



**2019 NOAA Emerging Technologies Workshop**  
NOAA Center for Weather and Climate Prediction (NCWCP)  
College Park, Maryland



## **AGENDA**

**June 25-26, 2019**



**On mobile devices: works best in landscape**

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*Technology toward a mission-effective, integrated, adaptable and affordable observation portfolio*

### **Day 1 – June 25 Resilience to Extreme Weather and Water**

**08:30 - 08:45 Welcome and Opening Remarks**

- **Observing System Committee (OSC) Co-Chairs, Richard Edwing and Tom Cuff**
- Agenda overview, ground rules, and logistics

**08:45 - 09:00 Keynote Address: RDML Tim Gallaudet**

**09:00 - 10:10 Session 1: Hydrometeorological Extremes**

09:00 - 09:05 **Introduction** - Neal DiPasquale

09:05 - 09:15 MoPED - Mobile Platform Data Generation for Flash Flooding and Extreme Weather

09:15 - 09:25 Automated NonContact Hydrologic Observations in Rivers

09:25 - 09:35 FFIoT – Flash Flood Internet-of-Things

09:35 - 09:45 Decision Support at Regional Scales: Connecting Emerging Technologies to User Needs in a NOAA Services Framework

09:45 - 10:10 **Panel Q&A**

**10:10 - 10:40 Break & Posters**

**10:40 - 12:00 Session 2: Remote Sensing for Extreme Atmospheric Events**

10:40 - 10:45 **Introduction** - John Cortinas

10:45 - 10:55 Wideswath Radar Altimeter

10:55 - 11:05 Airborne Phased Array Radar

11:05 - 11:15 Stratospheric Observations of Earth Systems (SOES)

11:15 - 11:25 Airborne Doppler Wind Lidar Sounder

11:25 - 11:35 The Airborne Radar Network (AiRNet) project

11:35 - 12:00 **Panel Q&A**

**12:00 - 13:30 Lunch & Posters & Science on a Sphere tours**

### **13:30 - 15:00 Session 3: Artificial Intelligence**

- 13:30 - 13:35 **Introduction** - Sidney Thurston
- 13:35 - 13:45 Amazon Web Services
- 13:45 - 13:55 Google Cloud's Efforts to Enhance Data Discoverability and Access
- 13:55 - 14:05 Machine Learning for Earth Observation and Environmental Prediction (EOEP)
- 14:05 - 14:15 The Weather Archive and Visualization Environment (WAVE)
- 14:15 - 14:25 A Data Driven Approach for Modeling Ocean Temperature and Salinity Using Observational and Computational Data
- 14:25 - 14:35 Deep learning approach for detecting precursors of tropical cyclone -Toward Cyclogenesis Prediction
- 14:35 - 15:00 **Panel Q&A**

### **15:00 - 15:30 Break & Posters**

### **15:30 - 16:50 Session 4: Data Analytics (Part 1)**

- 15:30 - 15:35 **Introduction** - Kim Valentine
- 15:35 - 15:45 Geospatial Image Services for NOAA's Geostationary Weather Satellite Constellation
- 15:45 - 15:55 Real-time Event Identification in Social Sources (REISS)
- 15:55 - 16:05 Live Access Server data visualization and analysis platform (LAS)
- 16:05 - 16:15 Hyperspectral Imager for Updated Littoral Situational Awareness (HULA)
- 16:15 - 16:25 NESDIS Financial Management Data System (FMDS)
- 16:25 - 16:50 **Panel Q&A**

### **16:50 - 17:00 Closing Remarks and Overview of Day Two (Richard Edwing and Tom Cuff)**

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## **Day 2 – June 26 Blue Economy**

### **08:20 - 08:30 Opening Remarks by OSC Co-Chairs, Richard Edwing and Tom Cuff**

- Day One recap, Day Two overview, ground rules, and logistics

### **08:30 - 08:45 Keynote Address: Cisco Werner**

### **08:45 - 10:05 Session 5: Resource Mapping**

- 08:45 - 08:50 **Introduction** - Frank Schwing
- 08:50 - 09:00 Underwater Spherical Camera System
- 09:00 - 09:10 Fish-i
- 09:10 - 09:20 SAILDRONE: A Global USV Network for In-Situ Ocean Observations
- 09:20 - 09:30 VMS augmented with satellite and terrestrial AIS and the newly available Hawkeye360 data
- 09:30 - 09:40 Vemco Live Aquatic EcoSystem Observer
- 09:40 - 10:05 **Panel Q&A**

**10:05 - 10:35 *Break & Posters***

**10:35- 11:55 Session 6: Coastal Risk**

- 10:35 - 10:40 **Introduction** - Jonathan Pennock
- 10:40 - 10:50 Containerized Autonomous Marine Environmental Laboratory (CAMEL)
- 10:50 - 11:00 Advanced Coastal Monitor: Autonomy and Modularity in Marine Survey Vehicles
- 11:00 - 11:10 Mobile, In-situ HAB Toxin Warning and Genomic Observation for the Great Lakes
- 11:10 - 11:20 HABscope: A Tool For Use By Citizen Scientists To Facilitate Near Real-Time Warning of Respiratory Irritation Caused By Toxic Blooms of *Karenia brevis*
- 11:20 - 11:30 smartcoastlines.org - realization of scalable, low-cost, versatile, environmental Internet of Things for the coastal zone
- 11:30 - 11:55 **Panel Q&A**

**11:55 - 13:30 *Lunch & Posters & Science on a Sphere tours***

**13:30 - 15:00 Session 7: Data Analytics**

- 13:30 - 13:35 **Introduction** - John McDonough
- 13:35 - 13:45 Passive Acoustic Monitoring (PAM) Zoo
- 13:45 - 13:55 Large-Scale Deep Learning for Passive Acoustic Monitoring of Marine Mammals
- 13:55 - 14:05 Bathymetry Mapping with UAS and Motion Software
- 14:05 - 14:15 InDX Platform
- 14:15 - 14:25 Enhancing creation, archival and discovery of video annotations
- 14:25 - 14:35 Automated processing of underwater imagery
- 14:35 - 15:00 **Panel Q&A**

**15:00 - 15:30 *Break & Posters***

**15:30 - 16:30 **No Transitions, No Outcomes Panel Discussion** (NOAA Research Council)**

Panel members:

- Cisco Werner, Chair
- Steve Thur, NOS

Hendrik Tolman, NWS  
John Cortinas, OAR  
Bill Michaels, NMFS  
Harry Cikanek, NESDIS  
Gary Matlock, OAR

16:30

**Closing Remarks**

**For your  
workshop  
materials online.**

