

Richard D. Cole II

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EMPLOYMENT:



President, RDSEA International, Inc. (RDSEA): *Founded in 2002, Providing state-of-the-art ocean-technologies to oceanographers and engineers within the international ocean community:* With a strong academic and field background in oceanography, the ocean sciences and technology, over three-decades aboard research vessels sailing oceans, bays and estuaries as scientific support and crew, technical support, and staff at federal and state oceanographic institutions and laboratories in the U.S., RDSEA provides expertise in project development, concept, design, construction, deployment and recovery of shallow and deep-water mooring systems and ocean instrumentation packages, data processing and dissemination to a variety of institutions and agencies in the U.S. and world-wide. RDSEA is presently in contract with AMBIDADOS (Oceanographic consultants, Rio de Janeiro, Brazil) working in parallel with the University of Sao Paulo, Institute of Oceanography, Sao Paulo, Brazil on the PIRATA Project in the Atlantic Ocean. See www.rdsea.com for details on all projects.

University of South Florida, Ocean Circulation Group

Oceanographic Operations Coordinator: 1989 - 2010

Coordinator, “Offshore Component” of the State of Florida’s

“COASTAL OCEAN MONITORING and PREDICTION SYSTEM” (COMPS): 1997 - 2010

A Sub-Component of the Southeastern Coastal Ocean Observing Regional Association (SECOORA)

U.S. Integrated Ocean Observing System (IOOS)

The Ocean Circulation Group (OCG)
University of South Florida (USF)
College of Marine Science (CMS)
St. Petersburg, Florida

Position Breakdown and Characteristics of Duties:

OCEANOGRAPHIC OPERATIONS:

- Chief Scientist aboard USF, NOAA, NSF, ONR, USGS and UNOLS research cruises. Maintain regular contact with these agencies and ship schedulers to coordinate scheduling, information and logistics. Responsible for the safety of all science personnel on travel and underway as well as the scientific objectives of all research conducted.
- Coordinate research cruises and establish guidelines for engineering and scientific support and planning, science staffing needs, outfitting of research vessels and supervise oceanographic operations at sea. Maintain a close liaison with ships’ masters, crewmembers and office.
- Communicate effectively with project principal investigators (PI), scientists, engineers, manufacturing, vendors, graduate students, and shipboard personnel to accomplish the common goal of data return.
- Identify potential sources, solicit and review proposals, prepare proposals and budgets and select vendors.
- Publish research papers, data and technical reports in community journals.
- Attend and present at various professional conferences and meetings as well as visit other laboratories and manufactures’ sites.

MOORING and BUOY TECHNOLOGY SPECIALIST:

- Conceive, design, engineer, build, deploy and recover deep sea and coastal ocean mooring systems. Work closely with USF's College of Marine Science machine shop in construction of buoy and seafloor mounted mooring systems. Assist other groups with these designs and implementation into collaborative efforts and projects.

INSTRUMENTATION SPECIALIST:

- Overall responsibility of OCG oceanographic instrumentation. Maintain knowledge of all instrumentation, PC interfacing and associated software. Integrate instrumentation onto oceanographic moorings. Conceptualize solutions to engineering problems.
- Keep abreast of developing scientific investigation directions, requirements for new equipment and systems designs. Recommends applicability to the OCG Director and Principle Investigators. Ensure data quality assurance and quality control measures. Help develop new designs and techniques.
- Purchase, maintain, test, calibrate, troubleshoot electronic/mechanical systems, deploy and retrieve acoustic Doppler current profilers (ADCP), temperature, conductivity, pressure, meteorological and optical sensors.

GROUP DIVEMASTER and DIVE OPERATIONS MANAGER:

- Senior Scientific and Working Diver with NOAA, EPA and The American Academy of Underwater Sciences (AAUS), OCG Divemaster: organize and conduct diving operations, selection of support vessels and divers, supervising dives, drafting dive plans and post dive reports, attending dive safety council meetings and maintaining up to date certifications and training. Review the latest diving technology and procedures.

Research Assistant, National Oceanographic Atmospheric Administration (NOAA), Pacific Marine Environmental Laboratory (PMEL), Seattle, WA, Ocean Climate Research Division: 1986-1989:

Career Foundation:

- Polar Research Laboratories Drift Buoy project, Dr. Bruce Taft, (Director, Current Mooring Group, Ret.)
- Current Mooring Group, Dr. Mike Mcphaden, Director, (past Director of TAO)
- Engineering Development Division, Hugh Milburn, Director (Ret.)
- Autonomous Temperature Line Acquisition System (ATLAS), Dr. Stan Hayes (Deceased).
- NOAA Dive Office, Seattle, WA, Cliff Newel, Director (Ret.).
- Participated in the initial installation of the "Tropical Ocean Atmosphere" (TAO), array along the equatorial Pacific Ocean (formerly: EPOCS and TOGA studies). Mooring manufacturing, buoy construction, sensor manufacturing, maintain, test, calibrate, deploy and recover vector averaging current meters (VACM), vector measuring current meters (VMCM), meteorological instrumentation and thermistor chains. Maintained and serviced Polar Research Laboratory thermistor chain drifters, laboratory calibrations, logistics, at sea operations.
- NOAA Research diving.

Oceanographic Consultant, Sea Surveyor, Inc., Ventura, CA 1985-1986:

- Geophysical and hydrographic surveys, project logistics and data analysis.

Oceanographic Technician, National Oceanographic and Atmospheric Administration (NOAA), Seattle, WA: 1984-1985:

- NOAA Ship "*RAINIER*": Hydrographic surveying, Hawaiian Islands, the Gulf of Alaska, Cook Inlet and South East Alaska.
- NOAA Ship "*DISCOVERER*": Oceanographic operations (all disciplines of the field), North and South Pacific Ocean.

EDUCATION:

Florida Institute of Technology (FIT), Jensen Beach, Florida

- Bachelor of Science in Applied Technology, 1983
- Associate of Science in Offshore Marine Technology, 1981

MILITARY:

Aviation Bos'n Mate, United States Navy, 1974-1977:

- USS "CONSTELLATION": Carrier Vessel Attack (CVA), 1974-1975, Flight and Hanger deck operations, launch and recovery of aircraft, Pacific Ocean, Southeast Asia (Viet Nam, South China Sea, and Philippine Sea), Indian Ocean and Persian Gulf.
- USS "SARATOGA": Carrier Vessel (CV) 1975-1977, Control Tower (Primary Fly) Air Division office management and operations, Liaison between the flight deck Commander (Air Boss), flight deck crew, pilots, squadrons and air traffic control; Atlantic Ocean and Mediterranean Sea.

PROFESSIONAL:

Co-Chair, Office of Naval Research (ONR) - Marine Technology Society (MTS) Buoy Workshop
Co-Chair, Marine Technology Society (MTS) Buoy Technology Committee
Data Buoy Corporate Panel (DBCP)
Tropical Implementation Panel (TIP - Global Tropical Mooring Array)
The Oceanographic Society. (TOS)
The Marine Technology Society. (MTS)
The American Academy of Underwater Sciences (AAUS)
Divers Alert Network (DAN)

CERTIFICATIONS:

U.S. National Oceanic and Atmospheric Administration, Scientific Working Diver.
U.S. Environmental Protection Agency, Scientific Working Diver.
American Academy of Underwater Science, Senior Research Scientific Diver.
International Association of Nitrox and Technical Divers, Enriched Air Nitrox Diver
Divers Alert Network (DAN): Oxygen Administration & Provider, Diving Accident Management.
Hyberbarics International, Hyperbaric and Undersea Medical Training.
Professional Association of Diving Instructors (PADI), Divemaster.
Professional Association of Diving Instructors (PADI), Rescue Diver
National Association of Underwater Instructors (NAUI), CPR-First Aid
National Association of Underwater Instructors (NAUI), Advanced Open Water Diver.
Young Men's Christian Association (YMCA), Basic Diving
Certified Mountaineer/Crevasse Rescue Techniques; Rainier Mountaineering, Inc
Summits:
Mnt. Kilimanjaro, East Africa, August, 2003: 19,500ft
Mnt. Rainier, WA State, USA, August 2005: 14,411ft
Mnt. Elbert, CO State, USA, September 11, 2008: 14,433 (solo)
Mnt. Whitney, CA State, USA, April, 2009: Lower 48 highest peak: 14,506ft.
Mnt. Hood, OR State, USA, June 2010: Highest point in OR: 11,239ft

PUBLICATIONS and PRESENTATIONS:

Cole R.D.: Our Data Are All "Wet", a Quick Look at Measuring the Ocean
Environmental, Coastal and Offshore Journal, ECO, September/October, 2013
RDSEA International, Inc., St Pete Beach, FL

Cole, R.D., J. Donovan, D. Mayer: ADCPS on Buoys, Lightning Round Discussions, Teledyne R.D. Instruments,
ADCPS In Action, October, 2013, San Diego, CA. *RDSEA International, Inc. and the University of South Florida,
Ocean Circulation Group*

Cole, R.D., L. Barreira and E. Campos, 2013: Development and Deployment of Brazil's First Buoy System.
Marine Technology Reporter, September 2013.
RDSEA International, Inc., Florida, Institute de Estudos do Mar Paulo Moreira, Brazil

Campos, E, C. Franca, L. Nonnato, F. Neto, L. Barreira, R. D. Cole: ATLAS-B. The Development and
Mooring of a Brazilian Prototype ATLAS Buoy; MTS OCEANS, September, 2013, San Diego, CA
*Institute of Oceanography, University of Sao Paulo, Sao Paulo, Brazil, Ambidados and RDSEA
International, Inc.*

Cole, R.D.: Deep-Sea Miners Engage Physical Oceanography, Ocean News and Technology, September, 2013. *RDSEA International, Inc. St Pete Beach, FL*

Cole, R.D.: Site Characterization of Offshore Wind Energy Areas; Metocean Sensors Assess Conditions, Risks and Impacts of U.S. Wind Energy Areas (WEA): Sea Technology, February, 2013
RDSEA International, Inc. St Pete Beach, FL

Cole, R.D., J. Kinder, W. Yu: Ocean Climate “Off-the-Shelf”.
Marine Technology Society (MTS) Journal, January/February 2013, Volume 47, Number 1
RDSEA International, Inc., Down East Instrumentation and The State Oceanic Administration, First Institute of Oceanography, Qingdao, China

Cole, R.D., P. Berk: ATLAS-TFLEX RAMA Cruise Overview, R/V *Baruna Jaya III*, Merak, Java to Banda Aceh, Sumatra, Indonesia, Eastern Indian Ocean, March/April, 2012
RDSEA International, Inc. St Pete Beach, FL, NOAA Pacific Marine Environmental Laboratory Seattle, WA

Cole, R.D., RDSEA Addresses Sea-Bird Electronics: Update on Sea-Bird Products on RAMA, Indian Ocean Observing System, Sea-Bird Electronics, Bellevue, WA, March, 2012
RDSEA International, Inc., St Pete Beach, FL

Cole, R.D., C. L. Ning: Poster Cluster Abstract, Session C14: Sustaining and Developing Ocean and Sea-Ice Observations for Climate Research: The Global Tropical Moored Buoy Array, “Bai-Long Buoy”, 2011
RDSEA International, Inc., First Institute of Oceanography, State Oceanic Atmospheric Administration, China

Cole, R.D., J. Kinder, Chun-Lin Ning, Weidong Yu, Yang Chao: DVS Deploy on RAMA, Indian Ocean Observing System, Teledyne RD Instruments, ADCPs in Action, Oct. 2011, San Diego, CA, *RDSEA International, Inc. St Pete Beach, FL*

Cole, R.D.: RDSEA Addresses RD Instruments
Doppler Volume Sampler (DVS) Update, Real-Time Data Transmission
Teledyne RD Instruments, San Diego, December, 2010
RDSEA International, Inc., St Pete Beach, FL

Cole, R.D., J. Kinder, W. Yu, Y. Chao: “A TAO Hybrid for the Indian Ocean”. 2010 MTS/ONR Buoy Workshop, Monterey, CA. March 2010
RDSEA and Associates, Inc., St Pete Beach, FL

Cole, R.D., J. Kinder: System #1 FIO Buoy System Commissioning, State Oceanic Administration, First Institute of Oceanography, Qingdao, China. Oct. 9-16, 2009. IndOOS/RAMA
RDSEA and Associates, Inc., St Pete Beach, FL, Down East Instrumentation, LLC, Cary North Carolina

Cole, R.D., P. Devine, J. Donovan, J. Law, D. Mayer, R. H. Weisberg: USF’s Ocean Circulation Group Deploys the DVS. Teledyne RD Instruments, ADCPs in Action, Oct. 2009, San Diego, CA.
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: The Art of TAO, NOAA Ship Ka’ Imimoana, KA-08-05, TAO cruise central Pacific Ocean August 4 - September 1, 2008. An overview of El Nino/La Nina and a brief history of NOAA’s TAO Program. *RDSea & Associates, Inc. St Petersburg, FL*

Cole, R.D.: A Group Overview of USF’s Ocean Circulation Group Programs using Teledyne RD Instruments ADCPs: Still Pinging After All These Years: Live brown-bag luncheon Wedinar via the Internet, May 29, 2008
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: CARIACO Final Update, Year Number Five (NSF Proposal): A Review and Update on the Five-Year ADCP Deployment in the CARIACO Trench. Annual meeting, EDIMAR, LaSalle, Margarita Is., Venezuela. May 26, 2008. Ocean Circulation Group
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., Eric Siegel: Nortek Joins USF’s Ocean Circulation Group and the COMPS Array. May, 2008 Nortek Users Symposium, Vicksburg, MS.
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., James Cappelini, Henri Berteaux (deceased): Stanford "One-Hop Buoy" Update, Return to the Southern Ocean, 2007. ONR-MTS Buoy Workshop, Bay St. Louis, MS. NOAA-NDBC, NAV-OCEANOGRAPHIC Office, *RDSa and Associates, Inc., St Pete Beach, FL, Mooring Systems, Inc., Cataumet, MA.*

Cole, R.D.: A USF Milestone, COMPS 50th Research Cruise on the West Florida Shelf, Gulf of Mexico, Marine Technology Reporter, Nov. 2007
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., Aida Alvera-Azcarate, Alexander Barth, J. C. Donovan, Jason Law, D. Mayer, J. Virmani, R.H. Weisberg: Basin Observations, Caribbean Sea (CARICAO) Teledyne RD Instruments, ADCPs In Action, November 2007
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., The OCG, FIO and UNOLS, UNIOLS Research Vessel Technical Meeting, Florida Institute of Oceanography USF, St. Petersburg, Feb. 2007
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: CARIACO Update, Year Number Three (NSF Proposal): A Review and Update on the ADCP Deployment in the CARIACO Trench. Annual meeting, EDIMAR, LaSalle, Margarita Is., Venezuela. May, 2006. Ocean Circulation Group
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., R.H. Weisberg: Coastal Ocean Observing Systems Going Wireless. Sea Technology, April, 2006
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., E. J. Tappa (University of South Carolina, Dept of Geological Sciences): CARIACO: The Best Kept Secret in Oceanography. 2006 ONR-MTS Buoy Workshop, Texas A&M University, March, 2006
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., R.H. Weisberg, N. Trenaman, K. Amundsen: COMPS, SEACOOS and Near-shore Waves. Presented at Oceans 2005, WA, DC.
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D., U. Inan, N. Reddell, S. Kery, J. Cappelini, P. Smit, G. Greider. From Alaska to the South Pacific in One-Hop. Sea Technology, April 2005. Presented at Oceans 2005, WA, DC. and DBCP/WMO Workshop, Buenos Aires, Argentina, Oct. 2005
RD Sea and Associates, Inc., St Pete Beach, FL

Cole, R.D., R.H. Weisberg, N. Trenaman, K. Amundsen: Wireless Waves. Presented at: Marine and Oceanographic Technology Network (MOTN), Newport, RI, Nov. 2004. ADCPs In Action, San Diego, CA, April 2005. 2005 IEEE-Current Meter Technology Workshop, Southampton, UK.
College of Marine Science, USF, St. Petersburg, FL, RD Instruments, San Diego, CA, Benthos, Inc. North Falmouth, MA

Cole, R.D., R. H. Weisberg, J. Law. USF Marine Science Divers Get Put on a "Shelf". 24th Annual American Academy of Underwater Science "Diving for Science" Symposium March 2005, Mystic CT. *College of Marine Science, USF, St. Petersburg, FL*

Cole, R.D., R.H. Weisberg, J.C. Donovan, C.H. Merz, D.R. Russell, V. Subramanian. The Evolution of a Coastal Mooring, Sea Technology, February, 2003
College of Marine Science, USF, St. Petersburg, FL

Weisberg, R.H., M.E. Luther, R. He, R. D. Cole, J. Donovan (USF), C.R. Merz, F.J. Kelly, J. S. Bonner, J.C. Perez, J.S. Adams, D. Prouty, D. Trujillo (CBI); An HF-Radar Test Deployment Amidst an ADCP Array on the West Florida Shelf. IEEE/MTS-OCEANS 2002, Biloxi, MS. *College of Marine Science, USF, St Petersburg, FL Conrad Blucher Institute for Surveying and Science, Texas A&M University – Corpus Christi, TX*

Weisberg, R.H., R. He, M. E. Luther, J. Walsh, R.D. Cole, J. Donovan, C. R. Merz, V. Subramanian. A Coastal Ocean Observing System and Modeling Program for the West Florida Shelf, 2002. *College of Marine Science, USF, St. Petersburg, FL*

Cole, R.D.: The Evolution of a Coastal Mooring,
The 2002 Office of Naval Research-Marine Technology Society's Buoy Workshop.
Seattle, WA, April 2002. Sea Technology, Feb. 2003
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: The ECOHAB-ONR-COMPS (ENC) Array, 2001
IEEE/MTS-OCEANS 2001, Honolulu, HI.
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: ARGOS and the ECOHAB-ONR-COMPS (ENC) Array.
Service Argos, Inc., ARGOS Users Conference, Baltimore, MD, April 2001.
College of Marine Science, USF, St. Petersburg, FL

Cole, R.D.: The Ocean Circulation Group, 1989-2001, ADCP's In Action.
R.D. Instruments, ADCPs in Action Seminar, San Diego, CA, April 2000.
College of Marine Science, USF, St. Petersburg, FL

Weisberg, R.H., Jack Parrish, Eric Siegel, Brian Black, R.D. Cole, Jeff Donovan, 1998. Northeast Gulf of Mexico Water Velocity Observations: A report on data collected from a surface moored acoustic Doppler current profiler at 28° 50'N, 084° 50'W. *Department of Marine Sciences, USF, St. Petersburg, FL*

Way, B.S., William Ostrom, Robert Weller, John Ware, Rick Trask, R.D. Cole, Jeff Donovan, 1998. Pan-American Climate Study (PACS), Mooring Deployment Cruise Report, R/V RODGER REVELLE Cruise Number Genesis 4, 9 April-5 May 1997. *Woods Hole Oceanographic Institution Technical Report WHOI-98-07, 77pp.*

Weisberg, R.H., Eric Siegel, Brian Black, R.D. Cole, Jeff Donovan, 1997
The West-Central Florida Shelf Circulation Project: a report on data collected using a trans-shelf array of acoustic Doppler current profilers.
Department of Marine Sciences, USF, St. Petersburg, FL

Siegel, E.M., R.H. Weisberg, R.D. Cole, Jeff Donovan, 1996.
The Physical Factors Affecting Salinity Intrusions in Wetlands:
The Suwannee River Estuary. *Department of Marine Sciences, USF, St. Petersburg, FL*

Weisberg, R.H., Jeff Donovan, R.D. Cole, 1996. The West-Central Florida Shelf Hydrography and Circulation Study: a report on data collected using a surface moored acoustic Doppler current profiler. *Department of Marine Sciences, USF, St. Petersburg, FL*

Weisberg, R.H., Jeff Donovan, R.D. Cole, 1994. The Coupled Ocean-Response Experiment (COARE) Equatorial Array: a report on data collected using subsurface acoustic Doppler current profilers. *Department of Marine Sciences, USF, St. Petersburg, FL*

Weisberg, R.H., Jeff Donovan, R.D. Cole, 1993. The Coupled Ocean-Response Experiment (COARE) Equatorial Array: a report on data collected using subsurface acoustic Doppler current profilers. *Department of Marine Sciences, USF, St. Petersburg, FL*

Weisberg, R.H., Jeff Donovan, R.D. Cole, 1991. The Tropical Instability Wave Experiment (TIWE) Equatorial Array: a report on data collected using subsurface moored acoustic Doppler current profilers. *Department of Marine Sciences, USF, St. Petersburg, FL*

Weisberg, R.H., Jeff Donovan, R.D. Cole, 1991. The Tropical Instability Wave Experiment (TIWE) Equatorial Array: a report on data collected using subsurface moored acoustic Doppler current profilers. *Department of Marine Sciences, USF, St. Petersburg, FL*