

Day/Time/Room	Presenters/Hosts	Title	Description
Tuesday 10-11:30am, Floral Hall A1	Panelists: NOAA, Rick Brennan, NOAA GOM Nav. Man, Alan Bunn, QPS, Richard Hill, APA, Capt. Jorge Viso	Navigating with Precise Navigation Products	This workshop is a break-out session to discuss precise navigation. Pilots, people representing ports, and others interested in the topic are encouraged to attend to provide insight into precise navigation as they see it. The intent of the workshop is to discuss the idea of high resolution products for pilots to use when navigating ships through controlled and limited navigable channels. Panelists are interested in learning from attendees how precise navigation fits into their work and what resources they would find helpful for the hydrographic community to provide.
Tuesday, 10:30am-12pm, Floral Hall A2	CARIS: Burns Foster, Karen Hart, Michael Redmayne	Advancements in Hydrographic Data Processing	In this workshop we will focus on the latest streamlined HIPS workflow for processing bathymetry data from multibeam sonar. We will look at the essential steps required to create an accurate seafloor model, including the application of position and depth corrections and the introduction of the Process Designer. Visualization as a method of quality control will also be covered in preparation for downstream analysis. We will follow this essential introduction to hydrographic data processing in HIPS with an overview of the latest developments and advanced workflows, including: Variable Resolution surfaces, Multi-Detect / Extra Detect, advanced workflows in the Process Designer, processing RESON time series / normalized backscatter in SIPS, and the addition of the Engineering Analysis Module.
Tuesday, 1:30-3pm, Floral Hall A2	Universal Sonar Mount: Brent von Twistern	Vessels of Opportunity, Challenges and Solutions	Vessels of Opportunity are an industry standard, but what are they? This workshop will look to bring together any one with requirements, experience, ideas and just curiosity regarding Vessels of Opportunity; what they are, complex challenges and solutions. The workshop will be lead by Brent von Twistern, who has a M.Sc. and is a Certified Hydrographer with hundreds of projects to draw from. The intent of the workshop is to develop a better understanding of our communities requirements regarding Vessels of Opportunity using the knowledge from the attendees in an interactive discussion format as well as solutions developed and examples. There will also be an opportunity to see several hands-on solutions that are at the conference.
Tuesday, 1:30-3pm, Floral Hall A1	Max van Norden, University of Southern Mississippi, Capt. Rick Brennan, NOAA, Ian Fergusson, Retired NAVO	NSPS/THSOA Hydrographer Certification Review	The workshop will cover geodesy for hydrographers, sidescan survey techniques, IHO specifications, and depth correctors. Presentations will be a review of material in preparation for the Certification Exam. All Hydrographers interested in seeking NSPS/THSOA Hydrographer Certification will benefit from this workshop. There will also be time allotted for questions about the Certification Process.
Tuesday, 3:30-5pm, Floral Hall A1	NOAA CO-OPS: Cristina Urizar and Colleen Fanelli	Tide Coordinated Charting and Mapping	The NOAA Center for Operational Oceanographic Products and Services (CO-OPS) will present a workshop on the tools and methods used to provide tide support for NOAA Office of Coast Survey hydrographic projects and NOAA National Geodetic Survey shoreline mapping projects. The workshop will cover water level data collection sensors and new technologies, computing water level data products (tabulations, datums and harmonics) and their operational use, and tide reduction schemes.

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Tuesday, 3:30-5pm, Floral Hall A2	iLinks: Azing Vondeling, Sandy Borthwick	A pre-calibrated portable solution for combined multibeam and lidar acquisition	<p>The iLinks Portable Multibeam and LiDAR system (PMLS) is the first truly portable combined Multibeam and LiDAR system. The PMLS system is ideally suited to projects which require rapid mobilization on vessels of opportunity. PMLS negates the requirement for lengthy equipment mobilizations and calibrations and is simple to deploy and operate. PMLS is the ideal solution for combined Multibeam and LiDAR operations.</p> <p>This solution is the combined use of an IntelLAS mobile scanner in combination with the selected MBES. The IntelLAS will provide positioning and attitude as well as laser data all contained in one calibration-free unit. The IntelLAS LR mobile LiDAR system comprises of a dual frequency GPS and GLONASS positioning and heading system, and a high performance Inertial Navigation System Unit (INS), and a scanning laser module which produces real time 3D data at ranges of up to 250 meters with accuracies of better than 3 cm in a 360° field of view. All of the above sub-systems are fully integrated in a single weatherproof pod which can be easily mounted on any vessel or vehicle of opportunity. The IntelLAS LR has been designed to integrate seamlessly with data acquisition software and also has the necessary 1PPS and NMEA ZDA timing messages available for all industry standard multibeam systems.</p>
Wednesday, 10:30am-12pm, Floral Hall A1	QPS: Jonathan Beaudoin, Samantha Bruce	Hydrographic Data Processing Made Easy	<p>This workshop will provide an introduction to the QPS hydrographic data acquisition and processing workflow through primarily live software demos. Qimera was first introduced to the market in the summer of 2015 as the QPS response to provide an easy to learn and intuitive user experience. This workshop will highlight the time saving benefits of using QINSy and Qimera for acquisition and processing, Qimera Live as a tool for just-in-time data processing, functionality specifically available to compliment the NOAA workflow, and how to process water column data to determine the least depths of wrecks. Users will get a sneak peek into what will come in the next Qimera release, as well as leave with an understanding of what to expect in future development.</p>
Wednesday, 1:30-3pm, Floral Hall A1	Hypack: Vitad Pradith	AUV, ASV and UAV – More ways to get your data	<p>Hydrography is literally known as the craft of wearing many hats, but did you know that your data acquisition and processing skills aren't just limited to bathymetry? Consider yourself fortunate to be a Hydrographer! Your skill sets are even more relevant in a day and age where many industries are moving toward unmanned and autonomous operations. Let us show you how your hydrographic skill sets are very much relevant to your job and how HYPACK provides you with the tools necessary to maintain your edge in the worldwide marketplace. You will learn how to improve your workflows, acquire and process data, and increase situational awareness during your operations. Workshop attendees will see how their existing skills can be used on Unmanned Underwater Vehicles (UUV/AUV), Unmanned Surface Vessels (USV), and even Unmanned Aerial Vehicles (UAV's)!</p>
Wednesday, 3:30-5pm, Floral Hall A1	Seafloor Systems: John Tamplin, Cody Carlson	ASV Surveys for Inland, Shallow, and Remote access	<p>This workshop will describe the tools and preparation required to perform an autonomous hydrographic survey on an inland waterway such as a river, lake, stream, or harbor. It will discuss integration options for various hydrographic tools such as singlebeam and multibeam echosounders and sidescan sonar systems. Other topics will include Mission Planning tools and implementation, real-time telemetry and monitoring, as well as various factors affecting mission planning and mission endurance.</p>
Thursday, 12:30-5:30pm, Floral Hall A1	Hydrographer Certification Exam		