

Alex M. Silverman

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EXPERIENCE

Center for Ocean Technology, USF, St. Petersburg, FL May 2010-Current
Electrical Engineer: Choose components and design power distribution, communications, and software for data basing, video recording, and custom front and back end web control interface for Camera Based Assessment Survey System. Work in group environment for both design and while on research vessels; including more than 60 sea days. Assist in operation of Slocum Gliders, and deployment/recovery of Gliders and Comps weather buoys. Implement system integration of sensor, write data logging and interface software for optical micrometer to monitor coral growth. Add 802.15.4 wireless communications, complete, and test small footprint biotag.

Green Hills Software, Inc., Palm Harbor, FL Sept 2006-Nov 2009
Software Engineer: Tested and verified Integrity real time operating system, and the implementation of ARINC653, UDP/IP stack, FTP, and Journaling File System. Complied with DO-178B Level A, High and Low Level requirements testing, and Structural Coverage Analysis.

MRD Energy, LLC, Miami, FL Sept 2004-Apr 2006
Electrical Engineer: Analyzed industrial and commercial sites for power factor optimization. Manufactured and marketed standardized residential products. Wrote engineering proposals. Assisted in sales and customer relations. Developed an embedded system including engineering design of hardware and control software.

University of Florida, Gainesville, FL Aug 2002-Aug 2004
Teaching Assistantship: Assembled new labs for course instruction. Designed PCB for use in Introduction to Engineering course. Created an online database for graduate school application under the tutelage of Dr. Eric Schwartz, Associate Director of the Machine Intelligence Lab.

EDUCATION

University of Florida, Gainesville, FL
Master of Science, Electrical Engineering December 2005
Bachelor of Science, Electrical Engineering August 2002
Bachelor of Science, Computer Engineering August 2002

University of Florida Team Machine Intelligence Lab Aug 2004-May 2005
Underwater Autonomous Vehicle Competition Member: Developed in C, the Linux interface and sensor display. Developed in C, the computer vision system, performing real time visual target detection, vision based steering, and payload drop timing, from a firewire camera.

SKILLS

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|----------------------|--------------------------|--------------------|
| ■ Python | ■ HTML | ■ Javascript |
| ■ C# | ■ RESTful web design | ■ Linux |
| ■ SQL | ■ Networks Communication | ■ Board Design |
| ■ C/C++ | ■ Computer Vision | ■ Embedded Systems |
| ■ Power Distribution | ■ Assembly Language | ■ VHDL |
| ■ Java | ■ Prolog/Lisp | ■ PHP |

PUBLICATIONS

- Silverman, A., C. Lembke, S. Butcher, M. Lindemuth, S. Murawski (2018) “Enabling a Platform for Habitat and Marine Assessment with Real Time Monitoring and Synchronous Databasing” Oceans 2018 MTS/IEEE, DOI: 10.1109
- Lembke, C., D. Mann, C. Taylor, J. Gray, E Hughes, A. Silverman (2018) “Utilizing Gliders and Acoustics to Identify Fish Habitat Hotspots” Oceans 2018 MTS/IEEE, DOI: 10.1109
- Lembke, C., Grasty, S., Silverman, A., Broadbent, H., Butcher, S., Murawski, S., (2017) “The Camera-Based Assessment Survey System (CBASS): A Towed Camera Platform for Reef Fish Abundance Surveys and Benthic Habitat Characterization in the Gulf of Mexico”, Continental Shelf Research, DOI: 10.1016
- Lembke, C., X. Shi, A. Silverman, S. Butcher, S. Murawski, and S. Grasty (2013) “Development and Sea Trials of a New Camera-Based Assessment Survey System for Reef Fish Stocks Assessment”, Oceans 2013 MTS/IEEE, DOI: 10.23919/OCEANS.2013.6741218
- Panez, R., Dockendorf, K., Dubel, W., Irigoyen, E., Pietrodangelo, B., Silverman, A., Godowski, J., Schwartz, E., Nechyba, M., Arroyo, A., (2004) “SubjuGator”, AUVSI and ONR's 7th International Autonomous Underwater Vehicle Competition.
- Makeev, M., Clerc, J., Panez, R., Schipper, J., Silverman, A., Trinh, V., Schwartz, E., Nechyba, M., Arroyo, A., (2003) “SubjuGator”, AUVSI and ONR's 7th International Autonomous Underwater Vehicle Competition.
- Silverman, A., Jimenez, L., Nechyba, M., Arroyo, A., Schwartz, E., (2003) “Hand Writing Recognition System for Musical Notes”, Florida Conference on Recent Advances in Robotics

US COLLABORATORS (last 5 years)

Barbieri, S., Florida Marine Research Institute

Beckler, J., Mote Marine Laboratory

Boswell, K, Florida International University

Brissette, M., Teledyne Webb Research Corporation

Broadbent, H., University of South Florida

Buermans, J., ASL Environmental

Caillouet, R., NOAA Fisheries

Campbell, M., NOAA National Marine Fisheries Service, SEFSC

Chave, R., ASL Environmental

DeCollibus, C., Teledyne Webb Research Corporation

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

Hu, J., SRI International

Hommeyer, M., University of South Florida

Horne, J., University of Washington

Keenan, S. Florida Marine Research Institute

Law, J., University of South Florida

Lembke, C., University of South Florida

Lindemuth, M., Stratus Video

Locker, S., United States Geological Survey

Mann, D., University of South Florida / Loggerhead Instruments

Murawski, S., University of South Florida

Pearce, S., ASL Environmental
Peebles, E., University of South Florida
Piacentino, M., SRI International
Russell, R., University of South Florida
Seim, H., University of North Carolina Chapel Hill
Somerton, D., NOAA National Marine Fisheries Service, AFSC
Sutton, T., Nova Southeastern University
Switzer, T., Florida Marine Research Institute
Taylor, C., NOAA National Marine Fisheries Service, SEFSC
Zhang, D., SRI International