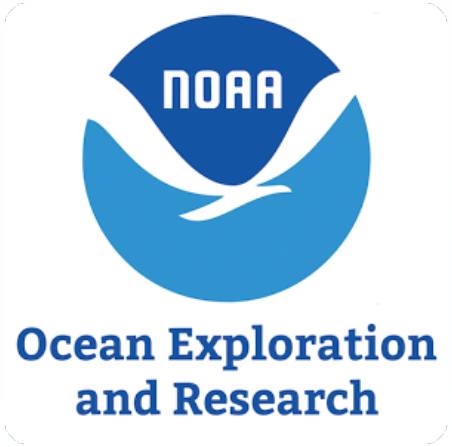
NATIONAL OCEAN EXPLORATION FORUM | 2017

OCEAN EXPLORATION IN A SEA OF DATA



James A. Austin

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SCRIPPS INSTITUTION OF OCEANOGRAPHY

UC San Diego
JACOBS SCHOOL OF ENGINEERING

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

Ocean Exploration and Research

OCEAN
EXPLORATION
IN A SEA OF DATA

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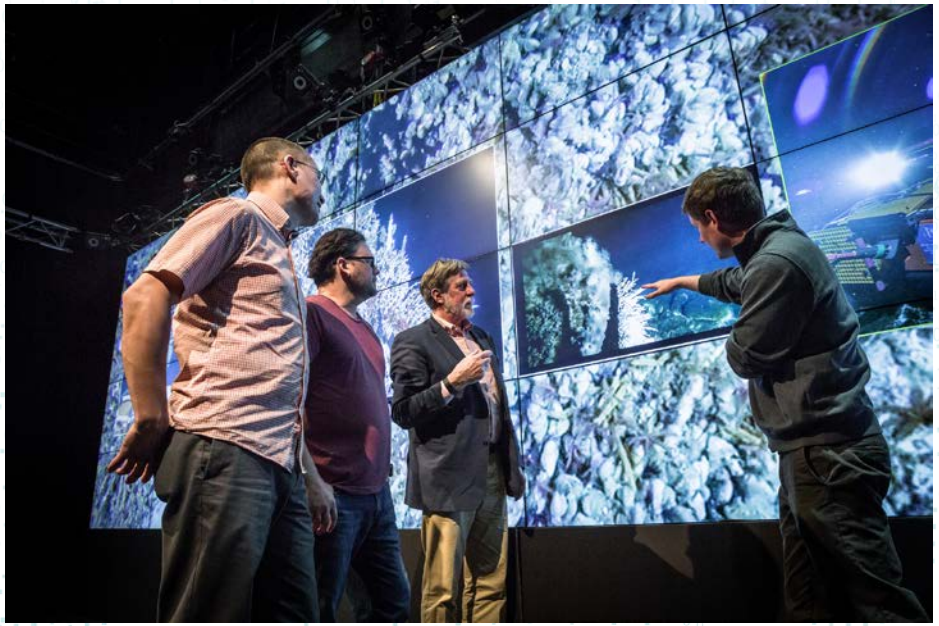
"The Pacific Research Platform:
A Regional-Scale Big Data Analytics
Cyberinfrastructure"
National Ocean Exploration Forum 2017
Ocean Exploration in a Sea of Data
Calit2's Qualcomm Institute
University of California, San Diego
October 21, 2017
Dr. Larry Smarr
Director, California Institute for Telecommunications and Information Technology
Harry E. Gruber Professor,
Dept. of Computer Science and Engineering
Jacobs School of Engineering, UCSD
http://lsmarr.calit2.net

SCRIPPS

Ocean Exploration and the Temporal Domain

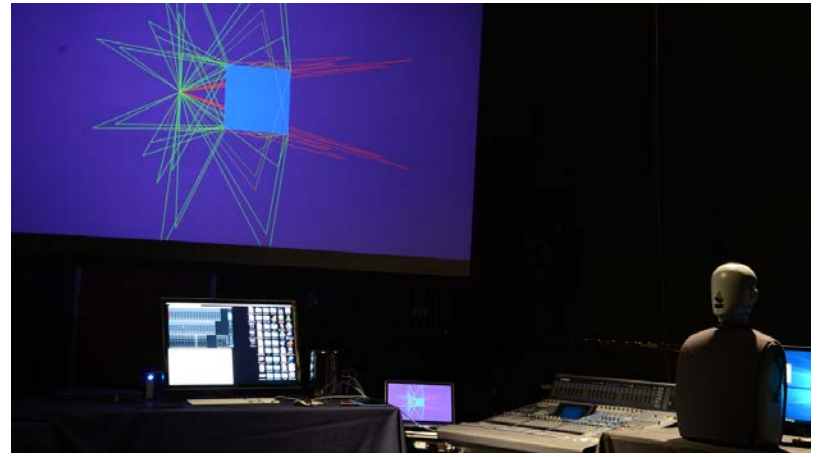
John Delaney



Exploring Ocean Data Through Audio Spatialization and Sonification

Shahrokh Yadegari, Grady Kestler, and Adrienne Copeland

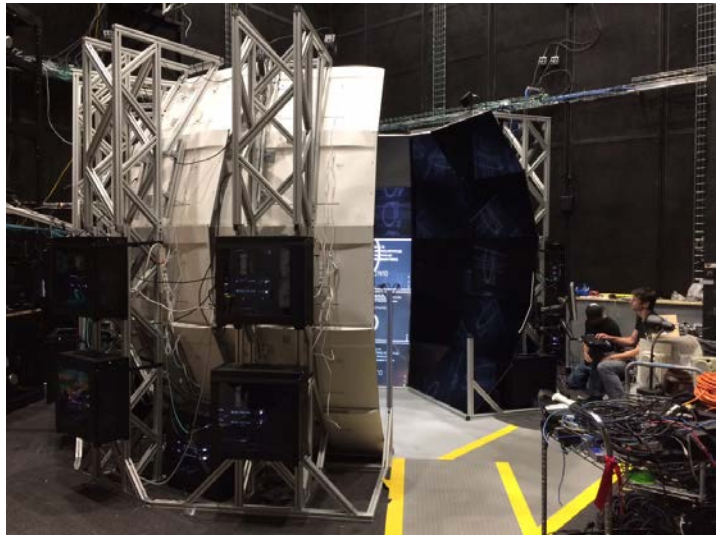
SpatLab

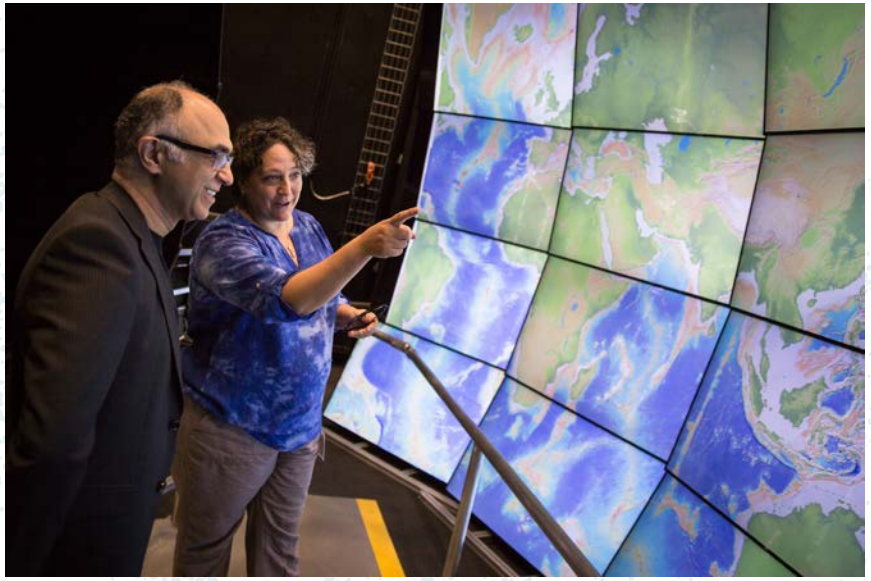


Seabed Mapping – New Perspectives

Vicki Ferrini

SunCAVE

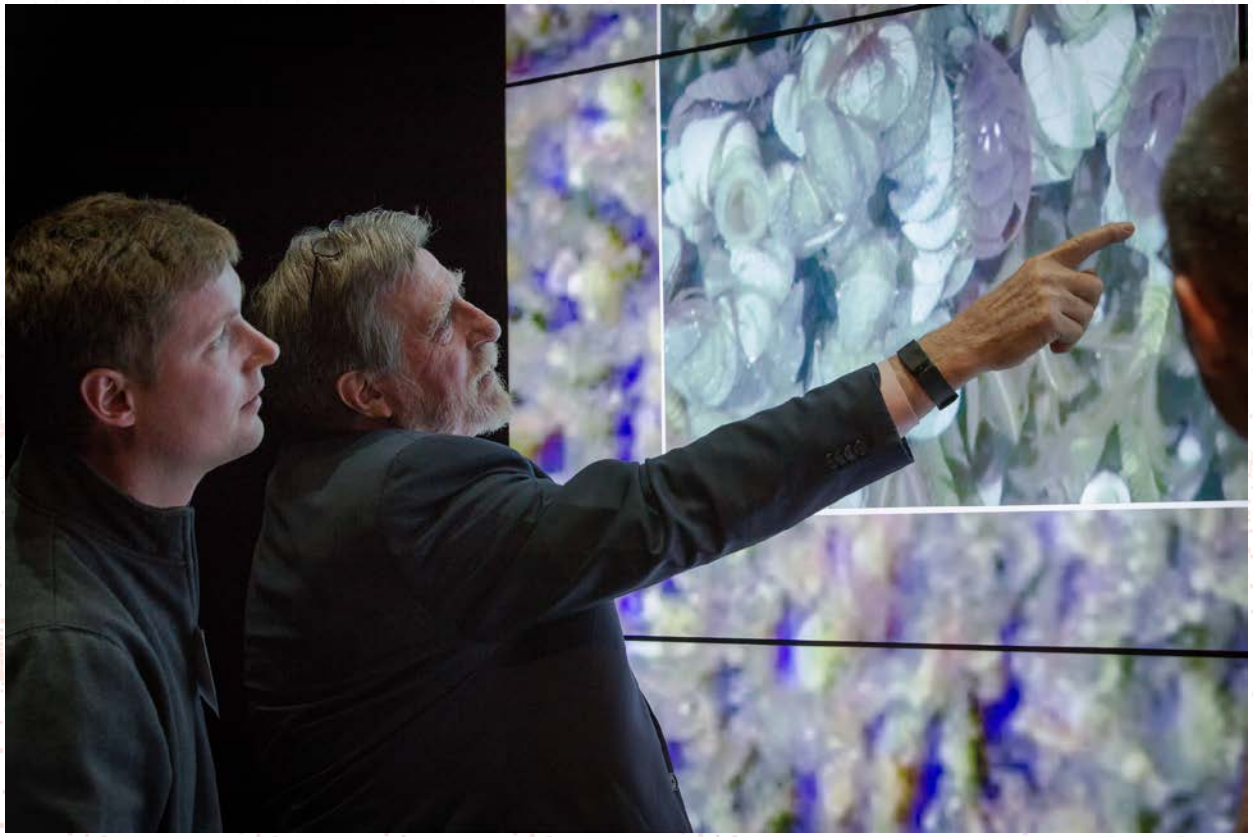




Being There without Being There” – Interactive, Remote, Fiber-Optic Presence on a Major, Highly Active Mid-Ocean Ridge Volcano – Eruptions, Active Venting, and More…

John Delaney, Timothy Crone, Friedrich Knuth, and Aaron Marburg

Vroom



Visualizing Antarctic Ice Shelf Structure and Bathymetry from the Air

Nick Frearson and Robin Bell

CHEILab

Underwater Photogrammetry: Point Based Visual Analytics and Habitat Characterization

Falko Kuester and Dominique Rissolo

WAVElab

Discussion and Debrief

Tiffany Fox

David McKinnie

Design Lab

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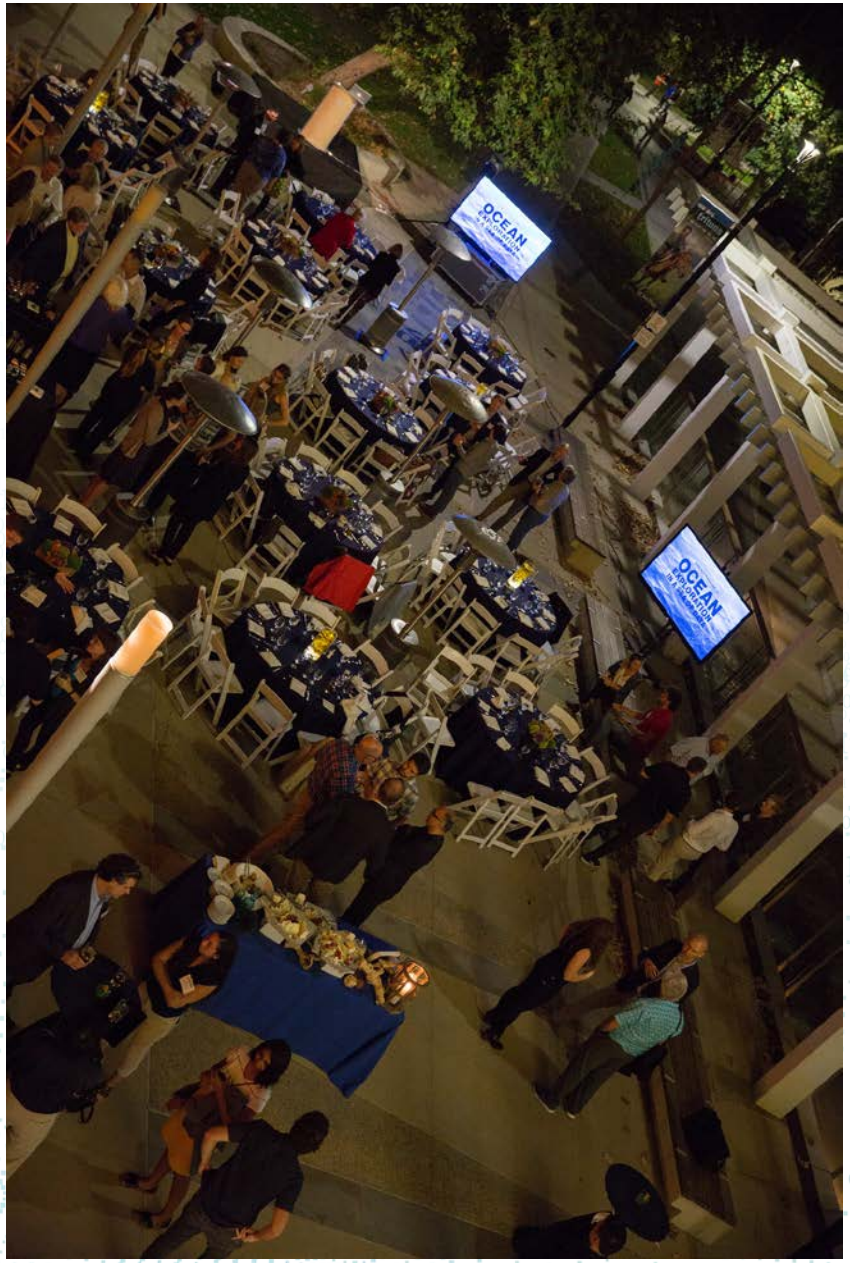
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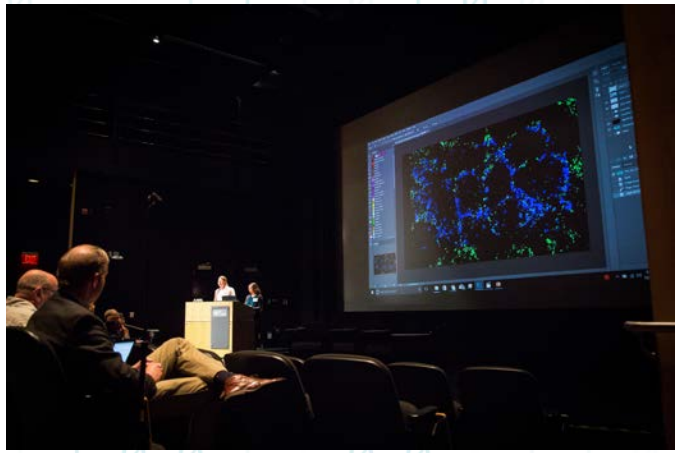
Report Out of Day One

Tiffany Fox



Coral Reef Point Clouds and Classification

Stuart Sandin, Falko Kuester, Vid Petrovic, and Nicole Pedersen

Visualization and New Understanding

JPL's OnSight Immersion Environment

Alice Winter

Data Science Solutions to Integrating Temporally and Spatially Space Data

Vicki Ferrini, Dawn Wright, Jessica Block, Alice Winter,
Vid Petrovic, and Stuart Sandin,

A CONCEPTS

6004
OCEAN EXPLORATION IN A SEA OF DATA

New technologies and data visualizations can enhance efforts to better engage the public about ocean science and exploration by capturing people's attention and immersing them in the data; helping people visualize, and thus, better understand the complexity, importance, and depth of ocean exploration and reaching wider, more diverse audiences.

Visualization can help accelerate and advance new scientific discoveries by encouraging work across disciplines, challenging the traditional hypothesis-driven workflow of science, allowing extraction of relevant data in more intuitive ways, and promoting onshore research of offshore data.

Provoke Thought – Spark Creativity – Encourage Dialogue

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UC San Diego

November 06, 2017 | By Tiffany Fox

Tackling 'Ocean Exploration in a Sea of Data' at the National Ocean Exploration Forum

SHARE

Ocean explorers from around the world gathered at the UC San Diego Qualcomm Institute last month for a National Ocean Exploration Forum (NOEF) to discuss a challenging problem: how to make sense of the vast quantities of oceanographic data generated by both historic and contemporary studies of the sea.

This fifth annual forum attracted nearly 125 participants, including scholars of data science, ocean exploration and other disciplines who are interested in how data science analysis and visualization techniques can be applied to oceanographic data. The theme of this year's Forum, "Ocean Exploration in a Sea of Data," was intended to elicit forward-looking recommendations for how data scientists and ocean explorers can smoothly collaborate to expand traditional concepts of ocean exploration while driving new discoveries, providing greater access to data and engaging more effectively with the public.

MEDIA CONTACT

Tiffany Fox
858-246-0353
tfox@ucsd.edu

RELATED LINKS

2017 National Ocean Exploration Forum

U.S. National Oceanographic and Atmospheric Administration

RELATED STORIES

MATCHPOINT

Are you looking for a data scientist to work with you on your data?
Are you a data scientist looking for interesting projects?

If so, you have come to the right place. MATCHPOINT is a matching sevice provided by the Data Science Hub at SDSC. Its goal is to match Domain experts and students with Methods experts and students to create interdisciplinary working teams that can take on challenging problems in data science and analytics. Learn more about how MATCHPOINT works.

Below you'll find a list of MATCHPOINT past, current and future projects. If you are a data scientist, you can find leads to interesting projects here. If you are a PI with a data science problem, create an entry so that people can find you. To see full project details and expert contact information, and to submit new projects or student applications, you will need to create an account on this site and login.

Displaying 1 - 7 of 7 projects. Click on the column headers to sort.

	Project	Short Description	Status	Domain Expert	Domain Expert Department	Methods Expert	Methods Student Funding	Methods Student Openings	Participating Students	Last Date Updated
	Machine learning for ocean sound sources and environment	Using underwater sound pressure from active and passive sources to train machine learning models for various applications.	Active	Emma Ozanich	Scripps Institution of Oceanography	Peter Gerstoft	no	2.00 • Create an account or Login to apply	• Emma Ozanich	2018-01-18

SCHMIDT OCEAN INSTITUTE

APPLY DATA PUBLICATIONS EDUCATION GALLERY

ABOUT CRUISES TECHNOLOGY R/V *FALKOR* NEWS

2017 Planning Workshop

Coral Reef Survey Initiative

On October 30th and 31st, 2017 Schmidt Ocean Institute convened collaborating experts from the global community of ocean researchers and technology developers to help inform about some of the current coral reef research for possible new program and technology development areas. This report provides a summary of recommendations obtained to inform the evaluation and preliminary planning of a coral reef conservation and research initiative. The outcomes will also help identify possible directions and opportunities for our 202 call for proposals.

EVENT DETAILS

Select Language

"I went to this meeting as an emissary of our team, and I arrived with pride and confidence. I left with more pride and confidence, as I noted both our tangible strengths in this field as well as the respect and sincere collaboration that we have."
- Stuart

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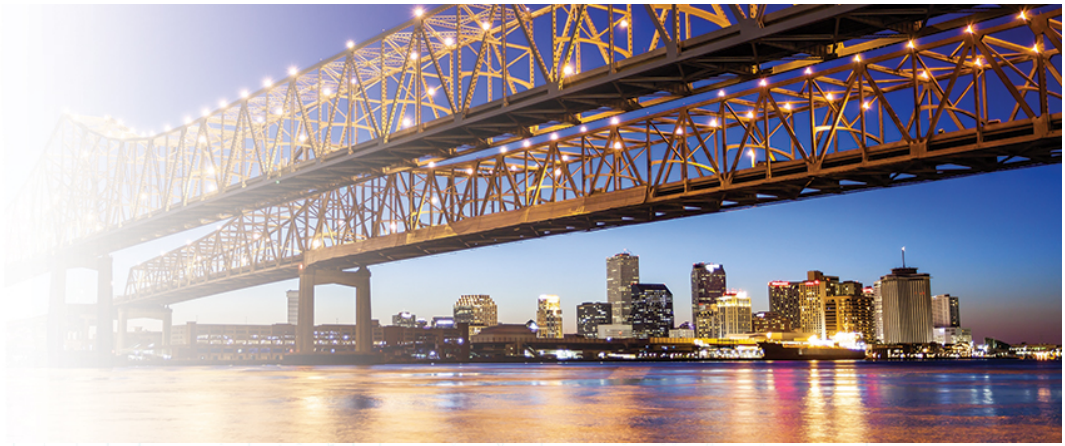
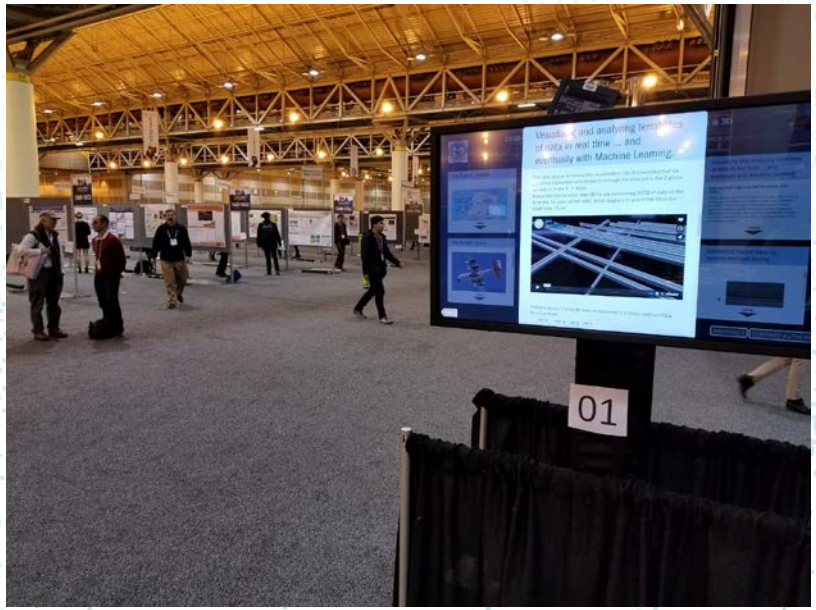
Esri Imagery Education Summit 2017 - Day 2
Inaugural community-building event, Esri headquarters, Redlands, CA, USA, Nov 9-10, 2017.
by Dawn Wright 21 days ago 321 Views
Imagery and GIS

AGU FALL MEETING

New Orleans
11-15 Dec. 2017

What will *you* discover?





Hey Vid,

Talks and post-talks meetings went very well. I have some NASA Rover guys interested in your methods of visualization as they have 10 years of data quite like mine that they are looking for easy ways to access and search through. Lots of discussions about machine learning as well.

Cheers
Nick

2018 OCEAN SCIENCES MEETING

11–16 February • Portland, Oregon

OD24B-2730 Spatial Reconstruction of Ocean Audio Data ***Grady Kestler***[1], *Shahrokh Yadegari*[1], *Bob Dziak*[2] *and Adrienne Copeland*[3], *(1)University of California San Diego, La Jolla, CA, United States, (2)NOAA Pacific Marine Environmental Laboratory, Seattle, WA, United States, (3)NOAA Office of Ocean Exploration and Research, United States*

IS31A-07 Enabling Virtual Access to Hoyo Negro: A Submerged Late Pleistocene Site in Quintana Roo, Mexico ***Vid Petrovic***[1], *Alberto Nava Blank*[2], *Dominique Rissolo*[1], *James C Chatters*[3], *Blaine Schubert*[4], *Roberto Chavez Arce*[5], *Pilar Luna Erreguerena*[6] *and Falko Kuester*[1], *(1)University of California San Diego, La Jolla, CA, United States, (2)Global Underwater Explorers, Seaside, CA, United States, (3)Applied Paleoscience, Bothell, WA, United States, (4)East Tennessee State University, Center of Excellence in Paleontology, Johnson City, TN, United States, (5)Global Underwater Explorers, Mexico, (6)Instituto Nacional de Antropologia e Historia, Mexico City, Mexico*

ED14A-2317 Ocean Exploration in a Sea of Data: The 2017 National Ocean Exploration Forum ***Dominique Rissolo***[1], *Vicki Lynn Ferrini*[2], *Adrienne Copeland*[3] *and David McKinnie*[3], *(1)University of California San Diego, La Jolla, CA, United States, (2)Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY, United States, (3)NOAA Office of Ocean Exploration and Research, Silver Spring, MD, United States*

MG31A-01 Building a Global Ocean Map through International Collaboration – Seabed 2030 ***Vicki Lynn Ferrini***, *Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY, United States*

ED24A-2349 Engaging Citizen Scientists with Ocean Video Lab *John J Morton*[1], ***Vicki Lynn Ferrini***[1] *and Nick Pawlenko*[2], *(1)Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY, United States, (2)NOAA Office of Ocean Exploration and Research, RI, United States*

EP44B-0892 Can Prey Distribution and Sea Surface Temperature Influence Predator Behavior? ***Adrienne Copeland***, *NOAA Office of Ocean Exploration and Research, Silver Spring, MD, United States and Melanie Hutchinson, Joint Institute for Marine and Atmospheric Research, Honolulu, HI, United States*

ED44D-2503 Community Engagement Through Live Telepresence Interactions ***Katie Wagner***, *Adrienne Copeland and David McKinnie, NOAA Office of Ocean Exploration and Research, Silver Spring, MD, United States*

< Events

People

Katy Croff Bell
Visiting Scientist

Monday — Tuesday
February 26, 2018 —
February 27, 2018
8:00am — 7:00pm

mit
media
lab

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THANK YOU