

14TH INTERNATIONAL
MINE TECHNOLOGY
VIRTUAL
SYMPOSIUM

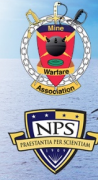


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MAY 25-27, 2021



AGENDA – ALL TIMES ARE SHOWN AS U.S. EASTERN
as of 19 May 2021

(All Speakers have accepted unless otherwise indicated)

The Art of the Possible: Uncovering the Potential of Mine Warfare

Tuesday, 25 May 2021

- 0955-1000 Welcome Remarks – **RDML Rick Williams, USN (Ret)**, Expeditionary and Mine Warfare Adviser, Naval Postgraduate School
- 1000-1045 **RAADM Michael Wettlaufer, USN**, Commander, Military Sealift Command
- 1055-1125 **Dr. Frank DiGiovanni**, Deputy Director, Expeditionary Warfare Division, OPNAV N95B
- 1130-1200 **RDML Chris Alexander, USN**, Commander, Naval Surface and Mine Warfighting Development Center (SMWDC) and **CAPT R. A. Baughman, USN**, Division Director, SMWDC
- 1205-1245 **RDML Casey Moton, USN**, Program Executive Officer, Unmanned and Small Combatants (PEO-USC)
- 1250-1350 PEO Panel
Moderator: **Dr. James (Sam) Taylor**, Mine Warfare Senior Leader
Panelists: **CAPT Danielle George, USN**, PMS 495, Mine Warfare Programs
CAPT Pete Small, USN, PMS 406, Unmanned Maritime Systems
CAPT Dan Malatesta, USN, PMS 408, Expeditionary Missions
CAPT Gus Weekes, USN, PMS 420, LCS Missions Modules
Ms. Andrea Bell-Miller, PEO, International Programs
- 1400-1600 Technical Sessions (See Page 3)
- 1610-1700 **Mr. Brian Almquist**, Office of Naval Research
- 1710-1800 **CDRE John Stavridis, RAN**, Director General Littoral

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Wednesday, 26 May 2021

- 1000-1045 **ADM Christopher Grady, USN**, Commander, US Fleet Forces Command
- 1100-1150 NATO Future Naval Mine Warfare Vision
CDR Herman Lammers, NLD N, Director, NATO Naval Mine Warfare Center of Excellence
- 1200-1250 NATO Unmanned Systems Operating Concepts – Interoperability and Standardization
CDR Herman Lammers, NLD N, Director, NATO Naval Mine Warfare Center of Excellence
- 1300-1400 International Panel
Moderator: **Ms. Andrea Bell-Miller**, PEO USC, Director of International Programs
Panelists: **CAPT Yves-Pierre Pilfert**, France Maritime Forces, NOB-NW
CDR Ben Vickery, RN, Captain Patrol, Underwater Exploitation and Diving
CMDR Brad Vizard, RAN, SEA 1905 Lead
- 1410-1610 Technical Sessions (See Page 4)
- 1625-1705 **CDRE Darron Kavanagh, RAN**, AM CSC, Director General Combat Management & Payload Systems, (Capabilities Acquisition & Sustainment Group) Australia
- 1710-1800 **Dr Peter Adair**, Technical Director, NSWC Panama City Division

Thursday, 27 May 2021

- 1000-1050 **VADM William R. Merz, USN**, Commander, US SEVENTH Fleet
- 1100–1140 **CAPT Michael L. Egan, USN**, Mine Warfare Branch Head, OPNAV N952
- 1150-1220 **RADM William J. Houston, USN**, Director, Undersea Warfare Division, OPNAV N97
- 1230-1330 Fleet Panel
CAPT Derek Brady, USN, Mine Countermeasures Squadron 7 (MCMRON-7)
CAPT Oscar Rojas, USN, Commander Task Force 52 (CTF-52)
- 1400-1645 Technical Sessions (See Page 5)
- 1700-1750 **VADM Andrew Lewis, USN**, Commander, US SECOND Fleet
- 1750-1800 Final Closing Remarks – **VADM Barry Costello, USN (Ret)**, Senior Mine Warfare Advisory Council

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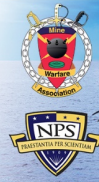


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TECHNICAL SESSIONS

TUESDAY, 25 MAY 2021

TRACK 1

TRACK 2

TRACK 3

TRACK 4

1400 to 1430	MCM Sensors, AI / Machine Learning and Autonomy Applied Research Presented by: Tory Cobb and Joshua Weaver, Office of Naval Research Code 32	Simulation of a Small Unconventional UUV Performing Low-Speed Maneuvers in Energetic Shallow Water Environments Presented by: Jonathan Eastridge, Naval Surface Warfare Center, Panama City Division	Applied Software Development and Machine Learning Operations in MCM. Presented by: CDR Jonathan Haase (PMS 408)	Enabling Technologies for Unmanned Systems. Presented by: LCDR Jessica Olena (PMS 406)
1445 to 1515	Advances in Synthetic Aperture Sonar Sensing Capabilities Presented by: Jim Prater, Naval Surface Warfare Center Panama City Division	Seabed Warfare and the Art of the Possible Presented by Dr. Daniel D. Sternlicht, Dr. K. Todd Holland, CAPT D. Brian Osgood (USN Retired) Naval Surface Warfare Center Panama City Division	Single Sortie Detect to Engage. Presented by: Mr. Andrew Fuller (PMS 495)	Integration and Interoperability of Unmanned Systems. Presented by: Ms. Andrea Bell, PEO International Programs
1530 to 1600	Enabling Faster Technology Maturation Using the Cloud - Presented by: Jeremy Hatcher, Naval Surface Warfare Center Panama City Division	Coalition Underwater Mine & IED Defeat (CUMID) Presented by: Mr. Jose Salas, NSWC PCD; Mr. Øivind Midtgaard, FFI Norway; and Dr. Anna Crawford, DRDC Canada	Advancing Non-Towed Acoustic and Magnetic Minesweeping Technologies Presented by Mr. Jason Pappafotis (PMS 420)	

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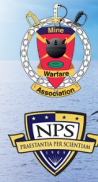


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TECHNICAL SESSIONS

WEDNESDAY, 26 MAY 2021

	TRACK 1	TRACK 2	TRACK 3	TRACK 4
	Sensors	Autonomy	Other	Platforms
1415 to 1445	<p>A combined UUV payload for SCM and RI –</p> <p>Presented by: Ioseba (Joe) Tena, Sonardyne UK and Luke Richardson, 2G Robotics</p>	<p>Real World, USN and Coalition Navy, Variable Mission Levels of Autonomy for Multi-domain, Manned-Unmanned Teaming - Fleet Forces Don't Have to Control Robots, They Command Them.</p> <p>Presented by: Alastair Cormack, Seebyte</p>		<p>MCM Replacement Program (rMCM) Belgium & Royal Netherlands Navies.</p> <p>Presented by: Commander Claude Bultot, Program Director</p>
1500 to 1530	<p>Mine Burial Assessment using a Multi-Frequency Multibeam Echosounder</p> <p>Presented by: Mike Brisette, R2Sonic LLC</p>	<p>Challenges of the Unmanned Systems During Future Operational Deployments.</p> <p>Presented by: Commander Yvo Jaenen, BE Navy</p>	<p>Single-Sortie Detect to Engage (SSDTE) Project Summary and Follow-on efforts</p> <p>Presented by: David VanDellen and Dan Kucik, Naval Surface Warfare Center Panama City Division</p>	<p>Large Displacement UUV for VSW Mine Hunting with OTH Ingress</p> <p>Presented by: Tim Raymond and Dave Shea, Kraken Robotic Systems Inc</p>
1545 to 1615	<p>Barracuda: Progress towards autonomous mine neutralization – Raytheon Technologies</p> <p>Presented by: Marcos Sastre-Cordova, Raytheon Technologies</p>	<p>MQ-8C Fire Scout & AMCM</p> <p>Presented by: Scott Weinpel, Northrop Grumman</p>	<p>Modeling and Simulation of Offensive Denial Mining</p> <p>Presented by: Dr. Paul Beery, Naval Postgraduate School</p>	<p>UUV Operations in Complex Mission and Training Environments</p> <p>Presented by: Adam Mara, General Dynamics Mission Systems</p>
Track Sponsor	Raytheon	Northrop Grumman		

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TECHNICAL SESSIONS

THURSDAY, 27 MAY 2021

	TRACK 1	TRACK 2	TRACK 3
	Mine Hunting	VSW/SZ/BZ Solutions	Other
1400 to 1430	<p>A Novel Wet-Mate Connector Requiring No Oils or Seals</p> <p>Presented by: Jim Windgassen, Northrop Grumman</p>	<p>Surf Zone Modeling Tool (NAVSEA / SBIRS)</p> <p>Presented by: Tabatha DeJesus, Arete</p>	<p>Unmanned MCM Systems Which Operational Gains?</p> <p>Presented by: Antony Penn, ECA Group and Aymeric MOULLART DE TORCY, ECA Group</p>
1445 to 1515	<p>Material Identification Reflectivity Kernel (MIRK) for a New Approach to Mine and Submarine Target Discrimination.</p> <p>Presented by: Jim Byrnes, Prometheus, Inc</p>	<p>Amphibious Unmanned Ground Vehicle for VSW/SZ/BZ mine detection and neutralization -</p> <p>Presented by: Arnis Mangolds, C-2i, Inc</p>	<p>Mine Neutralisation from an Unmanned Surface Vessel</p> <p>Presented by: Mr TEO Tee Cheng Defence Science & Technology Agency and Ms SIOW Chengxin Defence Science & Technology Agency</p>
1530 to 1600	<p>EOD Workspace Simulator: A Valuable Training Tool and Simulator for OPENSEA Software Development Quality Control</p> <p>Presented by: Greg Probst, Greensea Systems, Inc</p>	<p>Beach Zone Modeling Toolset (NAVSEA / SBIRS)</p> <p>Presented by: Tabatha DeJesus, Arete</p>	<p>WIEVLE: Spherical AUV Prototype Development, Testing and Analysis</p> <p>Presented by: Ross Eldred, Naval Postgraduate School</p>
1615z to 1645	<p>SAFE C2: Long Range Over the Horizon Standoff C2 for Remotely Operated Vehicles</p> <p>Presented by: Greg Probst, Greensea Systems, Inc</p>	<p>Low SWaP-C Tactical Airborne Lidar (ONR / NAVAIR/ SBIRS)</p> <p>Presented by: Jeff Mercer, Arete - Arete</p>	<p>(Autonomy) Marrying Unmanned Maritime Systems to Solve the MCM Challenge</p> <p>Presented by: U.H. "Jack" Rowley, MARTAC</p>
Track Sponsor	Northrop Grumman		ECA Group