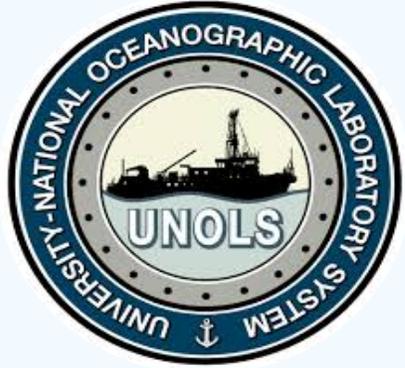


# Tech Training Sub-committee

2020 Virtual RVTEC



# Members

- Kristin Beem
- Brett Hembrough
- Gabe Matthias
- Julianna Diehl
- Nick Mathews (outgoing)
- Tony D'Aoust (outgoing)

Space for two new members!

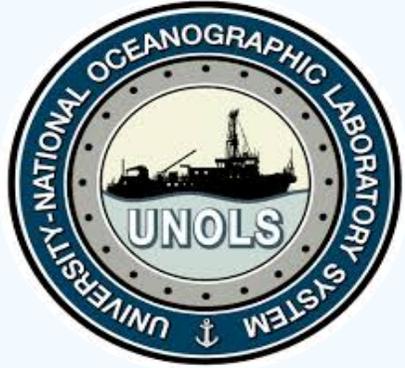
Taking nominations

Email- [techtraining@unols.org](mailto:techtraining@unols.org)



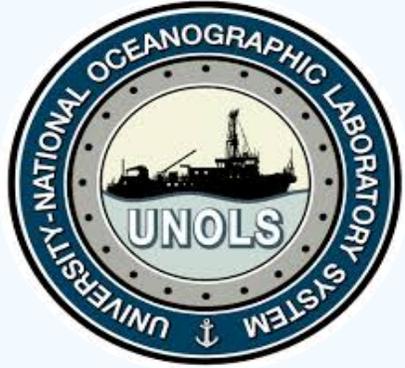
## Previous Ideas

- Creating our own training
- Identifying training opportunities aboard vessels of the US Academic Research fleet
- A repository of resources built on existing experience and materials
- Recording training sessions



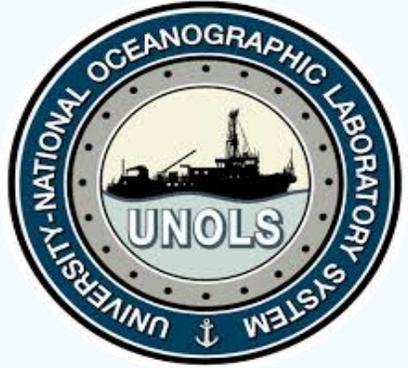
# Difficulties

- Creating our own training
  - *Time intensive*
- Identifying training opportunities aboard vessels of the US Academic Research fleet
  - *COVID-19*
- A repository of resources built on existing experience and materials
  - *Data mining is time intensive*
- Recording training sessions
  - *Professionally expensive or time intensive*



## So what now?

- Creating our own training
  - *Put on hold and watch for opportunities*
- Identifying training opportunities aboard vessels of the US Academic Research fleet
  - *Standing by for reduced restrictions*
- A repository of resources built on existing experience and materials
  - *Maybe we don't have to start from scratch- Ocean Best Practices System (stay tuned)*
- Recording training sessions
  - *TBD - Videos from Network Training at OSU*



## Additional Next Steps

- Send us your nominations for new committee members!
  - [techtraining@unols.org](mailto:techtraining@unols.org)



# Bridging the RVTEC and OBPS Communities

---

## Introduction to the Ocean Best Practices System (OBPS)

- Background and capabilities

## Introduction to our initiative:

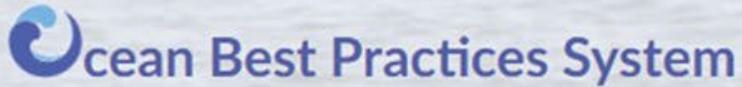
- Group members
- Plan for the development of Best Practices documents for sea-going operations and accompanying decision trees
- Participation of beta testing of Best Practice documents

Please visit our RVTEC Slack Channel for more Information:

<https://unols.slack.com/archives/C01CGJ0C5CN>

#rvtec-bestpractices-iode-r2r

---



## Ocean Best Practices System

### Our Vision

To have agreed and broadly adopted methods across ocean research, operations and applications.

 See OBPS Workshop IV



#### What is a Best Practice?

A best practice is a methodology that has repeatedly produced superior results relative to other methodologies with the same objective; to be fully elevated to a best practice, a promising method will have been adopted and employed by multiple organizations.



#### What is the OBPS?

The OBPS is a global, sustained system comprising technological solutions and community approaches to enhance management of methods as well as support the development of ocean best practices.



#### Search for a Best Practice

1144

Best Practices in the Repository

Submit a Best Practice

Best practices are created by the community for the community  
<https://www.oceanbestpractices.org/>

Mark.Bushnell@noaa.gov

## Consists of:

- **A permanent OBPS repository hosted by IODE including state-of-the-art semantic discovery and metadata indexing for improved access to best practices**
- **A peer-reviewed Research Topic Journal in Frontiers in Marine Science**
- **A web-based and in-person Training and Capacity Development capability based on the IODE OceanTeacher Global Academy**
- **Community outreach and engagement activities to help users integrate OBPS into their routine work.**



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2020 en

### [Best Practices for Shipboard Underway Transmissometers. Version 1.](#)

Smith, Shawn R., Forcucci, Dave, Goes, Joaquim, Hudak, Rebecca, Mishonov, Alexey, Stolp, Laura, Watkins-Brandt, Katie

Data to Record and Provide to Users What do science users want from an underway *transmissometer*?... Figure 1: Explanation of data output from the C-Star *Transmissometer*. 4.... It is important to document how your *transmissometer* is installed on your ship, noting whether or not... water flow into the *transmissometer* happens downstream of a debubbler and if a flow meter exists to... Underway *Transmissometer* Cleaning and In-situ Calibration A clean *transmissometer* is crucial to obtaining...

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Florida State University, Center for Ocean-Atmospheric Prediction Studies

## Best Practices for Shipboard Underway Transmissometers. Version 1.



This best practice document was developed under the Rolling Deck to Repository project by a small working group comprised of the document authors. These recommendations are specifically for transmissometers installed within a research vessel's (RVs) scientific flow-through sea water (underway) system. They are not focused on transmissometers used for CTD/Rosette casts, though some information may be applicable. All underway transmissometers in the academic research fleet presently are WET Labs (henceforth Sea-Bird) C-Stars. Review of available sensors shows this will continue to be the most available and adaptive device. The Goal of this document is to provide best practices for operators that will improve access to transmissometer data and metadata to support routine data quality evaluation and science application.....

**Publisher**  
Florida State University, Center for Ocean-Atmospheric Prediction Studies  
Tallahassee, FL

**Document Language**  
en

**Sustainable Development Goals (SDG)**  
14.A

**Maturity Level**  
TRL 9 Actual system "mission proven" through successful mission operations (ground or space)

**Best Practice Type**  
Best Practice

**View/Open**

 PDF (190.4Kb)

**Date**  
2020

**Author**  
Smith, Shawn R.  
Forcucci, Dave  
Goes, Joaquim

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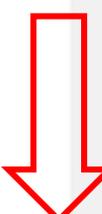
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**Maturity Level**

TRL 9 Actual system "mission proven" through successful mission operations (ground or space)

**Best Practice Type**

Best Practice  
Manual (incl. handbook, guide, cookbook etc)

**Citation**

Smith, S.R., Forcucci, D.; Goes, J.; Hudak, R.; Mishonov, A.; Stolp, L. and Watkins-Brandt, K. (2020) Best Practices for Shipboard Underway Transmissometers. Version 1. Tallahassee, FL, Florida State University Center for Ocean-Atmospheric Prediction Studies, 13pp. DOI: 10.25607/OBP-790

**URI**

<http://hdl.handle.net/11329/1275>  
<http://dx.doi.org/10.25607/OBP-790>

**Collections**

Miscellaneous Community Practices [305]

**View/Open**

PDF (190.4Kb)

**Date**

2020

**Author**

Smith, Shawn R.  
Forcucci, Dave  
Goes, Joaquim  
Hudak, Rebecca  
Mishonov, Alexey  
Stolp, Laura  
Watkins-Brandt, Katie

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**Pages**

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2007 en

### Quality Assurance of Real-Time Oceanographic Data

**CONTROL AND ASSURANCE FOR CTD DATA: Real Time Oceanographic... - Real-time and near real-time data** – to users within few hours at... assurance (QA) for *real-time* and near-*real-time* CTD data.... that are performed in *real-time*....

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- NOT

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2015 en

### Manual for Real-Time Quality Control of Ocean Optics Data: a guide to quality control and quality assurance for coastal and oceanic optics observations. Version 1.0.

## OBPS Newsletter Issue 27: September 2020

<https://us13.campaign-archive.com/home/?u=ab89e583ff8a6a2e366e1fdcf&id=7c6ddfee90>

### *From the Repository - So Easy!*

*Mark Bushnell, U.S. IOOS*

How easy is it to submit a document to the IOC-OBPS repository? Really easy! I took a few notes when submitting a paper recently, which I think doubled the time. It took me thirty minutes, so expect to spend just 15 minutes without taking notes. Within an hour, the paper was accepted into the repository and had been assigned a digital handle. It had been stored on a few hard drives and known to only a few individuals, and now it's permanently findable, accessible, interoperable, and reusable to the world.

You'll need to register with the OBPS first, an easy one-time action. And, of course, your first submission will go a bit slower as you navigate the various pages. There are seven pages of questions, but don't let that scare you, most questions are easy - such as "Title", "Author", "Date of Issue", "Language", etc. Now, some questions are a



Forums & Posts

Forum Management

Forum Announcements

Moderation Queue

Attachments

Home » Forum Management

Forum Management [Add New Forum](#)

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Forum	Order	Controls
<b>OBPS</b>	1	<a href="#">Options</a>
<a href="#">Moorings</a> Sub Forums: Hardware, bio-fouling, corrosion, Modeling	1	<a href="#">Options</a>
<a href="#">Uncertainty Quantification</a>	1	<a href="#">Options</a>
<a href="#">Jerico</a>	1	<a href="#">Options</a>
<a href="#">Omics/eDNA</a> A space to inclusively discuss protocols and BPs for Omics and environmental DNA (eDNA) research - Originated from the OBPS workshop IV 2020	1	<a href="#">Options</a>

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# BP4BP, templates



Intergovernmental Oceanographic Commission  
Manuals and Guides

84

## Towards a Best Practice for Developing Best Practices in Ocean Observation (BP4BP): Supporting Methodological Evolution through Actionable Documentation

UNESCO

Logo(s) (of Organization(s)/Project etc creating the best practice

Title

Sub-title

Edition/Version Number

Document ID

Authors<sup>1</sup>

<sup>1</sup>Author Affiliation

Year

1

Practices Document Template

**Metadata table (non-journal contribution)**

**Data Sheet v5** (for submissions to [www.oceanbestpractices.net](http://www.oceanbestpractices.net))  
 Send including this document data sheet into your Best Practice document. **Please do not format, entries in the left column, or the table structure.** The format below will allow most of the data in this table into the [OceanBestPractices](http://OceanBestPractices) Repository. Enter data only in the column.  
 Fields are indicated with \*\* but we strongly recommend that you provide data (if applicable) for data fields requested; this will allow you to unambiguously declare what your best practice is help our indexing technology make it more visible.

<p><b>Type **</b></p> <p>Select 1 to 2 entries from the list (delete the rest) to indicate the type of document you consider your document is. Separate two types with a semicolon (;)</p> <p><b>Best Practice:</b> a best practice is defined as a methodology that has been developed and used to produce superior results relative to other methodologies with the same objective, to be fully elevated to a best practice, a promising methodology must have been adopted and employed by multiple organizations</p> <p><b>Manual (incl. handbook; guide, cookbook):</b> a document giving instructions or information</p> <p><b>Standard:</b> something set up or established by a recognized standards organization as a rule for the measure of quantity, weight, extent, value, or quality</p> <p><b>Standard Operating Procedure:</b> established or prescribed procedure to be followed routinely for the performance of designated tasks or in designated situations</p> <p><b>Training and educational material:</b> an item, document, video, or other media intended to be used for instruction or training purposes</p>	<p>Best Practice;</p> <p>Manual (incl. handbook; guide, cookbook);</p> <p>Standard;</p> <p>Standard Operating Procedure;</p> <p>Training and educational material;</p>
<p><b>Language document title **</b></p> <p>The title must be in English.</p> <p>If applicable, include a sub-title after a colon (:) and version number after the title text (e.g. Version 3.2).</p>	
<p><b>Original language document title</b></p> <p>If the document was not originally in English, please include it in its original language here. If applicable, include a sub-title after a colon (:) and version number after the title/subtitle text (e.g. Version 3.2).</p>	

2



- **Almost all volunteers**
- **Monthly SG meetings**
- **Annual OBPS workshops**
- **Annual SG meeting**
- **Service provider for you**

**Front row from left to right - Francoise Pearlman, Jay Pearlman, Cristian Munoz, Rachel Przeslawski and Nick Roden; Second row from left to right - Emma Heslop, Pauline Simpson, Johannes Karstensen, Greg Reed, Ana Lara-Lopez, Juliet Hermes, Sergey Belov, Katherina Schoo, Claudia Delgado and Mark Bushnell.**

**Unable to attend: Pier Luigi Buttigieg, Kirsten Isensee, Adam Leadbetter, Frank Muller-Karger and Peter Pissierssens**



# Group Members



**Katie Watkins-Brandt**  
Regional Class Research Vessel- Datapreence and  
Engineering Support Center (R-DESC)  
Sensor Systems Engineer



**Kristin Beem**  
UNOLS Tech Training Committee  
RCRV Marine Science Systems Engineer



**Shawn Smith**  
Rolling Deck To Repository  
SAMOS Initiative  
COAPS, Florida State University



**Laura Stolp**  
Rolling Deck to Repository  
Woods Hole Oceanographic Institute  
Shipboard Scientific Support Group



**Rebecca Hudak**  
Rolling Deck to Repository  
Woods Hole Oceanographic Institute  
Shipboard Scientific Support Group



**Jay Pearlman, Ph.D. Fellow IEEE**  
IEEE France  
Director, Four Bridges  
Ocean Best Practices System Steering Group



**Mark Bushnell**  
National Coordinator, US IOOS/QARTOD  
IOC/Ocean Best Practices System Steering Group  
US CLIVAR Uncertainty Quantification Working Group



**Marine Technicians**  
We hope many of you join us!



# Best Practices for Shipboard Underway Transmissometers

**OceanBestPractices**  
 Repository of Ocean Community Practices in  
 Ocean Research, Observation and  
 Data/Information Management

↑ OceanBestPractices Home / ⇒ ZZZ\_Miscellaneous Communities / Miscellaneous Community Practices /

## Best Practices for Shipboard Underway Transmissometers. Version 1.

This best practice document was developed under the Rolling Deck to Repository project by a small working group comprised of the document authors. These recommendations are specifically for transmissometers installed within a research vessel's (RVs) scientific flow-through sea water (underway) system. They are not focused on transmissometers used for CTD/Rosette casts, though some information may be applicable. All underway transmissometers in the academic research fleet presently are WET Labs (henceforth Sea-Bird) C-Stars. Review of available sensors shows this will continue to be the most available and adaptive device. The Goal of this document is to provide best practices for operators that will improve access to transmissometer data and metadata to support routine data quality evaluation and science application.....

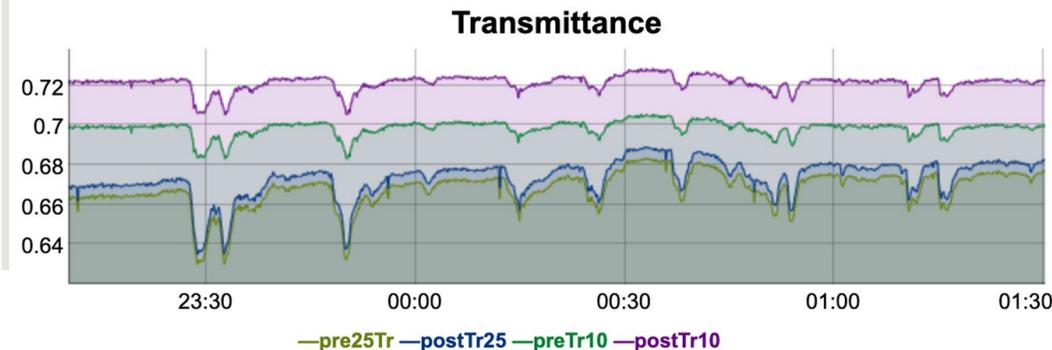


Check out the R2R presentation during the UNOLS Session 4: Instrumentation and Data Facilities recording:

[https://www.youtube.com/watch?v=b-DxJ\\_pORGo](https://www.youtube.com/watch?v=b-DxJ_pORGo)

648 views since publication in April!

<https://oceanbestpractices.org>





## Our Goals

---

- 1) Leverage the wealth of knowledge in the marine technician community and encourage participation in the development Best Practice documents related to shipboard scientific sensors.
  - 1) Alongside Best Practice documents, develop decision trees highlighting time-based suggestions for sensor maintenance and field and factory calibrations.
  - 1) Recruit beta testers to try out Best Practice Documents as they become available.
-



# Why Should You Get Involved?

**Standardization of Best Practices**, to an already demanding job, there is an extra ambiguity of how to care for a sensor in a shipboard setting can be confusing and sometimes overwhelming.

**Leverage of Calibration funding**, to standardize calibrations across the fleet

**Professional Development**, through the publication of Best Practices.

**You're the experts** and wholly responsible for the care of sensors at sea!





# How do You Get Involved?

Complete the survey:

<https://forms.gle/8Lxyo7moiTCJswdEA>

Indicate the sensors you are interested in contributing to BP documents.

Indicate if you're interested in being a beta tester as BP documents are developed.

Share the survey link with colleagues you think may be interested.



## Survey- Interest in Ocean Best Practice Development for Shipboard Instrumentation

Our goal is compile a list of technicians & other professionals interested in the development of Ocean Best Practice documents related to sea-going operations and beta testing of best practices.

This presents an opportunity to encourage the RVTEC and OBPS relationship, promote professional development with the publication of best practice documents, while also getting invaluable input from marine technicians.

The participation of technicians is important to us and we hope you consider contributing to these documents. As you complete this survey, please select sensors for which you have access to and expertise in operating.

Upon completion, we will reach out via email with further information.

Please send this survey link (<https://forms.gle/8Lxyo7moiTCJswdEA>) to interested colleagues who work with the sensors listed.

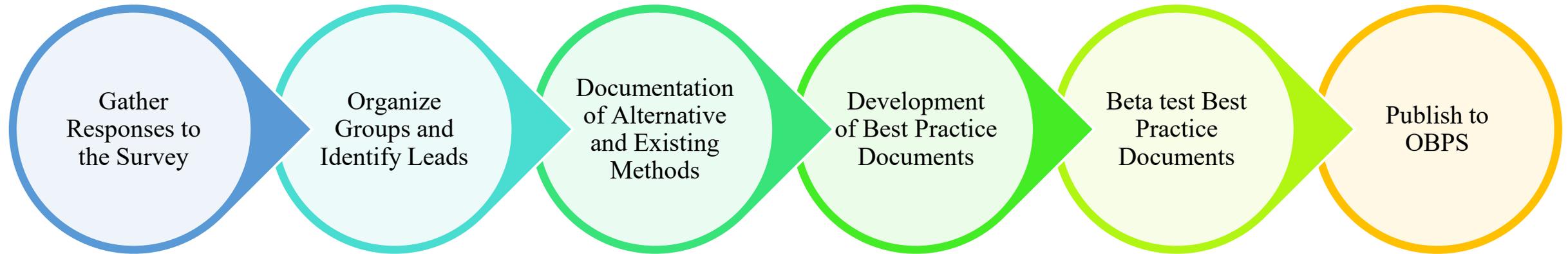
Allow 3-5 minutes to complete this single page survey.

This survey will close on November 20th.



## Next Steps

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Please visit our RVTEC Slack Channel for more Information:

<https://unols.slack.com/archives/C01CGJ0C5CN>

#rvtec-bestpractices-iode-r2r

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# Acknowledgements

