

Publications of LAMSS Members (While at LAMSS)

2021 (7 items)

1. Toby Schneider, Supun Randeni, and Henrik Schmidt. Fast, Cheap and Good: Development of a high performance communications and navigation system for High Latitude AUV deployments using a Virtual Ocean. In *Antarctic and Southern Ocean Forum 2021*, October 2021.
2. Bradli A. Howard. *Multi-path Penalty metric in underwater acoustic communication for autonomy and human decision-making*. PhD thesis, Massachusetts Institute of Technology, 2021.
3. Supun Randeni, Toby Schneider, Henrik Schmidt, EeShan Bhatt, and Oscar A Viquez. A high-resolution AUV navigation framework with integrated communication and tracking for under-ice deployments. *Field Robotics (under review)*, 2021.
4. Michael Benjamin, Tyler Paine, and Supun Randeni. Autonomy algorithms for stable dynamic linear convoying of autonomous marine vehicles. In *OCEANS 2021 MTS/IEEE*, October 2021.
5. Michael DeFilippo, Michael Sacarny, and Paul Robinette. Robowhaler: A robotic vessel for marine autonomy and dataset collection. In *OCEANS 2021 MTS/IEEE*, October 2021.
6. Conlan Cesar, Benjamin Whetton, Michael DeFilippo, Michael Benjamin, Michael Sacarny, Scott Reed, and Andrea Munafo. Coordinating multiple autonomies to improve mission performance. In *OCEANS 2021 MTS/IEEE*, October 2021.
7. Blake Cole and Michael Benjamin. Surface vessel collision avoidance in moos-ivp using a geodetic unscented kalman filter. In *OCEANS 2021 MTS/IEEE*, October 2021.

2020 (3 items)

8. Toby Schneider, Henrik Schmidt, and Supun Randeni. Self-adapting under-ice integrated communications and navigation network. In *2020 Underwater Communications and Networking Conference (UComms)*. IEEE, 2020.
9. Supun Randeni, Toby Schneider, and Henrik Schmidt. Construction of a high-resolution under-ice auv navigation framework using a multidisciplinary virtual environment. In *2020 IEEE/OES Autonomous Underwater Vehicles Symposium (AUV)(50043)*, pages 1–7. IEEE, 2020.
10. Supun Randeni, Erin Fischell, and Henrik Schmidt. An AUV dynamic model, based on the conservation of energy, for underwater navigation aiding. *IEEE Journal of Oceanic Engineering (Under Review)*, 2020.

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11. Michael Novitzky, Caileigh Fitzgerald, Paul Robinette, Michael R. Benjamin, and Henrik Schmidt. Updated: Virtual reality for immersive simulated experiments of human-robot interactions in the marine environment. In *Proceedings of the Workshop Virtual, Augmented, and Mixed Reality for Human-Robot Interaction ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea, March 2019. ACM/IEEE.
12. Erin Marie Fischell, Nicholas Rahardiyan Rypkema, and Henrik Schmidt. Relative autonomy and navigation for command and control of low-cost autonomous underwater vehicles. *IEEE*

- Robotics and Automation Letters*, 4(2):1800–1806, 2019.
13. Michael Novitzky, Paul Robinette, Michael R. Benjamin, Caileigh Fitzgerald, and Henrik Schmidt. Aquaticus: Publicly available datasets from a marine human-robot teaming testbed. In *Companion of the 2019 ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea, March 2019. ACM.
 14. Paul Robinette, Michael Sacarny, Michael Novitzky, Michael R. Benjamin, and Michael DeFilippo. Robot vessels versus centuries of maritime tradition: How should robots react to authorities and emergencies on the water? In *Proceedings of the Workshop The Dark Side of Human-Robot Interaction: Ethical Considerations and Community Guidelines for the Field of HRI ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea, March 2019. ACM/IEEE.
 15. Paul Robinette, Michael Sacarny, Michael DeFilippo, Michael Novitzky, and Michael R. Benjamin. Dealing with the novelty of robots: observations of interactions with an autonomous surface vehicle on a recreational waterway. In *Proceedings of the Workshop Dangerous HRI: Testing Real-World Robots has Real-World Consequences ACM/IEEE International Conference on Human-Robot Interaction*, Daegu, South Korea, March 2019. ACM/IEEE.
 16. Paul Robinette, Michael Novitzky, Michael R. Benjamin, Caileigh Fitzgerald, and Henrik Schmidt. Exploring human-robot trust during teaming in a real-world testbed. In *(Companion of the 2019 ACM/IEEE International Conference on Human-Robot Interaction)*. ACM, March 2019.
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 18. Kyle Woerner, Michael R. Benjamin, , Michael Novitzky, and John J. Leonard. Quantifying protocol evaluation for autonomous collision avoidance. *Autonomous Robots*, 43(4):967–991, April 2019.
 19. Nicholas Rahardiyana Rypkema. *Underwater and Out of Sight: Towards Ubiquity in Underwater Robotics*. PhD thesis, Massachusetts Institute of Technology, September 2019.
 20. Rui Chen and Henrik Schmidt. Robustness analysis of a convolutional neural network approach to source-range estimation in a simulated arctic environment. In *OCEANS 2019 MTS/IEEE*, October 2019.
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 22. Erin M. Fischell, Nicholas R. Rypkema, and Henrik Schmidt. Relative autonomy and navigation for command and control of low-cost autonomous underwater vehicles. *IEEE Robotics and Automation Letters*, February 2019.
 23. Gaute Hope and Henrik Schmidt. A parallelization of the wavenumber integration modeling package oases. *Computational Geosciences*, June 2019.
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29. Nicholas R. Rypkema, Erin Fischell, and Henrik Schmidt. Relative navigation for command and control of multiple low-cost autonomous underwater vehicles. *The Journal of the Acoustical Society of America*, 144(3), 2018.
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31. Nicholas R. Rypkema and Henrik Schmidt. *Formation Control of a Drifting Group of Marine Robotic Vehicles*, pages 633–647. Springer International Publishing, 2018.
32. Supun Randeni, Nicholas R. Rypkema, Erin M. Fischell, Alexander L. Forrest, Michael R. Benjamin, and Henrik Schmidt. Implementation of a hydrodynamic model-based navigation system for a low-cost auv fleet. In *IEEE OES Autonomous Underwater Vehicle Symposium*, 2018.
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39. Adam Michael Campbell. Enabling tactical autonomy for unmanned surface vehicles in defensive swarm engagements. Master’s thesis, Massachusetts Institute of Technology, Cambridge MA, June 2018.
40. Michael R. Benjamin. Capturing velocity function plateaus for efficient marine vehicle collision avoidance calculations. In *OCEANS 2018 MTS/IEEE Kobe Japan*, May 2018.

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41. Paul Robinette, Michael Novitzky, and Michael R. Benjamin. Trusting a robot as a user versus as a teammate. In *Workshop on Morality and Social Trust in Autonomous Robots at RSS 2017*, Cambridge, MA, July 2017.
42. Michael Novitzky, Paul Robinette, Danielle Gleason, and Michael R. Benjamin. A platform for studying human-machine teaming on the water with physiological sensors. In *In Workshop on Human-Centered Robotics: Interaction, Physiological Integration and Autonomy at RSS 2017*, Cambridge, MA, July 2017.
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49. Michael R. Benjamin. Fast-CPA: A layered caching algorithm for rapid closest point of approach calculations in marine collision avoidance. In *OCEANS 2017 MTS/IEEE Anchorage*, Anchorage, AK, September 2017.
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68. Nicholas R. Rypkema and Henrik Schmidt. Formation control of a drifting group of marine robotic vehicles. In *Distributed Autonomous Robotic Systems (DARS)*, London, UK, May 2016.
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