



Web image - OINA 2017 - Technical Tracks

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OINA 2017: Oceanology International North America Conference to Provide Valuable Insight into the Latest Ocean Technology

A series of technical sessions taking place during the inaugural Oceanology International North America in February will explore the latest developments in ocean science and technology in five key disciplines

San Diego/London, December 20th 2016 – Reed Exhibitions, organizer of the

Oceanology International North America 2017 (OINA 17) conference and exhibition has released full details of the comprehensive technical track program that will run throughout the three day event, which takes place February 14-16 at the San Diego Convention Center in association with The Maritime Alliance.

The series of topical technical sessions will explore the latest developments in ocean science and technology and their application in support of safe and sustainable use of the ocean and the protection of the marine environment. These sessions will feature technology advancements, case studies and best practice across a range of topics and disciplines: ***Big Data, Visualization & Modeling; Hydrography, Geophysics & Geotechnics; Sensors & Instrumentation; Unmanned Vehicles & Vessels*** and ***Communications & Navigation***.

Ralph Rayner, US IOOS Industry Liaison, NOAA, and Co-Chair, Partnership for Observation of the Global Oceans Industry Liaison Council, will open the OINA conference program. He said: “The technical tracks have been selected to provide perspectives on the latest developments across each key technology area which contributes to the science and information needs of the Blue Economy. Each will deliver valuable perspectives to all OINA 2017 delegates seeking to understand the latest developments.”

Split into three sessions, the ***Big Data, Visualization & Modeling*** track will be chaired by Dr Harry Kolar, Distinguished Engineer, IBM Research; Rob Fatland, Director of Cloud & Data Solutions, University of Washington and Dr Ed Kearns, Project Director – Big Data Partnership, NOAA.

A session on *Tools & Techniques* will provide examples of recent developments in support of data management, data fusion and data assimilation, which support the effective use and interpretation of large spatial and temporal data sets. The *Data Visualization* session will describe examples of

recent developments in visualization tools that support making effective use of large data sets. The *Applications* session will comprise case studies illustrating the application of tools, techniques and data visualization to practical information needs in support of offshore and coastal operations.

The **Hydrography, Geophysics & Geotechnics** track will feature two sessions covering *New Solutions & New Sensors* and *Integration & Automation*, and will be chaired by David Millar, President, Fugro Pelagos and RDML Shepard Smith, Director – Office of Coast Survey, NOAA.

The *New Solutions & New Sensors* session will look at how industry and government can get more out of surveys and site investigations. It will address the increasing pace at which technological innovation and advancement in sensors is changing and how these changes can be leveraged to improve efficiency, enhance quality and extend budgets. The *Integration & Automation* session will build on themes from the *New Solutions & New Sensors* session to look at integration and automation in the area of Hydrography, Geophysics & Geotechnics. Of particular focus will be how various data types can be integrated to provide enhanced knowledge and understanding; how new software and processes can increase integration and automation and how to get more from surveys and site investigations.

The **Sensors & Instrumentation** track will look at approaches and technologies to improve sensor capacity for autonomous measurement platforms. Split into two sessions, *Approaches & Technologies to Improve Sensor Capacity for Autonomous Measurement Platforms* and *Genomic Sensors & Enabling Technology for Autonomous Platform Integration*, it will be chaired by Neil Trenaman, Vice President Business Development, Ocean Aero and Dr Stephen Weisberg, Executive Director, Southern California Coastal Water Research Project.

The first session, *Approaches & Technologies to Improve Sensor Capacity for Autonomous Measurement Platforms* will recognise the rapid advancement of the use of autonomous underwater and surface vehicles. It will identify the challenges associated with developing new chemical and biological sensors that are suitable for integration on AUV & ASV platforms and highlight how the growth of the AUV & ASV markets is outpacing the sensor manufacturer's adaptation and development cycles. The *Genomic Sensors & Enabling Technology for Autonomous Platform Integration* session will feature presentations on the genomic measurements providing new opportunities for improved monitoring of biological systems in the ocean. The session will conclude with a panel and audience discussion focused around what is still required to develop the existing applications for genomic sensing towards autonomous applications.

“Along with the growing adoption of the use of AUV and ASV platforms and expanding market opportunities, are the challenges facing the sensor manufacturing industry to develop new innovative products that suit the requirements of these platforms,” said Neil Trenamen. “This session will highlight a cross-section of currently available sensor technologies, with a focus on chemical and biological sensors and generate discussions on future possibilities.”

The ***Unmanned Vehicles & Vessels*** track is designed to capture current and critical insights for users and developers of these complex technologies. Focus sessions on surface and subsurface vehicles will be complemented by a panel on developments in autonomy and instrumentation for UMVs. While each session stands on its own, the entire track will provide attendees with new insights on UMV technologies, increased awareness of emerging UMV applications and a global perspective informed by international experts.

Chaired by Dr Bob Allwood, Chief Executive, SUT; Justin Manley, Founder, Just Innovation; and Steve Brodet, Applications Engineer, Hydroid, the track will be split into two sessions, *Unmanned Surface Vehicles* and *Unmanned Underwater Vehicles*

As a rapidly growing segment of the UMV market, the *Unmanned Surface Vehicles* session will look at developments in the underlying technology as well as the latest applications for USVs and global experts from both leading manufacturers and operators of USVs will share their perspectives. In the *Unmanned Underwater Vehicles* session, the latest developments in UUVs will be presented including basic technology developments as well as trends in miniaturisation and buoyancy propulsion. The *Innovations in Autonomy* panel session will explore the frontiers of unmanned maritime vehicles. Building upon the earlier sessions discussing UMV platforms, this panel will present new capabilities made possible by advanced algorithms and innovative sensors. An international panel of leading technologists will share the latest developments from the USA, Canada and the UK.

“San Diego was arguably the birthplace of commercial underwater vehicles some forty years ago and it remains a world center for underwater vehicle technology development,” said Dr Bob Allwood. “OINA 2017 will surely attract very large numbers of locally based delegates from the fields of ocean related technologies and science, but in addition there will be many visitors

from around the world. Whether you are a researcher, a manufacturer, an end user or involved in the regulatory aspects of the oceans and use of systems within them, this is the event you need to attend.

The closing track, ***Communications & Navigation*** will be chaired by Dana Goward, President, RNT Foundation and Norman Farr, Principal Engineer - Applied Ocean Physics & Engineering, Woods Hole Oceanographic Institution. The *Communications & Surface Navigation* session will explore some of the vulnerabilities of satellite navigation systems, ways to safeguard and augment satellite navigation systems and satellite-based internet solutions for ocean science. The *Subsurface Communications & Navigation* session will explore some of the latest developments in and applications for subsurface optical and acoustic communications and navigation techniques and tools.

To find out more details about the OINA conference schedule, visit the OINA website: www.oceanologyinternationalnorthamerica.com/

OINA conference and exhibition visitors can register here: www.oceanologyinternationalnorthamerica.com/register

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The Oceanology International portfolio of events offer a global forum where industry, academia and government share knowledge and connect with the marine technology and ocean science community, improving their strategies for measuring, exploiting, protecting and operating in the world's oceans. First established in 1969, the flagship event in London features the world's largest exhibition for marine science and technology, multiple agenda-setting technical conferences, and a visiting vessels and waterside demonstration program.

The Oceanology International portfolio includes

- **Oceanology International China:** Developed with government and industry associations, Oceanology International China provides organizations with the opportunity to capitalize on China's rapidly growing offshore energy and marine industries. With 215 exhibitors from 20 different countries, more than 5000 domestic and overseas professional attendees from 32 different countries and regions were attracted to OI China 2015. www.oichina.com.cn/en
- **Oceanology International:** Oceanology International is the leading conference and exhibition dedicated to serving all professionals working in the global ocean science and marine technology sector. The first Oceanology International was held in Brighton, in 1970. Today, it's home is at ExCeL London . The OI2016 exhibition was the largest ever in the show's 47-year history with over 8,500m2 occupied by 520 exhibiting companies from 33 countries. www.oceanologyinternational.com
- **Catch the Next Wave conference:** Now in its fourth edition, Catch the Next Wave is an exclusive conference taking place alongside or as part of Oceanology International events globally. The most recent program in London took place at the prestigious Royal Institution, and the North American edition will form part of the OINA conference program on February 16th 2017. The event

takes a longer-term view of the capabilities that will shape our future ability to explore, understand, exploit and protect the oceans. www.ctnwconference.com

- **Oceanology International North America** (February 14-16 2017, San Diego Convention Center, USA) The launch event of the biennial series is taking place in 2017.
www.oceanologyinternationalnorthamerica.com

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