.info/Science_highlight/Lorenzoni_Feb08.html)
- Chen, F-Z, W-J Cai, Y. Wang, and **C.R. Benitez-Nelson** (2007) Sea surface  $p\text{CO}_2$ -SST relationships, biogeochemical cycling of inorganic Carbon and net community production estimation in a cold-core cyclonic eddy in the lee of the Hawaiian Islands, SOLAS Open Science Conference 5-9 March 2007, Xiamen, China.

- \*Maiti, K., **Benitez-Nelson, C.R.**, Rii, Y., Bidigare, R. (2007) Extensive cyclonic particle remineralization within highly productive cold-core cyclonic eddies in the lee of the Hawaiian Islands (Abstract ID: 357). 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- Benitez-Nelson, C.R.**, Sannigrahi, P., Pellechia, P., Thunell, R.C. (2007) Particulate phosphorus composition in the Cariaco Basin, Insights from Phosphorus and Carbon NMR (Abstract ID: 951). 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- Brandes, J.A., Ingall, E.; **Benitez-Nelson, C.R.**, Paterson, D., de Jonge, M., Northrup, P. (2007) Nanoscale distribution and speciation of phosphorus within Cariaco Basin sinking particulates. (Abstract ID: 224). 2007 ASLO Fall Meeting, 4-9 February Santa Fe, NM.
- \*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., Dyhrman, S.T. (2007) Polyphosphate Metabolism in the Marine Cyanobacteria *Trichodesmium* and *Crocospheera*. (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 CO<sub>2</sub> 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. 7-14<sup>th</sup>, 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 <sup>31</sup>P NMR and bloch decays to examine phosphorus speciation in an anoxic marine basin. 2004 45<sup>th</sup> 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 <sup>234</sup>Th. 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.  $^{234}\text{Th}$  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  $^{32}\text{P}$  and  $^{33}\text{P}$ . 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  $^{32}\text{P}$ ,  $^{33}\text{P}$ ,  $^7\text{Be}$ , and  $^{210}\text{Pb}$  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. Belastock (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. Belastock, and **C. R. Benitez-Nelson**. Particle export fields in the Arabian Sea derived from  $^{234}\text{Th}$ :  $^{238}\text{U}$  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. Belastock, 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 <sup>31</sup>P 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.  
2015 – present Senior Editor, *Limnology & Oceanography Letters*  
2015 – 2019 Board Member, Association of Public and Land-grant Universities' Board on Oceans, Atmosphere, and Climate  
2016 – 2019 Member, U.S. National Committee for the Scientific Committee on Oceanic Research (SCOR)  
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 13<sup>th</sup>-19<sup>th</sup>, 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 <sup>234</sup>Th in Aquatic Ecosystems (International Workshop with 45 participants), August 16-19<sup>th</sup>, 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 Associate Professor, College of New Jersey

Melissa Ranhofer, M.S. USC Dept. of Geological Sciences 2005  
Now an Adjunct Professor, Furman University

Kanchan Maiti, Ph.D. USC Dept. of Geological Sciences 2007  
Now an Associate 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 Ph.D. Student, University of South Carolina

Viena Puigcorbe, Ph.D. Universitat Autònoma Barcelona, Spain (Joint with Dr. Pere Masque). Now Associate Scientist at Edith Cowan University

William Schroer, M.S. USC Geological Sciences. 2018 Now a PhD student at UGA

Doug Bell, Ph.D., USC Marine Science Program, 2018 Now a Management and Program Analyst at NOAA

Blaire Umhau, Ph.D. USC Marine Science Program, 2019 Now an Assistant Scientist SEA

Caitlyn Sarno, M.S. USC Marines Sciences. 2019 Now a M.S. student in Education at UMass Amherst  
 Kelly McCabe, M.S. USC Marines Sciences. 2020 Now a Biogeochemistry Lab Analyst, CILGR, University of Michigan.  
 Curtis Szewcyk, M.S. USC Marines Sciences. In progress  
 Heather Kish, USC Marines Sciences. In progress

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 – 2018 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