



# The Institute of Marine Engineering, Science & Technology



## Eastern USA Branch

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November 10, 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 the IMarEST.

Date: Wednesday, November 15, 2017

Location: **Please note change in location:**  
India House  
1 Hanover Square  
New York, NY 10004

Topic: The Shipboard Environment Aboard the International Space Station

Presenter: Capt. William Shepherd (USN, Ret.), Former NASA Astronaut

<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](mailto:bradley.golden@tritec-marine.com)) by Friday, November 10, 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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## **Eastern USA Branch**

### **TECHNICAL PRESENTATION INFORMATION**

**Date:** Wednesday, November 15, 2017

**Location:** **Please note change in location:**

India House  
1 Hanover Square  
New York, NY 10004

**Topic:** The Shipboard Environment Aboard the International Space Station

**Presenter:** **Capt. William Shepherd (USN, Ret.), Former NASA Astronaut**

William Shepherd has served as a Navy SEAL, NASA Astronaut, Program Manager, and Senior Government Official with the Department of Defense (DOD). He started his career in 1971 as an Underwater Demolition "Frogman", and Navy SEAL, with assignments to the Pacific, Atlantic, and European theaters of operation. In 1984, he was one of 17 Astronaut Candidates in NASA's Astronaut Group 10. Captain Shepherd flew as a NASA Mission Specialist and Flight Engineer on 3 Space Shuttle flights. Capt. Shepherd and his crews carried DOD and scientific payloads to space, performed materials and life science experiments in microgravity, and launched the interplanetary probe "Ulysses" into the first polar orbit of the Sun. In 1993, Capt. Shepherd was selected to serve as Program Manager for the new International Space Station (ISS). He led a 16 nation partnership to design and build this new orbital "gateway" to space. In 1996 Capt. Shepherd was named by Vice President Gore and Russian Premier Chernomyrdin to command the "First Expedition" to the new space station. In 2000, Capt. Shepherd's crew, with Russian Cosmonauts Yuri Gidzenko and Sergei Krikalev, launched from Kazakhstan aboard a Soyuz rocket, flew into Earth orbit, and docked with the Space Station. From Oct 2000 to March 2001, The Expedition One crew brought the station to life, establishing the operational and research capabilities of the new outpost. Their 4 ½ month mission covered 58,000,000 miles—equal to two-thirds the distance between Earth and Mars. Now approaching its 18th year of continuous human operations, ISS is a robust 500 ton space "ship"—a home to hundreds of astronaut-explorers, on more than 50 expeditions, who have conducted thousands of hours of unique research activity. The ISS partnership, formed 25 years ago, remains a singular example of international cooperation, in a very large and complex program.

Capt. Shepherd left NASA in 2001 to serve as a technical advisor to the Navy's SEAL headquarters in California, and later was the U.S. Special Operations Command's first "Science Advisor" in Tampa Fla. Capt. Shepherd is currently a private consultant to government and industry, helping to advance national security capabilities and technologies.



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Capt. Shepherd received a Bachelor's Degree in Aerospace Engineering from the U.S. Naval Academy, and Master's and Engineer's degrees in Mechanical and Ocean Engineering from MIT. Although he kept his status as a Navy Frogman throughout his NASA career, he received NASA's Steve Thorne Aviation Award and was designated "Honorary Naval Aviator Number 30" by the Chief of Naval Operations. He has also received the Defense Distinguished Service Medal, the National Intelligence Medal, the Spirit of St. Louis Medal, the Gagarin Gold Medal, the Robert H. Goddard Trophy, and the Congressional Space Medal of Honor. In 2009, NASA's International Space Station team, which Capt. Shepherd led on the ground and in space, won the Collier Trophy, an award recognizing the Nation's greatest achievements in aviation and astronautics.

Capt. Shepherd is married to the former Beth Stringham of Houston Texas. They reside in Virginia Beach Va.

**Abstract:** This presentation introduces NASA's efforts to design, build, launch, and operate an integrated orbital space platform in collaboration with 15 other countries, including the Russian Federation.

Through video and a narrative description, this presentation describes the early construction, launch, and crew operations of the "first expedition" aboard the International Space Station. The "space station" now serves in part as a prototype for future large expeditionary vehicles, ones which will take humans to live and work far beyond Earth orbit.

The space station is a "shipboard" environment, distinct from an aircraft experience, and the presentation will touch on the many parallels with ship design, engineering, and operations, as well as themes of technology, history, design, cross cultural understanding, teamwork, risk, and performance.

The talk will conclude with the presenter's vision for our future space explorations, and a discussion about the vehicles and program activities which will be required to make them happen.

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](mailto:alanrowen@gmail.com)), for more details.



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### NEW YORK AREA JOINT SOCIETIES' MEETING SCHEDULE, 2017-2018

Date	Day	Event	Host	Location	Presentation
18 Sep 2017	Mon	SMPE Golf Outing	SMPE	Forest Hill Field Club Bloomfield, NJ	
28 Sep 2017	Thur	SNAME Meeting Past Chairman's Night	SNAME	SUNY Global Center 116 E. 55 <sup>th</sup> St	SNAME OpenCalc: History, Status, Future/ Steven M. Hollister
18 Oct 2017	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	O'Reilly's 21 W. 35 <sup>th</sup> St	Nekton Deep Ocean Exploration 2018-21 Indian Ocean Mission/ Oliver Steeds & Alex Rogers
24-27 Oct 2017	Tue- Fri	SNAME Maritime Convention	SNAME	Houston, TX	Papers at Meeting
15 Nov 2017	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	IMarEST	India House 1 Hanover Sq.	The Shipboard Environment Aboard the International Space Station/Capt. William Shepherd
14 Dec 2017	Thur	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SMPE	Iberia Peninsula Newark, NJ	(TBD)
17 Jan 2018	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting (SMPE Elections)	SMPE	Iberia Peninsula Newark, NJ	(TBD)
11 Feb 2018	Sun	SMPE Valentine's Day/ Family Day	SMPE	The Graycliff Moonachie, NJ	
15 Feb 2018	Thur	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	(TBD)	Ecochlor Ballast Water Treatment System/Pete Thompson & Katie Weaver
21 Mar 2018	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting (SNAME Elections)	IMarEST	Maritime Industry Museum Ft. Schuyler	(TBD)
18 Apr 2018	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting (Student Paper Night)	SNAME	Riccardo's by the Bridge Astoria, NY	Student Papers
9 May 2018	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	ASNE	(TBD)	(TBD)
13 Jun 2018	Wed	SNAME/IMarEST/SMPE/ ASNE Joint Meeting	SNAME	(TBD)	(TBD)
18-20 Jun 2018	Mon- Wed	TSS/ASNE Day 2018	ASNE	Washington DC	Papers at Meeting