

## SUNDAY, OCTOBER 14<sup>TH</sup>, 2018

Venue: Instituto Hidrográfico - Rua das Trinas, nº49, 1249-093 Lisbon

**6:00 – 8:00 P.M – Ice - Breaker Event and Registration**

## MONDAY, OCTOBER 15<sup>TH</sup>, 2018

Venue: Instituto Hidrográfico - Rua das Trinas, nº49, 1249-093 Lisbon

**9:00 – 9:30 A.M. – OPENING CEREMONY**

**Welcome:** Rear-Admiral Carlos Ventura Soares, Director General,  
 Instituto Hidrográfico

**Opening Remarks:** Co-Chair/Host Ana Isabel Santos, Instituto  
 Hidrográfico

**9:30-10:00 A.M. – KEYNOTE** Luis Quaresma dos Santos: *Information  
 superiority from blue to brown water theater of military operations*

**10:00-10:30 A.M. – KEYNOTE:** Piers Larcombe and Sylvain Ouillon : *How  
 the offshore industry uses particle measurements – examples, gaps and  
 opportunities*

**10:30-11:00 A.M. – Coffee Break**

**11:00 A.M. - 12:00 P.M. - SESSION 1 – SEDIMENTS AND INDUSTRY**

Presiding: Piers Larcombe, RPS MetOcean and University of Western Australia

1. David Felix, Ismail Albayrak and Robert M. Boes: *Real-time  
 suspended sediment measurements at hydropower plant*

*Fieschertal using LISST and Coriolis Flow- and Density Meter  
 (CFDM).*

2. Ola Haugen Havrevoll, Silje Kreken Almeland and Kaspar Vereide: *A new self-flushing rock trap concept for pump-storage plants.*
3. Cansu Özyaman and Cahit Yerdelen: *Experimental investigation of labyrinth spillways.*

**12:00 – 1:00 P.M. - POSTER and EXHIBITOR PRESENTATIONS**

**1:00 – 2:15 P.M. – LUNCH**

**2:15 – 2:45 P.M. - KEYNOTE:** Claire Chassagne, Andrew Manning, Zeinab Safar and Zhirui Deng: *Flocculation of suspended sediment during transport: what is there to learn from combining in-situ and laboratory experiments?*

**2:45 – 3:45 P.M. - SESSION 2 – SEDIMENT TRANSPORT IN MARINE ENVIRONMENTS**

Presiding: Anabela Oliveira, Instituto Hidrográfico

1. Karline Soetaert, Kirstin Schulz and Theo Gerkema: *Spatial patterns in suspended particles and physical water column structure in the central North Sea under late spring stratified conditions.*
2. Hakon Sandven, A. Kristoffersen, Yi-Chun Chen and B. Hamre: *Measurements of volume scattering function and particle size distribution in natural waters in the Arctic Ocean.*

3. Thorbjørn Joest Andersen, Kristoffer Hofer Skinnebach and Mikkel Fruergaard: *Flocculation of PVC microplastic particles in natural seawater*

**3:45-4:15 A.M. – Coffee Break**

**4:15 – 5:30 P.M. - SESSION 3 – SEDIMENT TRANSPORT IN MARINE ENVIRONMENTS**

*Presiding: Anabela Oliveira, Instituto Hidrográfico*

1. Suzanna Jackson, Dave Bowers and Michael Harris: *The effect of aggregation/disaggregation on Suspended Particulate Matter transport in a sea strait.*
2. Alex Nimmo Smith, Phil Hosegood and Jill Schwarz: *A biophysical food pump: mechanisms promoting prey availability to top predators at a tropical seamount.*
3. Spyridon Chaikalis, D. Velaoras, A.P. Karageorgis, Sarantis Sofianos, Alexandra Gogou, V. Cardin and D. Hainbucher: *LISST measurements in the Mediterranean Sea: Relationships between particle optical characteristics and hydrology.*
4. Sabine Haalboom, Henko .C. de Stigter, G.C.A. Duineveld, G.-J. Reichart and F. Mienis: *Suspended sediment transport in a submarine canyon: What are we looking at?*

**TUESDAY, OCTOBER 16<sup>TH</sup>, 2018**

**8:30 – 10:00 A.M. - SESSION 4 – SPECIAL SESSION ON BIOLOGICAL RESUSPENSION**

*Presiding: Alex Nimmo Smith, University of Plymouth*

1. Gitai Yahel, Merav Gilboa, Shahar Grossbard, Adi Vainiger, Tali Treibitz, Yoav Schechner, Uri Shavit and Timor Katz: *Biological activity: an overlooked, mechanism for sediment resuspension, transport, and modification in the ocean.*
2. Timor Katz and Onn Crouvi: *Dynamics of suspended sediment fluxes and their composition over the shallow shelf of Israel in the Mediterranean Sea.*
3. Merav Gilboa, Timor Katz, Uri Shavit, Shahar Grossbard, Adi Torfstien and Gitai Yahel: *Novel approach to measure the rate of sediment resuspension at the ocean and to estimate the contribution of fish activity to this process.*
4. Uri Shavit, Amit Halamish, Shahar Grossbard, Shai Asher, Merav Gilboa, Timor Katz and Gitai Yahel: *Testing a biological resuspension footprint model using Lagrangian simulations.*
5. Adi Vainiger, Yoav Y. Schechner, Tali Treibitz, Aviad Avni and David S. Timor: *Underwater Wide-Field Tomography of Sediment Resuspension.*
6. Shahar Grossbard, Merav Gilboa, Timor Katz, Gitai Yahel and Uri Shavit: *Developing a laboratory simulator for the study of resuspension events*

**10:15-10:45 A.M. – Coffee Break**

# Particles in Europe 2018

Instituto Hidrográfico, Lisbon, Portugal  
October 14-17<sup>th</sup>, 2018  
**CONFERENCE PROGRAM**

**11:00 A.M. – Bus to Conference Field Trip aboard NTM “Ópera” (near Santos Church)**

Venue: NTM “Ópera” - Estaleiro Naval Rocha Conde Óbidos, 1399-036 Lisboa

**11:45 A.M. – 12:15 P.M. - KEYNOTE: Paula Freire: *The Tagus Estuary*.**

**12:15-4:00 P.M. – CONFERENCE FIELD TRIP ON THE TAGUS ESTUARY  
ONBOARD NTM “ÓPERA”**  
*Lunch served onboard*

**7:30 – 11:00 P.M – CONFERENCE DINNER AT PAVILHÃO DAS  
GALEOTAS (MARITIME/NAVY MUSEUM, BELÉM)**

**7:30 P.M. – Musical performance – “FadoGrass”**

## **WEDNESDAY, OCTOBER 17<sup>TH</sup>, 2018**

9:00 – 9:30 –**KEYNOTE: César Andrade: *Particle stories: from source to sink*.**

### **9:30 – 10:30 A.M. - SESSION 5 – SEDIMENT TRANSPORT IN TRANSITIONAL ENVIRONMENTS**

*Presiding: Michael Fettweis, MUMM - Royal Belgian Institute of Natural Sciences*

1. Anabela Oliveira and Ana Isabel Santos: *LISST200X - Instrumental response to suspended volcanic particles with low concentration values (Madeira Island - Portugal)*.
2. Grace M. Massey, Kelsey A. Fall, Carl T. Friedrichs, Danielle R.N. Tarpley and S. Jarrell Smith: *Evidence of Muddy Aggregates as Resilient Pellets in Suspension throughout the Water Column Using Traps and a Particle Image Camera System (PICS) in a Tidal Estuary*.
3. Jessica S Turner, Grace M. Massey, M. Lisa Kellogg, and Carl T. Friedrichs: *Effects of oyster aquaculture on water clarity and suspended particle dynamics in Chesapeake Bay, Virginia, U.S.A.*

**10:30-11:00 A.M. – Coffee Break**

**11:00 – 11:30 A.M.–KEYNOTE: Helmut Habersack**

# Particles in Europe 2018

Instituto Hidrográfico, Lisbon, Portugal  
 October 14-17<sup>th</sup>, 2018  
**CONFERENCE PROGRAM**

## 11:30 A.M. – 1:00 P.M. - SESSION 6 – OPTICS/ACOUSTICS AND REMOTE SENSING OF PARTICLES AND FLOCS

*Presiding: Ole Mikkelsen, MacArtney Underwater Technology*

1. Ana I. Santos, Dora Carinhas and Anabela Oliveira: *Exploratory statistical tools to understand ADCP backscatter response to suspended sediment attribute variations.*
2. Yogesh C. Agrawal and Wayne Slade: *Three Frequency Acoustics for Inverting Vertical River Profiles.*
3. Marius Becker, Gabriel Herbst, Christian Maushake and Christian Winter: *Evaluation of sediment flux measurements by calibrated ADCP backscatter data in a tide-controlled estuary.*
4. Slaven Conevski, Nils Ruther, Massimo Guerrero and M. Burckbuchler: *Bedload measurements using ultrasound Velocity profilers (UVP) in controlled laboratory conditions.*
5. Romarc Verney, Marius Becker, Matthias Jacquet, David Le Berre, Gabriel Herbst, and Christian Winter: *Quantification of SPM floc sizes in coastal seas: intercomparison of LISST100X, LISST HOLO2 and PCAM measurements.*
6. Klavs Bundgaard, Ulrik Lumborg, Lotte Nyborg and Bjarne Holm Jakobsen: *Challenges in using Optical Backscatter techniques for sediment monitoring in mixed sediment environments.*

## 1:00 – 2:15 P.M. – LUNCH

## 2:15 P.M. – 3:00 P.M. - SESSION 7 – SEDIMENT TRANSPORT IN FLUVIAL ENVIRONMENTS

*Presiding: Katarina Holubova, Head of the River Morphology and Hydrology Department, Slovakia Water Research Institute (WRI)*

1. Daniel M. Hanes: *Particle Size Dependence of Heavy Metal Concentrations in the Lower Meramec River, Missouri, USA, Originating From Legacy Lead Mining*
2. O. A. Mikkelsen and Yogesh Agrawal: *Suspended Sediment Profiles in Rivers With LISST-SL2 Laser Diffraction Instrument*
3. Flora Pomázi, Sandor Baranya and G.T. Török: *Mapping of suspended sediment mixing at a confluence zone to improve sediment monitoring of a large river.*

## 3:00 – 4:00 P.M – SESSION 8 – PARTICLE MEASUREMENT TECHNIQUES

*Presiding: Wayne Slade, Sequoia Scientific*

1. V G Hariharasudhan, Rao A Bhogeswara and Palanisamy Shunmugam: *Experimental study of critical angle peak shift in bubble volume scattering function for different sizes.*
2. Lianbo Hu, Xiaodong Zhang, Yuancheng Xiong and Yogesh Agrawal: *LISST-VSF calibration from a series of lab experiments.*
3. Rashmita Sahoo and Palanisamy Shanmugam: *Impacts of oceanic particles and bubbles on underwater optical wireless communication channel characteristics.*

## 4:00 – 4:30 P.M. - CONFERENCE CLOSING

*Closing Remarks: Yogesh Agrawal (Sequoia Scientific) and Anabela Oliveira (Instituto Hidrográfico)*

## POSTER PRESENTATIONS:

(Short 3/5 minute presentations on Monday, 15<sup>th</sup> of October from 12:00-1:00 P.M.)

### SEDIMENTS AND INDUSTRY:

- Maria Ubierna, Cristina Diez and Sabrina Upadhyay: *Hydropower development impacts on river connectivity: Lessons learned from sediment management in reservoir and run-of-river hydropower projects.*

### SEDIMENT TRANSPORT IN MARINE ENVIRONMENTS:

- Karolina Borzycka, Sławomir Sagan and Monika Zabłocka: *Improvement of water quality within Danish blue mussel farms observed using optical methods.*

### SEDIMENT TRANSPORT IN TRANSITIONAL ENVIRONMENTS

- Brent A. Law, Timothy Milligan, Vanessa Zions, Peter Cranford, Lindsay Brager, Raymond Bannister and Nigel Keeley: *Evaluating particle packaging and transport at an active area of salmon aquaculture over a mixed grain size seabed.*

### PARTICLE MEASUREMENT TECHNIQUES:

- Wayne Slade and Yogesh Agrawal: *Measuring light backscattering for lidar applications: Where we left off.*
- Magdalena Maria Pawlik, Dariusz Ficek: *Using LISST-100X for measuring pine pollen grains in the waters of the Southern Baltic Sea.*
- S. Thant, Y. Plancke and S. Claeys: *The interchangeability of sensors and comparison between direct – indirect measurement techniques: A 1 year calibration strategy report.*

- Nils Ruther, Rui Aleixo and Massimo Guerrero: *Assessing the suspended sediment concentration by means of a side looking (horizontal) ADCP.*

### OPTICS/ACOUSTICS AND REMOTE SENSING OF PARTICLES AND FLOCS:

- Hussain J. Nasih and Palanisamy Shanmugam: *Remote sensing of sediment settling velocity in estuarine and coastal waters.*
- Michael Fettweis: *Variations in SPM characteristics and its consequences for long-term in situ measurements using optical and acoustical sensors*

## EXHIBITORS:

