Brian R. Page

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Education

PhD	Mechanical Engineering	Purdue University	Expected S2021
	Dissertation Title: Underwater Persistence		
	Dissertation Committee: Dr. Nina Mahmoudian (chair), Dr. Peter Meckl, Dr. Xinyan Deng, and Dr. Mo Rastgaar		
MS	Mechanical Engineering	Michigan Technological University	2016
	Thesis Title: Design of Mobile Underwater Charging Station		
BS	Mechanical Engineering	Michigan Technological University	2015

Employment

Graduate Research Assistant, Purdue University	2019–Present
Graduate Teaching Assistant, Purdue University	S20
Graduate Research Assistant, Michigan Technological University	2015–2018
Graduate Teaching Assistant, Michigan Technological University	F15, S17, & S18
Dynamics Summer School Fellow, Los Alamos National Lab	2015
Technical Intelligence Officer Co-op, Central Intelligence Agency	2014
Production Engineering Co-op, Marathon Petroleum	2014
Undergraduate Research Assistant, Michigan Technological University	2013–2015

Publications

Journal Articles

[1] **B.R. Page** and N. Mahmoudian, "Untitled Experimental Docking Research," *Applied Ocean Research. In Preparation*

[2] B. Li, **B.R. Page**, J. Hoffman, B. Moridian, and N. Mahmoudian, "Rendezvous Planning for Multiple AUVs with Mobile Charging Stations in Dynamic Currents," *IEEE Robotics and Automation Letters with ICRA 2019 Option*. vol. 4, no. 2, pp. 1653-1660, 2019. DOI: 10.1109/LRA.2019.2896899

[3] **B.R. Page** and N. Mahmoudian, "Simulation Driven Optimization of Underwater Docking Station Design," *IEEE Journal of Oceanic Engineering*. 2019. DOI: 10.1109/JOE.2018.2885200

[4] S. Ziaeefard, **B.R. Page**, A.J. Pinar, and N. Mahmoudian, "Effective Turning Motion Control of Internally Actuated Autonomous Underwater Vehicles," *Journal of Intelligent & Robotic Systems*, vol. 85, no. 1, pp. 189-206, 2017. DOI: 10.1007/s10846-017-0544-3

[5] **B.R. Page**, S. Ziaeefard, A.J. Pinar, and N. Mahmoudian, "Highly Maneuverable Low-Cost Underwater Glider: Design and Development," *IEEE Robotics and Automation Letters*, vol. 2, no. 1, pp. 344-349, 2017. DOI: 10.1109/LRA.2016.2617206

Proceedings

[1] B. Moridian, **B.R. Page**, and N. Mahmoudian, "Sample Efficient Reinforcement Learning for Navigation in Complex Environments," in *IEEE International Symposium on Safety, Security and Rescue Robotics*, Würzburg, Germany, September, 2019. DOI: 10.1109/SSRR.2019.8848957

[2] **B.R. Page** and N. Mahmoudian, "AUV Docking and Recovery with USV: An Experimental Study," in *IEEE/MTS OCEANS Conference*, Marseille, France, June, 2019. DOI: 10.1109/OCEANSE.2019.8867159**Student Poster Competition**

[3] **B.R. Page**, S. Ziaeefard, L. Knop, M. Rastgaar, and N. Mahmoudian, "Robotics Education To and Through College," in *Robotics in Education Conference*, Vienna, Austria, April 2019.. DOI: 10.1007/978-3-030-26945-6_10

[4] **B.R. Page**, J. Naglak, C. Kase, and N. Mahmoudian, "Autonomous Docking for Exploration of Extraterrestrial Lakes," in *AIAA-Guidance, Navigation, and Control Conference*, San Diego, CA, January 2019. DOI: 10.2514/6.2019-1911

[5] **B.R. Page**, B. Li, J. Naglak, C. Kase, B. Moridian, and N. Mahmoudian, "Integrated Mission Planning and Adaptable Docking System for AUV Persistence," in *IEEE OES Autonomous Underwater Vehicle Symposium*, Porto, Portugal, November 2018. DOI: 10.1109/AUV.2018.8729744

[6] **B.R. Page**, J. Naglak, M. Sietsema, and N. Mahmoudian, "Littoral Magnetic and Water Column Survey Underwater Glider," in *IEEE OES Autonomous Underwater Vehicle Symposium*, Porto, Portugal, November 2018. **Awarded 1st Place Student Poster** DOI: 10.1109/AUV.2018.8729759

[7] B. Moridian, L. Wei, J. Hoffman, W. Sun, **B.R. Page**, M. Sietsema, Y. Zhang, Z. Wang, and N. Mahmoudian, "A Low-cost Mobile Infrastructure for Multi-AUV Networking," in *IEEE OES Autonomous Underwater Vehicle Symposium*, Porto, Portugal, November 2018. DOI: 10.1109/AUV.2018.8729790

[8] **B.R. Page**, J. Naglak, C. Kase, and N. Mahmoudian, "Collapsible Underwater Docking Station Design and Evaluation," in *IEEE/MTS OCEANS Conference*, Charleston, SC, October 2018. DOI: 10.1109/OCEANS.2018.8604745

[9] J. Naglak, **B.R. Page**, and N. Mahmoudian, "Backseat Control of SandShark AUV using ROS on RaspberryPi," in *IEEE/MTS OCEANS Conference*, Charleston, SC, October 2018. DOI: 10.1109/OCEANS.2018.8604630

[10] M. Miller, S. Ziaeefard, **B.R. Page**, *et al.*, "Monitoring Motivation Factors for Girls in Summer Robotics Program," in *ASEE Annual Conference and Exposition*, Salt Lake City, UT, June 2018.

[11] S. Ziaeefard, **B.R. Page**, *et al.*, "GUPPIE Program – A Hands-on STEM Learning Experience for Middle School Students," in *IEEE Frontiers in Education Conference*, Indianapolis, IN, October 2017. DOI: 10.1109/FIE.2017.8190546

[12] L. Knop, S. Ziaeefard, G.A. Ribeiro, **B.R. Page**, *et al.*, "A Human-Interactive Robotic Program for Middle School STEM Education," in *IEEE Frontiers in Education Conference*, Indianapolis, IN, October 2017. DOI: 10.1109/FIE.2017.8190575

[13] **B.R. Page**, S. Ziaeefard, B. Moridian, and N. Mahmoudian, "Learning Autonomous Systems – an Interdisciplinary Project-Based Experience," in *IEEE Frontiers in Education Conference*, Indianapolis, IN, October 2017. DOI: 10.1109/FIE.2017.8190555

[14] **B.R. Page**, S. Ziaeefard, P. Morath, V. Stumbris, and N. Mahmoudian, "ROUGHIE 2.0: Improving Performance Using a Modular Design Approach," in *IEEE/MTS OCEANS Conference*, Anchorage, AK, September 2017.

[15] S. Ziaeefard, **B.R. Page**, A.J. Pinar, and N. Mahmoudian, "A Novel Roll Mechanism to Increase Maneuverability of Autonomous Underwater Vehicles in Shallow Water," in *IEEE/MTS OCEANS Conference*, Monterey, CA, September 2016. DOI: 10.1109/OCEANS.2016.7761160

[16] **B. Page**, O. Murray, P. Tan, A.N. Marchi, A. Scheinker, D. Rees, and C. Farrar "Phase Control of RF Cavities," in *34th annual Int. Modal Analysis Conf. (IMAC)*, Orlando, FL, January 2016. DOI: 10.1007/978-3-319-29859-7_1

Patents

[1] N. Mahmoudian and **B. R. Page**, "Mobile Underwater Docking System," Publication Number. US 2019/0016425 A1, *Patent Pending.*

Teaching Experience

ME 59800: Autonomous Systems

Lead curriculum developer for new graduate course at Purdue University (Spring 2020)

MEEM 4707: Autonomous Systems

Lead curriculum developer for new course at Michigan Tech (Spring 2017 & 2018). Resulted in conference publications [3][13].

MEEM 4700: Dynamic Systems and Controls

Three lab sections led. Won Outstanding Graduate Student Teaching Award (Fall 2015).

Awards & Honors

Purdue Graduate Student Government Travel Grant	2019
IEEE OES OCEANS-Marseille Student Poster Competition	2019
IEEE OES AUV Symposium 1st Place Student Poster	2018
Michigan Tech Graduate Student Government Travel Grant	2017-2018
First Place, Consumer Products Day Competition	2016
First Place Poster, Graduate Research Colloquium	2016
Outstanding Graduate Student Teaching Award	2016
Dynamics Summer School Fellow, Los Alamos National Lab	2015
Top Secret Clearance, Central Intelligence Agency	2014

Service & Outreach

Reviewer, Springer Autonomous Robots	2020
Reviewer, ASME Journal of Mechanisms and Robotics	2019–Present
Reviewer, IEEE Transactions on Vehicular Technology	2019–Present
Reviewer, IEEE International Conference on Robotics and Automation	2016–Present
Reviewer, IEEE/RSJ International Conference on Intelligent Robotics and Systems	2016–Present
Instructor, Michigan Tech Summer Youth Programs	2016–2017
Presenter, Michigan Tech Water Festival	2013–2016
Presenter, Michigan Tech STEM Festival	2013