

Dr. Jonathan D. Sharp

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University of Washington
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Research Experience

2020– Present	Postdoctoral Scholar University of Washington CICOES/PMEL Seattle, WA
2015– 2020	Graduate Student Researcher (Topic: CO ₂ System Chemistry) University of South Florida College of Marine Science St. Petersburg, FL Advisor: Robert H. Byrne
2013–14	Undergraduate Researcher (Topic: Ionic Interactions in Seawater) University of Miami, Rosenstiel School of Marine and Atmospheric Science Miami, FL Advisor: Frank J. Millero

Education

2015– 2020	Doctor of Philosophy, Marine Science University of South Florida College of Marine Science
2010– 2014	Bachelor of Science (cum laude), Marine and Atmospheric Science University of Miami

Fellowship/Scholarship Support

2019–20	NSF Graduate Student Research Fellowship (National Science Foundation)
2018–19	Knight Endowed Fellowship for Marine Science (USF College of Marine Science)
2016–18	NSF Graduate Student Research Fellowship (National Science Foundation)
2015–16	Anne and Werner Von Rosenstiel Fellowship (USF College of Marine Science)
2010–14	University Scholarship (University of Miami)

Achievements and Awards

2019	Von Rosenstiel Student Innovation Award (USF College of Marine Science, \$5K)
2019	Aquatic Sciences Meeting Student Travel Award (ASLO, \$870)
2018	Invited Student Speaker (USF College of Marine Science Fellowships Luncheon)
2017	Best Student Oral Presentation (USF College of Marine Science)

2013–14 President's Honor Role (University of Miami)
2011–14 Provost's Honor Role (University of Miami)
2010 Eagle Scout (Boy Scouts of America)

Teaching Experience

2018 Guest Lecturer, USF College of Marine Science, "Physical Chemistry of Seawater"
 Using CO2SYS to Make CO₂ System Calculations, 10/16/2018 and 10/18/2018
 Uncertainty Propagation in Marine CO₂ System Calculations, 11/13/2018

Peer-Reviewed Publications

Sharp, J.D., Byrne, R.H. Technical note: Excess alkalinity in carbonate system reference materials. Submitted to *Marine Chemistry*.

Sharp, J.D., Byrne, R.H., 2020. Interpreting measurements of total alkalinity in marine and estuarine waters in the presence of proton-binding organic matter. *Deep Sea Research Part I: Oceanographic Research Papers* 165, 103338.

Sharp, J.D., Byrne, R.H., 2019. Carbonate ion concentrations in seawater: Spectrophotometric determination at ambient temperatures and evaluation of propagated calculation uncertainties. *Marine Chemistry* 209, 70–80.

Sharp, J.D., Byrne, R.H., Liu, X., Feely, R.A., Cuyler, E.E., Wanninkhof, R., Alin, S.R., 2017. Spectrophotometric Determination of Carbonate Ion Concentrations: Elimination of Instrument-Dependent Offsets and Calculation of In Situ Saturation States. *Environmental Science and Technology*. 51 (16), 9127–9136.

Sharp, J.D., Albehadili, M.H.M., Millero, F.J., and Woosley, R.J., 2015. Estimating the Density and Compressibility of Natural Hypersaline Brines Using the Pitzer Ionic Interaction Model. *Aquatic Geochemistry*. 21 (1), 11–29.

Millero, F.J., **Sharp, J.D.**, 2013. Estimation of the Partial Molal Adiabatic Compressibility of Ions in Mixed Electrolyte Solutions Using the Pitzer Equations. *Journal of Chemical and Engineering Data*. 58 (12), 3458–3463.

Technical Reports

Millero, F.J., **Sharp, J.D.**, Woosley, R.J., Rodriguez, C., Paine, J., Levy, J., Williamson, J., Byrne, J., and Mastropole, K. (2014) *Global Ocean Repeat Hydrography Study: pH and Total Alkalinity Measurements in the Atlantic Ocean, A16 North and South*. University of Miami Rosenstiel School of Marine and Atmospheric Science.

Presentations (presenter underlined)

Sharp, J.D. Analytical Methods and Critical Analyses Supporting Thermodynamically Consistent Characterizations of the Marine CO₂ System. Dissertation Defense. USF College of Marine Science. St. Petersburg, FL. 10/6/2020 (talk).

Sharp, J.D., Byrne, R.H. Alkalinity and Intercomparability: proton exchange with organic bases during TA titrations induces carbonate system inconsistencies. 2020 Ocean Carbonate System Intercomparison Forum. 6/2020 (talk).

Sharp, J.D., Byrne, R.H. Total Alkalinity Determined by Titration in the Presence of Dissolved Organic Matter. 2020 Ocean Sciences Meeting. San Diego, CA. 2/20/2020 (poster).

Venturelli, R. and **Sharp, J.D.**. Understanding Isotopic and Carbonate Chemistry Characteristics of an Antarctic Subglacial Lake. Student Innovation Fund Awards Competition. USF College of Marine Science. St. Petersburg, FL. 11/19/2019 (collaborative talk).

Sharp, J.D., Byrne, R.H. Interpreting seawater alkalinity measurements in the presence of dissolved organic matter. Graduate Student Seminar Series. USF College of Marine Science. St. Petersburg, FL. 11/14/2019 (talk).

Sharp, J.D., Byrne, R.H. Carbonate ion determinations in seawater: A decade of methodological development. ASLO 2019 Aquatic Sciences Meeting. San Juan, PR. 2/27/2019 (talk).

Sharp, J.D., Hudson-Heck, E., Schockman, K.M., Tierney, C., Byrne, R.H. Acidification in the Gulf: Insights from measurements of pH and $[\text{CO}_3^{2-}]$ on GOMECC-3. 2018 Ocean Sciences Meeting. Portland, OR. 2/14/2018 (poster).

Sharp, J.D., Byrne, R.H. Direct measurements of seawater carbonate ion concentrations in the Gulf of Mexico: Implications for spatial mapping of CaCO_3 saturation states. OCB 2017 Summer Workshop. Woods Hole, MA. 7/27/2017 (poster).

Sharp, J.D., Byrne, R.H., Liu, X., Feely, R.A., Cuyler, E.E. Wanninkhof, R. Direct UV measurements of seawater carbonate ion concentrations: Observations and angstrom-scale adjustments. ASLO 2017 Aquatic Sciences Meeting. Honolulu, HI. 3/1/2017 (poster).

Sharp, J.D., Byrne, R.H., Liu, X., Cuyler, E.E. Direct UV measurements of seawater carbonate ion concentration: Smoothing troubled data with angstrom-scale adjustments. Graduate Student Symposium. USF College of Marine Science. Saint Petersburg, FL. 1/13/2017 (talk). ***Best Oral Presentation***

Adornato, L., Kaltenbacher, E., Byrne, R., Liu, X., and **Sharp, J.** Development of a portable carbon system sensor for ocean acidification research. OCEANS '16 MTS/IEEE. Monterey, CA. 9/22/2016 (poster).

Kaltenbacher, E., Adornato, L., Byrne, R., Liu, X., and **Sharp, J.** Development of a Compact Instrument for Field Measurements of pH, Total Dissolved Inorganic Carbon, and Total Alkalinity. Ocean Sciences Meeting. New Orleans, LA. 2/26/2016 (poster).

Sharp, J.D. Characterizing the Influence of Particulate Organic Matter on Seawater Alkalinity. Graduate Student Symposium. USF College of Marine Science. Saint Petersburg, FL. 1/15/2016 (talk).

At-Sea Experience (74 days)

Feb. 2020 USF Carbonate system sampling in the Gulf of Mexico (4 days)
 R/V Weatherbird II

April 2018 USF/USGS Organic alkalinity sampling in Tampa Bay (1 day)

Jul. 2017– NOAA/AOML Gulf of Mexico Ecosystems and Carbon Cycle cruise (35 days)
Aug. 2017 *R/V Ronald H. Brown*

May 2016– NOAA/PMEL West Coast Ocean Acidification cruise (34 days)

Jun. 2016 *R/V Ronald H. Brown*

Professional Development

2019 The Science of Science Communication Workshop
ASLO Aquatic Sciences Meeting, San Juan, PR

2018 Graduate Course Teaching Assistant, "Physical Chemistry of Seawater"
USF College of Marine Science, St. Petersburg, FL

2017 Ocean Carbon & Biogeochemistry Summer Science Workshop
Woods Hole Oceanographic Institution, Woods Hole, MA

2015 COSEE Presentation Bootcamp
University of South Florida College of Marine Science, St. Petersburg, FL

2010 SSI Open Water Diver SCUBA Certification
University of Miami SCUBA Club, Coral Gables, FL

Outreach and Community Involvement

2018 St. Petersburg Saturday Morning Market Ocean Education Booth, *Volunteer*

2017–18 St. Petersburg Science Festival, *Science Exhibitor*

2017 NOAA GOMECC-3 Cruise Blog, *Blogger* (<https://goo.gl/5EHkBs>)

2017 Eckerd College Marine Sci. Seminar, *Applying to Graduate School Student Panel*

2016–17 USF Marine Science Advisory Council, *Social Chair*

2016–17 College of Marine Science Honors & Awards Committee, *Student Representative*

2016–17 College of Marine Science 50th Anniversary Committee, *Student Member*

2016 NOAA WCOA Cruise Blog, *Blogger* (<https://goo.gl/dHJyDU>)

2016 College of Marine Science WCOA Cruise Blog, *Blogger* (<https://goo.gl/wRAQoZ>)

2016–17 Spoonbill Ocean Sciences Bowl, *Volunteer and Science Judge*

2015–16 St. Petersburg Science Festival, *Marketing Committee*

2015 ReefNation.com, *Contributing Writer* (www.reefnation.com/author/jsharp)

Current Professional Memberships (and year of entry)

2018 American Chemical Society

2016 Association for the Sciences of Limnology and Oceanography

2015 The Oceanography Society

2015 American Association for the Advancement of Science