

**Chad Lembke**  
**Research Faculty, Project Engineer**

College of Marine Science  
Center for Ocean Technology  
University of South Florida  
St. Petersburg, Florida

Phone: 727-553-3976  
Fax: 727-553-3967  
Email: clembke@usf.edu

**SPECIALIZATION**

Design of mechanics of sensors, vehicles, and platforms, including but not limited to pressure housing design, static and dynamic seals, high and low pressure fluid transfer, vacuum systems, fixturing (optical, electrical, mechanical), cable splicing, power and data transmission, and overall system layout. Design process contributions from mechanical and system level design to full project management involving the operation and enhancement of autonomous platforms. This includes engineering support on multiple AUV, ROV, Buoy, and towed platform deployments and operations locally and abroad. Current research is focused on managing USF's underwater glider fleet and combining new towed video methods with acoustic biomass technology and mapping sonars for fisheries stock assessment. Prior to work at USF, designed luxury yachts and specialty water craft for theme parks such as Disney World and Universal Studios.

**Ocean Technology, St.Petersburg, Florida**

*Assistant in Research, Project Engineer, University of South Florida Center for Ocean Technology, St. Petersburg, Florida*

*Mechanical Design Engineer, Specialty and Luxury Watercraft, David Jones and Associates, Pinellas Park, Florida*

COMMITTEE APPOINTMENTS

IOOS National Underwater Glider Plan Steering Committee (2012 - 2014)

GCOOS

August ■

December 1997

## PUBLICATIONS

Broadbent, H., S. Grasty, R. Hardy, M. Lamont, K. Hart, C. Lembke, J. Brizzolara, S. Murawski, (2019) “West Florida Shelf Pipeline Serves as Sea Turtle Benthic Habitat based on In-Situ Towed Camera Observations”, *Aquatic Biology*, DOI: 10.3354/ab00722

Xie, S., J. Law, R. Russell, T. Dixon, C. Lembke, R. Malservisi, M. Rodgers, G. Iannaccone, S. Guardatao, D. Naar, D. Calore, N. Fraticelli, J. Brizzolara, J. Gray, M. Hommeyer, J. Chen (2019) “Seafloor Geodesy in Shallow Water with GPS on an Anchored Spar Buoy”, *Journal of Geophysical Research: Solid Earth*, 124 DOI: 10.1029/2019JB018242

Weisberg, R. Y. Liu, C. Lembke, C. Hu, K. Hubbard, M. Garrett, (2019), “The Coastal Ocean Circulation Influence on the 2018 West Florida Shelf *K. brevis* Red Tide Bloom”, *Journal of Geophysical Research: Oceans*, 124, 2501-2512, DOI: 10.1029/2018JC014887

Milligan, R., A. Bernard, K. Boswell, H. Bracken-Grissom, M. D'Elia, S. deRada, C. Easson, D. English, R. Eytan, K. Finnegan, C. Hu, C. Lembke, J. Lopez, B. Penta, T. Richards, I. Romero, M. Shivji, L. Timm, J. Warren, M. Weber, R. Wells, T. Sutton, “The Application of Novel Research Technologies by the Deep Pelagic Nekton Dynamics of the Gulf of Mexico (DEEPEND) Consortium”, *Marine Technology Society Journal*, Volume 52, Number 6, November/December 2018, pp. 81-86(6), “ G(r)-r (gi)1 (h, )TJ- J. (s)-1 (o (-)-2 (ha (na)-1 (r)dsJ0 Tc /)- I (e)-1 (s)-om (t)3 (y)-1-1

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- Hu, C., B.B. Barnes, Q. Li, C. Lembke, and D. English (2016) “Vertical migration of *Karenia brevis* in the northeastern Gulf of Mexico observed from glider measurements.” *Harmful Algae*, V58, September 2016, pp 59–65.
- Weisberg, R., L. Zheng, Y. Liu, A. Corcoran, C. Lembke, C. Hu, J. Lenos, and J. Walsh (2016) “*Karenia brevis* blooms on the West Florida Shelf: A comparative study of the robust 2012 bloom and the nearly null 2013 event.” *Continental Shelf Research*, 120, 106-121, <http://dx.doi.org/10.1016/j.csr.2016.03.011>.
- Lui, Y., R. Weisberg, and C. Lembke (2015) “Glider Salinity Correction for Unpumped CTD Sensors across Sharp Thermocline” *Coastal Ocean Observing Systems*, 305-325.
- Voytenko, D., T. H. Dixon, I. M. Howat, N. Gourmelen, C. Lembke, C. L. Werner, S. de la Peña, and B. Oddsson (2015) Multi-year observations of Breiðamerkurjökull, a marine-terminating glacier in southeastern Iceland, using terrestrial radar interferometry. *Journal of Glaciology*, 61, 42–54.
- Wall, C., C. Lembke, C. Hu, and D. Mann (2014) “Fish Sound Production in the Presence of Harmful Algal Blooms in the Eastern Gulf of Mexico”, *PLoS ONE* 9(12): e114893. DOI:10.1371/journal.pone.0114893.
- Wall, C., P. Simard, M. Lindemuth, C. Lembke, D. Naar, C. Hu, B. Barnes, F. Muller-Karger, and D. Mann (2014) “Temporal and Spatial Mapping of Red Grouper *Epinephelus morio* Sound Production”, *Journal of Fish Biology*, DOI: 10.1111/jfb.12500.
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- Wall, C., C. Lembke, and D. Mann (2012) "Shelf-scale mapping of sound production by fishes in the eastern Gulf of Mexico, using autonomous glider technology", *Marine Ecology Progress Series*, Vol. 449: 55-64.
- English, D., C. Hu, C. Lembke, R. Weisberg, D. Edwards, L. Lorenzoni, G. Gonzalez, and F. Muller-Karger (2009) "Observing the 3-dimensional distribution of bio-optical properties of West Florida Shelf waters using gliders and autonomous platforms", *Oceans 2009 MTS/IEEE*, ISBN CD-ROM: 978-0-933957-38-1.
- Fefilatye, S., S., Dmitry, B. Goldgof, and C. Lembke (2009) "Autonomous Buoy Platform for Low-Cost Visual Maritime Surveillance: Design and Initial Deployment", *Proc. SPIE Defense, Security, and Sensing*, V7317-0A.
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**US COLLABORATORS** (last 5 years)

Barbieri, S., Florida Marine Research Institute  
Beckler, J., Mote Marine Laboratory

Boswell, K, Florida International University  
Broadbent, H., University of South Florida  
Buermans, J., ASL Environmental  
Byrne, R., University of South Florida  
Campbell, M., NOAA National Marine Fisheries Service, SEFSC  
Chave, R., ASL Environmental  
DeCollibus, C., Teledyne Webb Research Corporation  
Dixon, T., University of South Florida  
Edwards, C., Skidaway Institute of Oceanography  
Garrett, M., Florida Wildlife Research Institute  
Grasty, S., University of South Florida  
Gray, J., University of South Florida  
He, R., North Carolina St. University