



The Institute of Marine Engineering, Science & Technology



Eastern USA Branch

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April 26, 2017

MEETING NOTICE

The next technical meeting of the IMarEST Eastern USA Branch will be a joint session with the Society of Naval Architects and Marine Engineers (SNAME), the Society of Marine Port Engineers (SMPE), and the American Society of Naval Engineers (ASNE). This meeting is being hosted by ASNE.

Date: Thursday, May 18, 2017

Location: O'Reilly's Bar + Kitchen
21 West 35th Street, New York, NY 10001
(35th Street between 5th & 6th Avenues)

Topic: Underwater Autonomous Vehicles in Cluttered Underwater Environments

Presenter: Dr. Brendan Englot, Assistant Professor of Mechanical Engineering
Stevens Institute of Technology

<u>Time:</u>	Social Hour	– 5:00 PM	<u>Cost:</u>	Members	– \$40.00
	Dinner	– 6:00 PM		Non-Members	– \$55.00
	Technical Session	– 7:00 PM		Student Members	– \$15.00
				Student Non-Members	– \$25.00

Additional details about this presentation and future meetings can be found on the following pages.

Please E-mail your plans to attend to Bradley Golden, Chairman & Honorary Secretary (bradley.golden@tritec-marine.com) by Tuesday, May 16, 2017. We encourage inviting prospective new members interested in joining the Institute to attend a technical meeting as a guest of the Eastern USA Branch of the IMarEST.

Best regards,

Bradley D.M. Golden, Chairman & Honorary Secretary

Vice Chair – Technical
Paul Hormann
pmhormann@aol.com

Honorary Secretary Emeritus
Robert J. Bazzini



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TECHNICAL PRESENTATION INFORMATION

- Date: Thursday, May 18, 2017
- Location: O'Reilly's Bar + Kitchen
21 West 35th Street, New York, NY 10001
(35th Street between 5th & 6th Avenues)
- Topic: Underwater Autonomous Vehicles in Cluttered Underwater Environments
- Presenter: **Dr. Brendan Englot, Assistant Professor of Mechanical Engineering
Stevens Institute of Technology**

Dr. Englot received S.B., S.M., and Ph.D. degrees in Mechanical Engineering from the Massachusetts Institute of Technology in 2007, 2009, and 2012, respectively. At MIT, he studied motion planning for surveillance and inspection applications, deploying his algorithms on an underwater inspection robot that is now being produced in quantity for the US Navy.

During 2012-2014, Brendan was with United Technologies Research Center in East Hartford, Connecticut, where he was a Research Scientist and Principal Investigator in the Autonomous and Intelligent Robotics Laboratory (AIRLab) and a technical contributor to the Sikorsky Autonomous Research Aircraft (SARA). At Stevens Institute of Technology, he directs the Robust Field Autonomy Lab, which focuses on robust autonomous navigation solutions for robots operating in harsh and unstructured environments.

He is a recipient of a 2017 NSF CAREER award.

- Abstract: A three-tiered research effort to develop efficient navigation algorithms for autonomous underwater vehicles operating in close proximity to piers, ships, and offshore structures where situational awareness is essential is presented. The first tier comprises a foundation for navigating in the absence of prior knowledge of the environment - 3D localization and mapping, which is explored using an underwater robot equipped with a scanning sonar. Supervised learning techniques are applied to build real-time predictive 3D maps over sparse and noisy sonar data. The middle tier of the effort addresses exploring an unknown environment while a map is being constructed – and how to make efficient decisions by leveraging concepts from machine learning and information theory. Finally, when an accurate model of the environment is available, approaches are presented for maneuvering that will allow a robot to efficiently inspect complex structures.

This presentation is expected to be accredited for 1 PDH. Please contact SNAME's Professional Engineer Continuing Education Program Evaluator, Professor Alan Rowen (alanrowen@gmail.com), for more details.



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NEW YORK AREA JOINT SOCIETIES' MEETING SCHEDULE, 2016-2017

Date	Day	Event	Host	Location	Presentation
29 Sep 2016	Thursday	SNAME Meeting Past Chairmen's Night	SNAME	SUNY Audit 116 E. 55 th St	CFD Paper/Timothy Yen PhD, CD-Adapco
26 Oct 2016	Wednesday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	SUNY Audit 116 E. 55 th St	Innovation Adopters' Selection Priorities – The Case of Alternative Fuels/Amit Mokashi
2-5 Nov 2016	Tuesday- Saturday	SNAME Maritime Convention Bellevue Washington	SNAME	Bellevue WA	Papers at Meeting
15 Nov 2016	Wednesday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	SUNY Audit 116 E. 55 th St	Challenges and Achievements of CFD (Computational Fluid Dynamics) for Hydrodynamic Applications/ Alain Demeulenaere
15 Dec 2016	Thursday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SMPE	Peninsula Newark	Forces in Mooring Lines of Large Tankers/Rune Iversen
18 Jan 17	Wednesday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SMPE	Peninsula Newark	Composite Materials/ John Kozel
(TBD) Feb 17		SMPE Family Day	SMPE	Landmark	TBD
14-16 Feb 2017	Tuesday- Thursday	TSS 2017 (ASNE Day)	ASNE	Washington, DC	Papers at Meeting
27 Feb 2017	Monday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	SUNY Audit 116 E. 55 th St	Ferries in the Developing World: Where the opportunities are/ Roberta Weisbrod
16 Mar 2017	Thursday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting SNAME Elections	IMarEST	SUNY Audit 116 E. 55 th St	Design Features and Construction of Passenger Schooner AMERICA 2 / John Scarano
13 Apr 2017	Thursday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting (Student Paper Night)	SNAME	Riccardo's 21-01 24 th Av Astoria	Student Papers
18 May 2017	Thursday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	ASNE	O'Reilly's 21 W. 35 th St	Underwater Autonomous Vehicles in Cluttered Underwater Environments / Brendan Englot
7 Jun 2017	Wednesday	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	SUNY Audit 116 E. 55 th St	TBD