SMART SHIPS COALITION
OF THE GREAT LAKES-ST. LAWRENCE

THE SOCIETY OF NAVAL ARCHITECTS & MARINE ENGINEERS

Smart Ships Coalition
and
SNAME Great Lakes & Great Rivers

FALL 2023 WORKSHOP

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SMART SHIPS COALITION
OF THE GREAT LAKES-ST. LAWRENCE

2023 SMART SHIPS COALITION (SSC) WORKSHOP AND GREAT LAKES / GREAT RIVERS SECTION OF THE SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS (SNAME) CHAPTER MEETING		
September 21-22, 2023		
Northwestern Michigan College, Hagerty Center		
Traverse City, Michigan		
Registration cost $125 (includes all meals)-->Register HERE by September 8th		
There is a reduced registration fee for students and retired SNAME members–contact travism@bayengna.com for registration discount information.		
(Agenda Times are Eastern Daylight Time--Final Agenda Subject to Change)		
Tuesday, September 19, 2023		
8:00 AM - 5:00 PM	Lakebed 2030 Conference Day 1	This event is not included in the Smart Ships Coalition Workshop and SNAME Chapter Meeting registration and requires a separate registration. A full schedule for the Lakebed 2030 Conference is available here.
Wednesday, September 20, 2023		
8:00 AM - 5:00 PM	Lakebed 2030 Conference Day 2	This event is not included in the Smart Ships Coalition Workshop and SNAME Chapter Meeting registration and requires a separate registration. A full schedule for the Lakebed 2030 Conference is available here.
3:00 - 5:00 PM	Technology demonstrations on the water: Mythos AI Archie Autonomous Hydrographic Vessel	

Thursday, September 21, 2023		Presentation Topics and Speaker Bios
8:00 AM - 12:00 PM	Lakebed 2030 Conference Day 3	This event is not included in the Smart Ships Coalition Workshop and SNAME Chapter Meeting registration and requires a separate registration. A full schedule for the Lakebed 2030 Conference is available here.
11:00 AM - 12:00 PM	SNAME Chapter Meeting (for SNAME members only--contact travism@bayengna.com)	
12:00 PM - 1:00 PM	Smart Ships Coalition / SNAME Networking Lunch, Opening Remarks, Acknowledgement of Event Sponsors (Travis White, Smart Ships Coalition & Travis Martin, Great Lakes / Great Rivers Section of the Society of Naval Architects and Marine Engineers)	
1:00 PM - 1:45 PM	Maritime Innovation Roadmap (Jean Fahmy, CSL Group)	Presentation Topics: We'll explore the current situation of AI in the maritime industry; how do we use Artificial Intelligence to improve operations? A look at the problems we all face, the future vision of AI, maritime AI use cases, the foundation for shipping autonomy, and the need for industry collaboration to unlock the "Maritime Innovation Roadmap". About the Speaker: Jean Fahmy is a seasoned CTO, tech entrepreneur, and digital transformation expert with over 26 years of experience leading through creativity, innovation, and an entrepreneurial spirit. He has founded, built, managed and sold 3 technology businesses and is currently in charge of technology for an international 160-year-old maritime shipping company, leading digital transformation, business applications, data, infrastructure and connectivity. Jean has served as CTO for over 30 renown consumer brands, has garnered over a dozen Technology and Entrepreneurship awards, and taught Technology Entrepreneurship at l'École Polytechnique for 8 years. Jean is a frequent speaker at Technology and Innovation conferences.

1:45 PM - 2:30 PM	Automation in Maritime Machinery Systems (Randy Barr, Marine Automated System Technologies)	Presentation Topics: A focus on machinery control including real equipment and real world examples on the ability for real time monitoring from the office and ability to service remotely. About the Speaker: Randy Barr, P.E., founded Marine Automated System Technologies (MAST) in 2003 and has served maritime companies for over 25 years by supplying specialized industrial controls and equipment. During this time he has led projects including ACCU Unmanned Engine Room control, automatic ballasting, and automatic unloading on numerous Great Lakes fleet M/Vs and self unloading control of powdered cement for major barge companies.
2:30 PM - 3:15 PM	The Practical and Secure Application of Modern Computer Technology in Maritime Solutions (Dean Shoultz, Ripple)	Presentation Topics: In this session we will create a fictional marine transportation company, along with the customer and supplier ecosystems they work with, including shipyards, auditors, mariners, maintenance engineers, regulatory authorities, and other real-world business entities and scenarios. We will then, piece by piece, create a technology diagram that integrates all the technologies discussed until a final, master diagram is completed. Each section added to the diagram will be examined from an architectural, technical, cost, maintenance, and business value perspective. Technologies covered include: internet of things and digital twins, machine learning, augmented and mixed reality, and cognitive services. About the Speaker: Dean Shoultz has a diverse work experience in the technology industry. In 1991, he founded Advanced Software and served as both CEO and Founder. Dean later became the CTO until 2007. In 2007, he founded MarineCFO, Inc., where he currently holds the role of CTO. In 2010, Dean became the Chief Software Architect and Founder of VerticaLive. From 2011 to 2012, Dean was the CEO and Founder of UA Live 365. In 2015, he took on the role of CTO at UABusinessCloud.com and OpsGen. Additionally, he was the CTO at UA Business Software from 1992 to 2007.

3:15 PM - 4:00 PM	Industry Panel Discussion--Collaborative Approach to Advancing the Maritime Innovation Roadmap (facilitated discussion led by Jessica Daignault, Kongsberg Maritime)	Panel Topics: This facilitated panel will discuss the "Maritime Innovation Roadmap" and dive deeper into the topics shared by the featured presenters. There will be an opportunity for audience Q&A. Panelists: Jean Fahmy (CSL Group), Randy Barr (MAST), Dean Shoultz (Ripple), Eric Helder (Interlake Maritime), Brian Connon (Saildrone)
4:30 PM - 6:30 PM	Networking Event, Hosted Bar and Appetizers provided by SSC and SNAME	
Friday, September 22, 2023		
7:30 AM - 8:30 AM	Smart Ships Coalition / SNAME Networking Hour (Breakfast and Coffee Provided), Opening Remarks, Acknowledgement of Event Sponsors (Travis White, Smart Ships Coalition & Travis Martin, Great Lakes / Great Rivers Section of the Society of Naval Architects and Marine Engineers)	
8:30AM - 9:15 AM	Autonomy Does Not Have To Mean Uncrewed (Allen Flick, Mythos AI)	Presentation Topics: An overview of how Mythos AI is building, testing, and operating autonomous hydrographic survey vehicles using crew onboard to provide value and focus on the parts of autonomy that matter. How our approach is building towards a truly uncrewed future and the interactions we've had with policy / regulation. About the Speaker: Allen is a cofounder and the Chief Autonomy Operations Officer at Mythos AI. He's spent the last 13 years developing and testing autonomous vehicles. His first experience in this field was with unmanned vehicle projects for the Office of Naval Research such as the LDUUV INP. More recently before Mythos, he spent 5 years leading test engineering and development testing of self-driving cars at Uber ATG and Argo AI.

9:15 AM - 10:00 AM	Armada 8 Deployment at Michigan Tech and Ocean Infinity Global Overview (Andy Sherrell, Ocean Infinity America)	Presentation Topics: Announcement of industry-academic partnership between Ocean Infinity and Michigan Technological University to deploy Armada 8m vessel in Great Lakes, Ocean Infinity global overview, regulatory landscape and implications for domestic and international autonomous vessel operations About the Speaker: Andy has worked with underwater vehicles for over 25 years, as project manager, expedition leader, engineer, operator and technician. Broad operational experience performing multi-vehicle deep water search and salvage operations using AUVs, ROVs, towed systems, landers and manned submersibles. Involvement in the design and improvements of a wide variety of underwater vehicles and their associated sub systems and sensor packages. Andy currently leads Ocean Infinity America's Maritime Operations.

10:00 AM - 11:00 AM	Updates from United States Coast Guard on Autonomous Vessel Operations and Policy Work (LCDR Carmine Faul, LT Matthew Zanella, United States Coast Guard)	Presentation Topics: What is the Autonomous Policy Council (AutoPoCo), 2023 NDAA: language authorizing pilot program for USCG to consider spaceflight vessels, International community: IMO's MSC 107/Joint working group key takeaways, Challenges with marine autonomy, Discussion of future guidance towards UMS About the Speakers: Lieutenant Commander Carmine Faul: LCDR Carmine Faul is currently assigned to the office of design and engineering standards (CG-ENG-3) at USCG Headquarters, where he collaborates with Coast guard, industry, and inter-agencies to develop and implement design and engineering standards/policies of commercial vessels. Carmine graduated from the Coast Guard academy in 2013 with a Bachelor's of Science in Naval Architecture and Marine Engineering. Following graduation, Carmine served onboard the Coast Guard Cutter TAHOMA (WMEC 908) as a student engineer from 2013 – 2015, and then as a Coast Guard marine inspector from 2015-2018 out of Seattle, Washington. Carmine received his master of science in engineering through the University of Washington in 2020, and his Professional Engineer License in 2021. LT Matthew Zanella has worked at the Coast Guard's Office of Commercial Vessel Compliance (CG-CVC) since June 2020. In his current role he oversees the national Port State Control program. His responsibilities include setting national level policies, as well as liaising with foreign governments, class societies, and international organizations to align global objectives affecting an annual average of 10k vessel exams carried out by 36 field units. He also serves as the office's lead on various digital technology initiatives, engaging frequently with industry and fellow international Port State Control authorities on evolving risk in the maritime industry including the use of autonomous technologies and cybersecurity. Prior to reporting to CG-CVC, LT Zanella completed his M.S. in Ocean Engineering from Virginia Tech as part of the Coast Guard's Marine Safety Engineering

		program and served as a marine inspector at Marine Safety Unit Port Arthur, TX from 2015 - 2018. LT Zanella earned a B.S. in Marine Transportation and a 3rd Mate Unlimited Deck Tonnage license from SUNY Maritime College in 2012. He sailed as a licensed deck officer prior to joining the Coast Guard.
11:00 AM - 12:00 PM	Updates from Transport Canada about Marine Autonomous Surface Ships (MASS) in Canadian Waters (Mr. Howard Posluns, Transport Canada)	Presentation Topics: Enabling Maritime Autonomous Surface Ships (MASS) in Canada--updates about ongoing activities with Transport Canada About the Speaker: Howard is the Chief of Transport Canada's Advanced Technology, Multi-Modal R&D initiatives at the Innovation Centre
12:00 PM - 1:00 PM	Smart Ships Coalition / SNAME Networking Lunch, Acknowledgement of Event Sponsors	
1:00 PM - 1:45 PM	Lloyd's Register on Vessel Automation (Graeme Hyde, Lloyd's Register)	Presentation Topics: Overview of Lloyd's Register and its role in vessel automation. About the Speaker: Graeme is responsible for Business Development within the Americas of Materials and Equipment companies delivering components for Marine & Offshore, industries by ensuring that Type Approval of Marine & Offshore Equipment & Components, and Materials.
1:45 PM - 2:30 PM	ABS Smart and Autonomous Frameworks and Requirements (Sharat Valluri, American Bureau of Shipping)	Presentation Topics: Smart and Autonomous functions are becoming increasingly common onboard marine vessels and offshore units. In this presentation, we will discuss ABS frameworks for Smart, Autonomous and Remote-Control functions, as well as the safety, technical and survey requirements for product design assessments and notations to recognize vessels fitted with such functions. About the Speaker: Sharat Valluri has worked in the maritime and offshore industries for 25 years in various roles, including ship operation and maintenance, structural design, strategic business planning, digital technology qualification, and digital processes, tools & product development. He has worked in the Ship Engineering, International Government and Strategic Business Planning departments

		at the American Bureau of Shipping's world headquarters in Houston. He is currently the Director of Technology – Data and Digital Applications group. Here, he leads maritime digital transformation by developing and qualifying cutting-edge technologies such as structural and machinery Digital Twins, Smart functions, Structural Health Monitoring, Asset Integrity Management, Predictive Analytics, and condition-based programs. Sharat is an ex-chief engineer with 10 years of international sea-going experience on board oil tankers and product carriers prior to joining ABS. Sharat holds an MBA from the Wharton School of the University of Pennsylvania, and an MS in Ocean Engineering from the University of California, Berkeley.
2:30 PM - 3:30 PM	Panel Discussion--Developing a Regulatory Roadmap (facilitated discussion led by Eric Helder, Interlake Maritime Services)	Panel Topics: This facilitated panel will discuss the convergence of regulators, classification societies, insurers, and industry with respect to maritime automation. Panelists: LCDR Carmine Fault (USCG), LT Matthew Zannela (USCG), Mr. Howard Posluns (Transport Canada), Graeme Hyde (Lloyd's Register), Sharat Valluri (American Bureau of Shipping)
3:30 PM	Program conclusion	