

## **Brian Collister**

NASA Postdoctoral Program Fellow

NASA Langley Research Center

1 Nasa Dr.

Hampton, VA 23666

(757) 292-9412

brian.collister@nasa.gov

[https://www.researchgate.net/profile/Brian\\_Collister2](https://www.researchgate.net/profile/Brian_Collister2)

### **EDUCATION**

- 2021 Ph.D. Oceanography, Department of Ocean and Earth Sciences; Old Dominion University
- 2019 M.S. Ocean and Earth Science, Department of Ocean, Earth and Atmospheric Science; Old Dominion University
- 2016 B.S. Ocean and Earth Science, Magna Cum Laude, Department of Ocean, Earth and Atmospheric Science; Old Dominion University

### **SUPPLEMENTARY EDUCATION & TRAINING**

- 2018 Oceanhackweek, The University of Washington eScience Institute
- 2016 Modern Observational Oceanography, Bermuda Institute of Ocean Sciences

### **PUBLICATIONS**

- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J., Balch, W.M. (2020). Polarized lidar and ocean particles: insights from a mesoscale coccolithophore bloom. *Applied Optics*, 59, 4650-4662
- Collister, B. L., Zimmerman, R. C., Sukenik, C. I., Hill, V. J., Balch, W. M. (2018). Remote sensing of optical characteristics and particle distributions of the upper ocean using shipboard lidar. *Remote Sensing of Environment*, 215, 85-96.

### **PRESENTATIONS**

- Collister, B.L., Zimmerman, R.C., Hill, V.J., Sukenik, C.I., Balch, W.M. Polarized oceanographic lidar measurements from a mesoscale coccolithophore bloom. (2020). *Ocean Sciences Meeting*. San Diego, CA. (Oral Presentation – Presenting Author)
- Balch, W.B., Mitchell, C.M., Collister, B.L., Drapeau, D.T., Bowler, B.C., Zimmerman, R.C., Meeting an old friend after 3 decades: The 2018 New England mesoscale coccolithophore bloom (but viewed with new glasses!). (2019). International Ocean Color Science Meeting. Busan, South Korea. (Oral Presentation – Contributing Author)
- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J. Exploring the response of polarized lidar to bulk particle properties through combined modeling and field

- studies. (2018). *RAD-LIDAR*. Ft. Pierce, Florida. (Oral Presentation – Presenting Author)
- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J., Balch, W.M. Exploring the response of polarized LIDAR to bulk particle properties through combined modeling and field studies. (2018). *Ocean Optics XXIV*. Dubrovnik, Croatia. (Poster Presentation – Presenting Author)
- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J. Retrieval of particle composition and size distribution using lidar: a Monte Carlo Study. (2018). Ocean Sciences Meeting. Portland, OR. (Poster Presentation – Presenting Author)
- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J. Monte Carlo modeling of lidar radiative transfer: a trip to the casino!. (2017). *Department of Ocean, Earth, and Atmospheric Science Seminar Series*, Old Dominion University Norfolk, VA, (Oral Presentation – Presenting Author)
- Collister, B.L., Zimmerman, R.C., Sukenik, C., Hill, V.J., Balch, W.M. Remote sensing of optical characteristics and particle distributions of the upper ocean using shipboard lidar. (2017). *Ocean Carbon and Biogeochemistry Workshop*. Woods Hole, MA. (Poster Presentation – Presenting Author)
- Zimmerman, R.C., Hill, V.H., Collister, B.L., Sukenik, C., Balch, W.M. Exploiting *in situ* lidar to retrieve particle distributions and characteristics of the upper ocean. (2016). *Ocean Sciences Meeting*. New Orleans, LA. (Oral Presentation – Contributing Author)
- Collister B.L., Katsanos, E.D., Key A.B., Kowalczyk E.M. Poutsma J.L., Computational analysis of cyclic tripeptide lys-ala-ala. (2015). *Virginia Collegiate Honors Council Conference*. Richmond, VA. (Poster Presentation - Presenting Author)

## AWARDS

- 2021 **NASA Postdoctoral Program (NPP) Fellowship**
- 2019 **Virginia Space Grant Graduate Research Fellowship**, Virginia Space Grant Consortium/NASA
- 2018 **Ocean Optics XXIV Travel Award**, Ocean Optics Conference, Dubrovnik, Croatia
- 2018 **Dorothy Brown Smith Travel Award**, Old Dominion University, Norfolk, VA
- 2017 **Neil and Susan Kelley Endowed Scholarship**, Old Dominion University, Norfolk, VA
- 2017 **OCB Science Workshop Travel Support**, Ocean Carbon & Biogeochemistry Program; Woods Hole, MA
- 2016 **BIOS Summer Course Scholarship**, Bermuda Institute of Ocean Sciences, Modern Observational Oceanography Course

- 2016      **Old Dominion University Undergraduate Research Travel Award**,  
2016 Ocean Sciences Meeting, New Orleans, Louisiana
- 2016      **Old Dominion University Undergraduate Research Grant**, “Developing  
and Characterizing an in-situ LiDAR for Oceanographic Research”

## RESEARCH EXPERIENCE

- 2016-  
present      **Graduate Research Assistant**, Old Dominion University, Dr. Richard  
Zimmerman, Development of shipboard lidar for remote sensing of  
particle distributions in the ocean
- 2015-  
2016      **Undergraduate Research Assistant**, Old Dominion University, Dr.  
Richard Zimmerman, Development of shipboard lidar for remote sensing  
of particle distributions in the ocean
- 2014-  
2015      **Undergraduate Laboratory Assistant**, Virginia Institute of Marine  
Science, Brandon Conroy, Zooplankton grazing in the Amazon River  
plume
- 2014-  
2015      **Undergraduate Research Assistant**, Old Dominion University, Dr.  
Jennifer Poutsma, Computational analysis of small tripeptide Lys-Ala-Ala

## FIELD EXPERIENCE

- 21 days      R/V *F.G. Walton Smith*; Lee Stocking Island, Bahamas; 2019
- 13 days      R/V *Endeavor*, Gulf of Maine and Sargasso Sea; 2018
- 2 days      R/V *Atlantic Explorer*, Hydrostation S; 2016

## TEACHING EXPERIENCE

- 2016-  
2017      **Graduate Teaching Assistant**, Ocean and Earth Science Field Studies,  
Old Dominion University, Dr. H. Roger Harvey
- 2014-  
2015      **Undergraduate Teaching Assistant**, Organic Chemistry I/II, Old  
Dominion University, Dr. Jennifer Poutsma

## PROFESSIONAL SERVICE

- Peer Review      Applied Optics, IEEE: Transactions on Geoscience and Remote  
Sensing, Optics Letters, Remote Sensing
- Jury Member      Special Awards Judge for the Virginia State Science and Engineering  
Fair

## PROFESSIONAL AFFILIATIONS

- 2017-      AAAS
- 2015-      The Oceanography Society

## **OUTREACH**

Volunteer Official for the NOSB Blue Crab Bowl ocean science competition (2015-2020)

Mentor for the Virginia Aquarium Mentoring Young Scientists Program (2018)

Science Outreach Presentation at Cape Henry Collegiate Highschool "*LIDAR remote sensing of the ocean: looking beneath the surface*" (2017)

## **MENTORSHIP**

2021 Jason Boynewicz, University of Virginia Department of Physics, Currently pursuing an undergraduate degree in Physics

2019 Rhianne Cofer, Old Dominion University Department of Ocean, Earth, and Atmospheric Science, Currently pursuing a graduate degree in marine science at Old Dominion University

2018 April Savage, Old Dominion University Department of Physics, *Currently working at the Naval Oceanographic Office, John C. Stennis Space Center, MS*

2017 Jacob Bushey, Ocean Lakes Math and Science Academy Program, *Currently pursuing an undergraduate degree in chemistry at the University of Virginia*

2015 Adrien Flouros, NSF Research Experience for Undergraduates,