

Curriculum Vitae¹



C.O. "Tripp" Collins III

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Current Affiliation

ASEE Postdoctoral Fellow
U.S. Naval Research Laboratory
Oceanography Division – Code 7322
Stennis Space Center, MS, USA

Education

Ph.D. (Department: Applied Marine Physics) Rosenstiel School for Marine and Atmospheric Science at the University of Miami (2014)

Dissertation: *Typhoon Generated Surface Gravity Waves Measured by NOMAD-type Buoys*

Committee Chair: Dr. Hans C. Graber; Committee Members: Dr. Brian K. Haus, Dr. William M. Drennan, Dr. Robert E. Jenson (USACE), Dr. C. Linwood Vincent

M.S. (Department: Applied Marine Physics) Rosenstiel School for Marine and Atmospheric Science at the University of Miami (2012)

Master's Thesis: *In Situ Wave Measurements: Sensor Comparison and Data Analysis*

Committee Chair: Dr. Hans C. Graber; Committee Members: Dr. Brian K. Haus, Dr. Ad J.H.M. Reniers, Dr. Robert E. Jensen (USACE), Dr. C. Linwood Vincent

B.S. (Major: Physics, Minor: Mathematical Sciences) Clemson University (2007)

Senior Thesis: *Scan Tunneling Microscopy on Ag 111*

Thesis Advisors: Dr. Murray Daw and Dr. Chad Sosolik

Employment

ASEE Postdoctoral Fellow at NRL, 2014 – Current

Research Assistant at RSMAS – UM, 2008-2014

Teaching Experience

University of Miami sole teaching assistant for Environmental Statistics (ECS-GSC-MS204), Spring 2011

Field Work

University Center in Svalbard Waves and Ice Mechanics cruise in the Arctic Marginal Ice Zone on the ice breaker R/V Lance. (April – May, 2016)

Ocean Remote Sensing Using Ambient Noise Field Experiment, mooring recovery cruise, Florida Keys (Feb. 2013) on the R/V Walton Smith

¹ Updated: 07/13/2016

Contributed to an interdisciplinary team geologist, physicists, and engineers to collect organic rich sediment samples from Florida Bay, FL to examine how permeability effects the formation and preservation of geochemical gradients established by microbial activity in carbonate mud (8/16/2012)

ITOP Field Experiment, EASI buoy recovery cruise, Taiwan/Philippine Sea (2010)

ITOP Field Experiment, Emergency ASIS Buoy Recovery and AUV Recovery Cruise, Taiwan/Philippine Sea (2010)

ITOP Field Experiment, ASIS and EASI Buoy Deployment Cruise, Taiwan/ Philippine Sea (2010)
(ITOP cruises were conducted aboard US R/V Roger Revelle)

HEX 2/JOULE 2 Experiments, Sounding Rocket Launch, Poker Flat Research Range, Alaska (2007)

Awards and Fellowships

ASEE/NRL – Postdoctoral Fellow (2014 - Current)
Adviser: Mr. W. Erick Rogers

ONR/NASA/NOAA – Physical Oceanography Dissertation Symposium (PODS) participant (2014)

NSF/JSPS – East Asia and the Pacific Summer Institute (EAPSI) Research Fellow (2013)
Project Title: “Study of Extreme Waves in the Pacific”
Host Adviser: Dr. Takuji Waseda (The University of Tokyo)

NSF Research Experience for Undergraduates (REU), Atmospheric Science, Clemson University (2006)

Relevant Experiences

Eagle Scout

Licensed Open Water Diver

Attended 1st Annual International Rip Current Symposium, Miami, FL (2010)

Study Abroad, Surface Physics, Consortium International University, Paderno del Grappa and ELETTRA synchrotron facility (Trieste), Italy (2005)

Professional Activities

Referee for: Geophysical Research Letters, Journal of Geophysical Research, Ocean Dynamics, Ocean Engineering, Journal of Coastal Oceanography, Journal of Oceanography, Weather and Forecasting, World Maritime Technology Conference

Press

American Scientific (04/21/2015) Giant Waves , quickly Destroy Arctic Ice and Ecosystems [[Link](#)]

Publications

Summary: h-index: 6 (Google Scholar), 4 (SCOPUS); Profiles: [Research Gate](#), [Google Scholar](#), [ORCID](#), [SCOPUS](#)

REFEREED

Babanin, A.V., I. Ginis, T. Hara, M.D. Anguelova, N. Bernier, J. Bidlot, A. Chawla, **C.O. Collins III**, D. Dai, E. D'Asaro, R. de Camargo, M. Donelan, D.-J. Doong, T. Durrant, K. Ewans, C. Fairall, Y. Fan, D. Greenslade, J. Gemmrich, R. Harcourt, B.K. Haus, M. Hemer, C.-J. Huang, J. Hunt, G. Ivey, A. Kareem, J. Kepert, Vladimir Kudryavtsev, Luc Lenain, Lixiao Li, Q. Liu, I-I Lin, I. Marusic, J. McConochie, W.K. Melville, J. Monty, I.-J. Moon, N. Mori, B. Niclasen, H. Potter, F. Qiao, A. Roland, P. Sandery, E. Schulz, A. Soloviev, J. Thomson, A. Toffoli, Y. Troitskaya, T. Waseda, I. Young, & C. Zappa, Measurements of Coupled Air-Wave- Ocean Interactions in Tropical Cyclones and Extra-Tropical Extreme Wind Conditions, (submitted to *Bulletin of the American Meteorological Society*)

Collins III, C.O., et al., Doppler Correction for 1-D Wave Frequency Spectra Measured on Moving Platforms, (submitted to *Journal of Atmospheric and Oceanic Technology*)

Ardhuin et al., Measuring ocean waves in sea ice using SAR imagery: A quasi-deterministic approach evaluated with Sentinel-1 and in situ data, (Submitted to *Remote Sensing of the Environment*)

Lund, B., **C.O. Collins III**, H. Tamura, and H. Graber (2016), Multi-Directional Wave Spectra from Marine X-band Radar, *Ocean Dynamics*, 66(8), pp 973-988, doi: 10.1007/s10236-016-0961-z

Collins III, C.O., et al., The Dispersion of Ocean Surface Waves in Ice Covered Seas. (Under Review at *Ocean Dynamics*)

Lund, B., H. C. Graber, H. Tamura, **C. O. Collins III**, and S. M. Varlamov (2015), A new technique for the retrieval of near-surface vertical current shear from marine X-band radar images, *J. Geophys. Res. Oceans*, 120, 8466–8486, doi:10.1002/2015JC010961.

Potter, H., **C.O. Collins III**, W.M. Drennan, & H.C. Graber; (2015) Observations of Stress Direction During Typhoon Chaba (2010). *Geophysical Research Letters* (In Press)

Collins III, C.O., C.L. Vincent, & H.C. Graber; (2015) A Statistical Method for Correlating Paired Wave Spectra. *Journal of Atmospheric and Oceanic Technology*. (In Press) doi: <http://dx.doi.org/10.1175/JTECH-D-15-0040.1>

Collins III, C.O., W.E Rogers, A.V. Marchenko, & A.V. Babanin; (2015) In Situ Measurements of an Energetic Wave Event in the Arctic Marginal Ice Zone. *Geophysical Research Letters*, DOI: 10.1002/2015GL063063

Potter, H., H.C. Graber, W.M. Drennan, N.J. Williams, **C.O. Collins III**, & R.J. Ramos; (2015) In Situ Measurements of Momentum Fluxes in Typhoons. *Journal of the Atmospheric Sciences*, 72(1) 104-118.

Lund, B., **C.O. Collins III**, H.C. Graber, E. Terrill, & T.H.C. Herbers; (2014) Marine radar ocean wave retrieval's dependency on range and azimuth. *Ocean Dynamics*, 64(7) 999-1018.

Collins III, C.O., B. Lund, R.J. Ramos, W.M. Drennan, & H.C. Graber; (2014) Wave Measurement Inter-Comparison and Platform Evaluation during the ITOP (2010) Experiment. *Journal of Atmospheric and Oceanic Technology*, 31, 2309-2329.

Collins III, C.O., B. Lund, T. Waseda, & H.C. Graber; (2014) On recording sea surface elevation with accelerometer buoys: lessons from ITOP (2010). *Ocean Dynamics*, 64(6) 895-904.

Drennan, W.M., H.C. Graber, **C.O. Collins III**, N.J. Williams, R.J. Ramos, H. Potter, & A. Herrera; (2014) EASI: An air-sea interaction buoy for high winds. *Journal of Atmospheric and Oceanic Technology*, 31, 1397-1409.

UNREFEREED

Collins III, C.O., W.E. Rogers, A.V. Marchenko (2016) On Wave-Ice Interaction in the Arctic Marginal Ice Zone: Dispersion, Attenuation, and Ice Response, Naval Research Laboratory Technical Memorandum (NRL/MR/7320—16-9676)

Collins III, C.O. (2015) Discussion of 'Strongly Nonlinear Phenomena in Extreme Waves' by lafrati et al. (2015). *World Maritime Technology Conference*. Nov. 3-7, 2015, Providence, RI.

Collins III, C.O.; W.E. Rogers, A.V. Marchenko, A.V. Babanin; (2015) Energetic Surface Waves Measured in Arctic Ice. *UNO Ocean Waves Workshop*. Jan. 15, 2015, New Orleans, LA.

Collins III, C.O., "Typhoon Generated Surface Gravity Waves Measured by NOMAD-type Buoys" (2014). *Open Access Theses*. Paper 372.
http://scholarlyrepository.miami.edu/oa_theses/372

Collins III, C.O.; (2013). Tropical Cyclone Generated Extreme Waves. 13th International Workshop on Wave Hindcasting and Forecasting & 4th Coastal Hazard Symposium. Banff, AB, Canada.

Lund, B.; **C.O. Collins III**, H.C. Graber, E. Terrill; (2013) On the Imaging of Surface Gravity Waves by Marine Radar: Implications for a Moving Platform. 13th International Workshop on Wave Hindcasting and Forecasting & 4th Coastal Hazard Symposium. Banff, AB, Canada.

Collins III, C.O., "In Situ Wave Measurements: Sensor Comparison and Data Analysis" (2012). *Open Access Theses*. Paper 372.
http://scholarlyrepository.miami.edu/oa_theses/372

Presentations

INVITED

Collins III, C.O. et al.; (2014). Wave Measurements during ITOP (2010). The Naval Research Laboratory, John C. Stennis Space Center, MS, USA.

CONFERENCES 1st or PRESENTING AUTHOR

Collins III, C.O., W.E. Rogers, A. Marchenko, & A.V. Babanin; (2016) A Large Surface Wave Event Observed in Arctic Sea Ice. AGU Ocean Sciences Meeting. New Orleans, LA, USA. **[Poster]**

Collins III, C.O., W.E. Rogers, A.V. Marchenko, & A.V. Babanin; (2015) Wave Ice Interaction during an Energetic Wave Event in the Arctic. 14th International Workshop on Wave Hindcasting and Forecasting & 5th Coastal Hazard Symposium. Nov. 8-13, 2015. Key West, FL, USA.

Lund, B., H.C. Graber, H. Tamura, & **C.O. Collins III**; (2015) Validation of Marine X-band Radar's Multi-Directional Wave Retrieval Capabilities. 14th International Workshop on Wave Hindcasting and Forecasting & 5th Coastal Hazard Symposium. Nov. 8-13, 2015. Key West, FL, USA.

Collins III, C.O., T. Waseda, & H.C. Graber; (2015) Short Term Statistics during ITOP. 14th International Workshop on Wave Hindcasting and Forecasting & 5th Coastal Hazard Symposium. Nov. 8-13, 2015. Key West, FL, USA.

Collins III, C.O., W.E. Rogers; A.V. Marchenko, & A.V. Babanin; (2015) In Situ Measurements of an Energetic Wave Event in the Arctic Marginal Ice Zone. Forth International Symposium on Arctic Research. Toyama, Japan. **[Poster]**

Collins III, C.O., W.E. Rogers; A.V. Marchenko, & A.V. Babanin; (2015) Energetic Surface Waves Measured in Arctic Ice. UNO Ocean Waves Workshop. New Orleans, LA, USA.

Collins III, C.O., H. Potter*, B. Lund, W.M. Drennan, H.C. Graber, H. Tamura, & W.E. Rogers; (2015) 1- and 2-D Wave Properties and Air-Sea Interaction during Typhoon Chaba. AMS 19th Conference on Air-Sea Interaction. Phoenix, AR, USA. *Presented by

Collins III, C.O.; (2014) Typhoon Generated Surface Gravity Waves Measured by NOMAD-type Buoys. Physical Oceanography Dissertation Symposium. Lihue, HI, USA.

Collins III, C.O., H.C. Graber, W.M. Drennan, H. Potter, & B. Lund; (2014) Analysis of Tropical Cyclone Seas. AGU Ocean Sciences Meeting. Honolulu, HI, USA. **[Poster]**

Collins III, C.O.; H.C. Graber, & T. Waseda; (2013) Tropical Cyclone Generated Extreme Waves. 13th International Workshop on Wave Hindcasting and Forecasting & 4th Coastal Hazard Symposium. Banff, AB, Canada.

Lund, B.; **C.O. Collins III**, H.C. Graber, & E. Terrill; (2013) On the Imaging of Surface Gravity Waves by Marine Radar: Implications for a Moving Platform. 13th International Workshop on Wave Hindcasting and Forecasting & 4th Coastal Hazard Symposium. Banff, AB, Canada.

Collins III, C.O.; B. Lund, R.J. Ramos, H. Tamura, H. Potter, W.M. Drennan, & H.C. Graber; (2013) Extreme Waves Measured during the ITOP Experiment. International Workshop on Ocean Waves and Related Processes. Yokohama, Japan.

Collins III, C.O.; (2013) Extreme Waves in the Pacific. JSPS Summer Program 2013. Hayama, Japan **[Poster]**

Collins III, C.O.; B. Lund, H. Potter, R.J. Ramos, W.M. Drennan, & H.C. Graber; (2013) In Situ Observations of the Spatial Variation of Waves and Momentum Flux in Typhoons. WISE 2013 - a workshop on wave physics, spectral modeling, observations and related topics, College Park, MD, USA

Collins III, C.O.; H.C. Graber, W.M. Drennan, N.J. Williams, R.J. Ramos, B. Lund, A. Herrera, & E. Terrill; (2012) In Situ Measurements of Surface Gravity Waves in Typhoon Conditions. AGU Ocean Sciences Meeting, Salt Lake City, Utah, USA **[Poster]**

Potter, H. & **C.O. Collins III**, R.J. Ramos, N.J. Williams, W.M. Drennan, & H.C. Graber; (2011) Influence of Tropical Cyclones on the Marine Boundary Layer. SEJ, Miami, FL, USA **[Poster]**

CONFERENCES CO-AUTHORED

Tamura, H., W.M. Drennan, **C.O. Collins III**, & H.C. Graber (2016) Impact of Ocean Surface Waves on Air-Sea Momentum Flux. AGU Ocean Sciences Meeting. New Orleans, LA, USA. **[Poster]**

Lund, B.; **C.O. Collins III**, H.C. Graber, E. Terrill, & T.H.C. Herbers; (2014). Improvements to Shipboard Marine X-Band Radar Surface Wave and Current Retrieval. AGU Ocean Sciences Meeting. Honolulu, HI, USA. **[Poster]**

Potter, H., H.C. Graber, W.M. Drennan, **C.O. Collins III**, & R.J. Ramos; (2014). In Situ Measurements of Momentum Fluxes in Typhoons. AGU Ocean Sciences Meeting. Honolulu, HI, USA.²

Potter, H., **C.O. Collins III**, R.J. Ramos, W.M. Drennan, & H.C. Graber; (2013). Influence of Waves on momentum Fluxes in Typhoons. WISE 2013 - a workshop on wave physics, spectral modeling, observations and related topics, College Park, MD, USA

² 1st Place Award for Student Oral Presentation

Lund, B., H. Tamura, **C.O. Collins III**, & H.C. Graber; (2013). Shipborne Marine X-Band Radar Wave and Surface Current Retrieval during ITOP: A Comparison with Wavewatch-III and ADCP Measurements. WISE 2013 - a workshop on wave physics, spectral modeling, observations and related topics, College Park, MD, USA **[Poster]**

Potter, H., **C.O. Collins III**, **C.O.**, W.M. Drennan, R.J. Ramos, N.J Williams, & H.C. Graber; (2012). Air-Sea Measurements from Moored Surface Buoys during the 2010 Pacific Typhoon Season. AMS 18th Conference on Air-Sea Interaction/20th Symposium on Boundary Layers and Turbulence, Boston, MA, USA³ **[Poster]**

Potter, H., H.C. Graber, W.M. Drennan, N.J. Williams, R.J. Ramos, & **C.O. Collins III**; (2012). Upper Ocean Response to Typhoons during the 2010 Season. AGU Ocean Sciences Meeting, Salt Lake City, Utah, USA **[Poster]**

Lund, B., H.C. Graber, W.M. Drennan, N.J. Williams, R.J. Ramos, **C.O. Collins III**, A. Herrera, & E. Terrill; (2012). Wind and Wave Retrieval from Marine X-Band Radar Data under Typhoon Conditions. AGU Ocean Sciences Meeting, Salt Lake City, Utah, USA **[Poster]**

³ 1st Place Award for Student Poster