



Great Lakes  
Research Center

# Marine Research Assets Shared Facility (MRAF)



## Professional Staff

### Jamey H. Anderson

Coordinator, Marine Operations  
Manager, Marine Research Assets Shared Facility

jameya@mtu.edu 906-487-2914 (office) 208-251-3852 (mobile)

Professional Preparation and Education:

- Bachelor of Science, Geography, Utah State University
- Certified Boeing WaveGlider Operator



Primary responsibility for maintenance and operation of survey and research vessels, coastal monitoring buoys, Remotely Operated Vehicles (ROVs), Autonomous Underwater Vehicles (AUVs), and Autonomous Surface Vessels (ASVs) and other associated marine technologies.

Provides logistic and scientific support to Michigan Tech faculty and staff, as well as State and Federal partners, including vessel and equipment training, operation and scheduling, budget and proposal development, and project management.

Manage and promote the Marine Research Assets Shared Use Facility (MRAF) facility operation in collaboration with operations and research directors including coordinating and facilitating needs of visiting scientists from state, federal agencies and other universities.

#### **Synergistic Activities:**

Co-Investigator for Ontario Power Generation - Early-Warning System Targeting Water Intake Fouling by Cladophora. Design, test, build, deploy in-situ marine observation and sampling infrastructure in support of early warning system. Deploy other sensor systems and AUVs in support of project Co-Investigators.

Previous Co-Investigator for City College of New York/U.S. Federal Highway Administration - Post-Hazard Engineering Assessment of Highway Structures. Deployed semi-autonomous sensor systems in tidal and riverine systems to assess morphological change/scour near bridge abutments.

#### **Example Publications:**

W.C. Kerfoot, M.M. Hobmeier, F. Yousef, S.A. Green, R. Regis, C.N. Brooks, R.A. Shuchman, J. Anderson, & M. Reif (2014). Light Detection and Ranging (LiDAR) and Multispectral Scanner (MSS) Studies Examine Coastal Environments Influenced by Mining. ISPRS International Journal of Geo-Information, 3(1), 66-95.

J.H. Anderson, K.T. Weber, B.K. Gokhal, F. Chen (2011). Intercalibration and Evaluation of ResourceSat-1 and Landsat-5 NDVI. Canadian Journal of Remote Sensing, 2011, 37(2): 213-219



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## Professional Staff

### Christopher K. Pinnow

Electronics/Computer Engineer

ckpinnow@mtu.edu, 906.487.0007 (office), 906.370.7466 (mobile)

Professional Preparation and Education:

- MS Computer Science, Michigan Tech University
- BS Computer Science, Michigan Tech University
- BS Electrical Engineering, Michigan Tech University
  
- Boeing Wave Glider / Wave Glider Management System Operator
- National Instruments LabVIEW Certified Associate Developer
- Possess Michigan enhanced drivers license, completed boaters safety, Red Cross CPR & first aid and USCG cold water rescue training.



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Responsible for technical support of Michigan Tech's on-the-water research activities including the maintenance of science-based electrical, computerized, and mechanical equipment in the University boats and other water related research equipment.

Educates and supports faculty and staff on the use of specialized scientific equipment and esoteric topics, For example: remotely operated vehicles, autonomous underwater vehicles, autonomous surface vessels, and other associated marine technologies.

Mentors students in subject areas typically not covered in their regular coursework and offers technical guidance through hands-on projects augmenting educational enrichment.

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#### Activities:

Co-Investigator in a DARPA funded autonomous surface vehicle program whose purpose is to improve the survivability of small unmanned Navy boats in high sea states.

Previous Co-Investigator in a ARPA-E funded driverless car project where the objective was to improve fuel economy by adaptive routing, platooning and vehicle to vehicle communication.

#### Example Publications:

J Eisbrener, G. Murphy, D. Eade, C. K. Pinnow, K. Begum, S. Park, S.-M. Yoo, J.-H. Youn, "Recycled Path Routing in Mobile Ad Hoc Networks," Computer Communications, Vol 29, Issue 9, pp.1552-1560, May 2006.

Michigan Technological University, Department of Computer Science, August, 2005 – "Simple Application Level Checkpointing of Parallel Programs" C. K. Pinnow, P. R. Merkey



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## Professional Staff

### Travis M. White

Research Engineer, Relief Captain

tmwhite@mtu.edu 906-487-2877 (office) 906-748-1353 (mobile)

Professional Preparation and Education:

- Bachelor of Science, Mechanical Engineering, Michigan Technological University
- US Coast Guard Captains License, Master 50 Tons
- National Science Foundation Innovation Corps (I-Corps) Certified



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Responsible for administration of the Marine Autonomy Research Site and Smart Ships Coalition and coordination with the Marine Research Assets Shared Use Facility (MRAF) in support of client needs.

Provide scientific and engineering support to faculty, staff, partners, and sponsors with expertise in design, manufacturing, and integration of marine systems. Support budget and proposal development, project management, and strategic planning.

Over 10 years' experience as a licensed captain on the Great Lakes with expertise in navigation systems, marine electronics, mechanical systems, and maintenance, repair, and operations.

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#### Activities:

Co-investigator for a DARPA funded autonomous surface vehicle program to increase survivability of unmanned vessels in high sea states using intelligent trajectory planning and real-time environmental sensing. Planned and coordinated testing efforts with the United States Coast Guard using a 1/3 scale model, designed and built as part of this program, of an US Navy 11m autonomous rigid-hulled inflatable boat (RHIB).

Completed National Science Foundation Innovation Corps Training as team lead on a technology commercialization project for an "Autonomous Next Generation Vehicle".

Co-founded Superior Marine Products LLC (DBA ProNav Marine) and developed, tested, and produced marine GPS autopilot equipment, marine vessel controls, autonomous surface vessel platforms, and mobile navigation software. Coordinated intellectual property, strategic plan, commercialization strategy, and project management.

#### Example Publications:

Anderson, N. D., Benda, N. E., and White, T. M. "Networked Architecture for a Control System for a Steerable Thrusting Device" (Pending)