

## Remote Sensing of the Ocean, Sea Ice, Coastal Waters, and Large Water Regions 2018

Monday 10 September 2018

### Conference Sessions At A Glance

SHOW | HIDE

1: Coastal Chlorophyll Sensing  
 2: Bathymetric Sensing  
 3: Hyperspectral and Optical Sensing  
 Remote Sensing and Security + Defence Joint Plenary Session  
 4: Microwave and Radar Sensing  
 5: Physical and Optical Oceanographic Sensing  
 6: Earth Systems Sensing  
 Posters-Wednesday

### Important Dates

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Abstract Due:  
21 March 2018  
 Author Notification:  
28 May 2018  
 Manuscript Due Date:  
15 August 2018

### Conference Committee

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#### Conference Chairs

[Charles R. Bostater](#), Florida Institute of Technology (United States)  
[Stelios P. Mertikas](#), Technical Univ. of Crete (Greece)  
[Xavier Neyt](#), Royal Military Academy (Belgium)

#### Program Committee

[Samir Ahmed](#), The City College of New York (United States)  
 Richard J. Breitlow, Agfa Corp. (United States)  
[Jean-Paul Bruyant](#), ONERA (France)

#### Program Committee continued...

[Alexander Gilerson](#), The City College of New York (United States)  
[Carlton R. Hall](#), NASA Kennedy Space Ctr. (United States)  
 Frederic Lamy, ONERA (France)  
[Ana M. Martins](#), Univ. dos Açores (Portugal)  
 Petri Pellikka, Univ. of Helsinki (Finland)

### MONDAY 10 SEPTEMBER

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### Opening Remarks

Monday 10 September 2018  
 8:25 AM - 8:30 AM

### Session 1: Coastal Chlorophyll Sensing

Monday 10 September 2018  
 8:30 AM - 10:20 AM

Session Chair: [Charles R. Bostater](#), Florida Institute of Technology (United States)

**Evaluation and comparison of JPSS VIIRS neural network retrievals of harmful algal blooms with other retrieval algorithms, validated against in-situ radiometric and sample measurements in the West Florida Shelf, and examination of impacts of atmospheric corrections, temporal variations and complex in-shore waters (Invited Paper)**

Paper 10784-1

Time: 8:30 AM - 9:00 AM

Author(s): Samir Ahmed, Ahmed El-Habashi, The City College of New York (United States); Vincent Lovko, Mote Marine Lab. (United States); Michael E. Ondrusek, NOAA National Environmental Satellite, Data, and Information Service (United States)

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**Coastal chlorophyll-a concentrations monitoring in complex coastal region using machine learning techniques (Conference Presentation)**

Paper 10784-2

Time: 9:00 AM - 9:20 AM

Author(s): Yongsung Kwon, Ulsan National Institute of Science and Technology (Korea, Republic of); Seung Ho Baek, Korea Institute of Ocean Science & Technology (Korea, Republic of); Young Kyun Lim, Korea Institute of Ocean Science & Technology (Korea, Republic of); Chungnam National Univ. (Korea, Republic of); JongCheol Pyo, Ulsan National Institute of Science and Technology (Korea, Republic of); Yongeun Park, Konkuk Univ. (Korea, Republic of); Kyung Hwa Cho, Ulsan National Institute of Science and Technology (Korea, Republic of)


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**Vortex structures in the Southeastern Baltic Sea: satellite observations and concurrent measurements**

Paper 10784-3

Time: 9:20 AM - 9:40 AM

Author(s): Olga Y. Lavrova, Evgeny V. Krayushkin, Ksenia R. Nazirova, Alexey Ya. Strochkov, Space Research Institute (Russian Federation)

[Add To My Schedule](#) **Measurement of chlorophyll-a concentration using the data of the Landsat-8 OLI multispectral scanner****(Canceled)**

Paper 10784-4

Time: 9:40 AM - 10:00 AM

Author(s):

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**Coffee Break 10:20 AM - 10:50 AM**

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**Session 2:  
Bathymetric Sensing**

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Monday 10 September 2018

10:50 AM - 12:20 PM


Session Chair: Ryan Ahola, Fisheries and Oceans Canada (Canada)

**Satellite derived bathymetry for Arctic charting: a review of sensors and techniques for operational implementation within the Canadian Hydrographic Service** *(Invited Paper)*

Paper 10784-6

Time: 10:50 AM - 11:20 AM


Author(s): Ryan Ahola, René Chénier, Marc-André Faucher, Bradley Horner, Mesha Sagram, Fisheries and Oceans Canada (Canada)

[Add To My Schedule](#) **Coastal water bathymetry retrieval using high-resolution remote sensing data**

Paper 10784-7

Time: 11:20 AM - 11:40 AM


Author(s): Pedro Vilar, Ana Moura, Luísa Lamas, Rui Guerreiro, José Paulo Pinto, Instituto Hidrográfico (Portugal)

[Add To My Schedule](#) **Influence of bottom depths and bottom types on water surface reflectance**

Paper 10784-45

Time: 11:40 AM - 12:00 PM


Author(s): Tyler Rotkiske, Charles R. Bostater, Florida Institute of Technology (United States)

[Add To My Schedule](#) **Finding model parameters for the system waveform of a full-wave lidar: a pragmatic solution**

Paper 10784-44

Time: 12:00 PM - 12:20 PM

Author(s): Roland Schwarz, Martin Pfenningbauer, RIEGL Laser Measurement Systems GmbH (Austria)

[Add To My Schedule](#) **Visualization of the bathymetric data based on the side-scan-sonar signal****(Canceled)**

Paper 10784-9

Time: 12:20 PM - 12:20 PM

Author(s):

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**Lunch Break 12:20 PM - 1:30 PM**

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**Session 3:  
Hyperspectral and Optical Sensing**

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Monday 10 September 2018


1:30 PM - 3:40 PM

Session Chair: [Françoise Viallefont-Robinet](#), ONERA (France)**Analysis of water-in-oil emulsion hyperspectral signature: contribution of pool experiment** *(Invited Paper)*

Paper 10784-11

Time: 1:30 PM - 2:00 PM


Author(s): Françoise Viallefont, Ahmed Moussous, Philippe Déliot, ONERA (France); L. Roupioz, ONERA, Univ. de Toulouse (France); Véronique Mieggebielle, Total E&amp;P (France)

[Add To My Schedule](#) **Compressed UAV sensing for flood monitoring by solving the continuous travelling salesman problem over hyperspectral maps**

Paper 10784-12

Time: 2:00 PM - 2:20 PM

Author(s): Pablo Casaseca-de-la-Higuera, Univ. de Valladolid (Spain), Univ. of the West of Scotland (United Kingdom); Antonio Tristán Vega, Univ. de Valladolid (Spain); Carlos Hoyos-Barceló, Univ. of the West of Scotland (United Kingdom); Susana Merino-Caviedes, Univ. de Valladolid (Spain); Qi Wang, Univ. of the West of Scotland (United Kingdom); Chunbo Luo, Univ. of Exeter (United Kingdom); Xinheng Wang, Univ. of West London (United Kingdom); Zhi Wang, Zhejiang Univ. (China)


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#### Hyperspectral in-situ attenuation depths and their relation to satellite imagery in two southeastern US estuaries

Paper 10784-13

Time: 2:20 PM - 2:40 PM

Author(s): Charles R. Bostater, Florida Institute of Technology (United States)


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#### Inherent optical properties retrieval from deep waters using Multi Verse Optimizer

Paper 10784-14

Time: 2:40 PM - 3:00 PM

Author(s): Srinivas Kolluru, Shirish Gedam, A. B. Inamdar, Indian Institute of Technology Bombay (India)

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#### Reconstruction of the volume scattering coefficient

**(Canceled)**

Paper 10784-15

Time: 3:00 PM - 3:20 PM


Author(s):

#### Measurement of ocean optical properties profiles using airborne lidar (Conference Presentation)

Paper 10784-30

Time: 3:20 PM - 3:40 PM

Author(s): Hang Liu, Zhejiang Univ. (China); Peng Chen, Zhihua Mao, The Second Institute of Oceanography, SOA (China); Yan He, Shanghai Institute of Optics and Fine Mechanics (China); Difeng Wang, Qiankun Zhu, Fang Gong, The Second Institute of Oceanography, SOA (China)

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#### Coffee Break 3:40 PM - 4:00 PM

## Session PL: Remote Sensing and Security + Defence Joint Plenary Session

Monday 10 September 2018

4:00 PM - 6:00 PM

Location: Convention Hall I-D

#### Joint Virtual Operational Picture

Jürgen Beyerer, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB and Karlsruher Institut für Technologie KIT, Germany

#### Deep Learning for Remote Sensing Imagery

Christian Heipke, Institute of Photogrammetry and Geoinformation (IPI), Leibniz Universität Hannover, Germany

TUESDAY 11 SEPTEMBER

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## Session 4: Microwave and Radar Sensing

Tuesday 11 September 2018

9:00 AM - 10:30 AM


Session Chair: [Xavier Neyt](#), Royal Military Academy (Belgium)

#### ERS1-ERS2 scatterometer intercalibration

Paper 10784-47

Time: 9:30 AM - 9:50 AM

Author(s): Xavier Neyt, Anis Elyouncha, Royal Military Academy (Belgium)


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#### A stochastic model for oil spill detection in marine environment with SAR data

Paper 10784-18

Time: 9:50 AM - 10:10 AM

Author(s): Flavio Parmiggiani, Istituto di Scienze dell'Atmosfera e del Clima (Italy); Laura L. Álvarez-Hernández, Miguel Moctezuma-Flores, Univ. Nacional Autónoma de México (Mexico)


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#### Remote sensing of evolution of oil spills on the water surface

Paper 10784-19

Time: 10:10 AM - 10:30 AM

Author(s): Stanislav A. Ermakov, Ivan A. Kapustin, Alexander A. Molkov, George Leshev, Olga A. Danilicheva, Irina A. Sergievskaya, Institute of Applied Physics (Russian Federation)

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**Multiphysics model to predict the brightness temperature of pyramidal calibration targets for microwave radiometers** (*Invited Paper*)

**(Canceled)**

Paper 10784-16

Time: 10:30 AM - 10:30 AM

Author(s):

**Estimation of sea state parameters using X-band marine radar technology in coastal areas**

**(Canceled)**

Paper 10784-17

Time: 10:30 AM - 10:30 AM

Author(s):

**Coffee Break 10:30 AM - 11:00 AM**

## Session 5: Physical and Optical Oceanographic Sensing

Tuesday 11 September 2018

11:00 AM - 12:10 PM


Session Chair: Aqeel Piracha, ESRIN (Italy)

**Satellite based estimation of water-mass formation areas and extents** (*Invited Paper*)

Paper 10784-20

Time: 11:00 AM - 11:30 AM

Author(s): Aqeel Piracha, Roberto Sabia, Diego Fernández-Prieto, ESRIN (Italy); Marlene Klockmann, Max-Planck-Institut für Meteorologie (Germany); Luigi Castaldo, ESRIN (Italy)


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**Influence of ocean surface waves and air bubbles on the polarization characteristics of spaceborne oceanographic lidar returns**

Paper 10784-21

Time: 11:30 AM - 11:50 AM

Author(s): Qun Liu, Dong Liu, Jian Bai, Yupeng Zhang, Xue Shen, Zhejiang Univ. (China)


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**Particularities of radar backscattering associated with wave breaking on the sea surface**

Paper 10784-22

Time: 11:50 AM - 12:10 PM

Author(s): Irina A. Sergievskaya, Stanislav A. Ermakov, Alexey Ermoshkin, Ivan A. Kapustin, Olga Danilicheva, Institute of Applied Physics (Russian Federation)

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**Lunch/Exhibition Break 12:10 PM - 1:40 PM**

## Session 6: Earth Systems Sensing

Tuesday 11 September 2018

1:40 PM - 3:40 PM


Session Chair: [Samir Ahmed](#), The City College of New York (United States)

**Abnormal upwelling off the southeast of Vietnam in summer 2016** (*Invited Paper*)

Paper 10784-24

Time: 1:40 PM - 2:10 PM

Author(s): Zhihong Wang, Xiaoyan Chen, Yan Bai, Xianqiang He, The Second Institute of Oceanography, SOA (China); Xiaoping Zhang, Luoyang Normal Univ. (China)


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**Multiresolution earth remote sensing approach** (*Invited Paper*)

Paper 10784-46

Time: 2:10 PM - 2:40 PM

Author(s): Charles R. Bostater, Florida Institute of Technology (United States)

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**Impacts of sea water intrusion on lower indus deltaic region using geospatial techniques**

**(Canceled)**

Paper 10784-25  
 Time: 3:10 PM - 3:10 PM  
 Author(s):

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**WEDNESDAY 12 SEPTEMBER**

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## Session PS: Posters-Wednesday

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Wednesday 12 September 2018  
 5:40 PM - 7:30 PM  
 Location: Estrel Hall Foyer

Conference attendees are invited to attend the Remote Sensing poster session held on Wednesday 17:40 to 19:30. Posters will be on display after 13:00 hrs on Monday in the conference area hallway. Authors of poster papers will be present to answer questions concerning their papers during the Wednesday Poster Session.. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Attendees are required to wear their conference registration badges to the poster sessions. Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/x32234.xml>.


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### **Atmospheric correction of OLI/Landsat-8 image for inland riverine water (Canceled)**

Paper 10784-29  
 Time: 5:40 PM - 7:30 PM  
 Author(s):


### **Satellite remote sensing of submesoscale fronts in inner seas**

Paper 10784-31  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Marina I. Mityagina, Olga Y. Lavrova, Space Research Institute (Russian Federation)

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### **Directional variations in parallel polarized water-leaving radiance for suspended particulate matters in coastal waters based on radiative transfer simulation**

Paper 10784-33  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Jia Liu, Jiahang Liu, Xi'an Institute of Optics and Precision Mechanics (China); Xianqiang He, Yan Bai, The Second Institute of Oceanography, SOA (China); Xiaoyan Chen, The Second Institute of Oceanography (China); Peng Chen, The Second Institute of Oceanography, SOA (China); Tieqiao Chen, Yihao Wang, Feng Zhu, Xi'an Institute of Optics and Precision Mechanics (China)

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### **Polarization characteristics of underwater, upwelling radiance of suspended particulate matters in turbid waters based on radiative transfer simulation**

Paper 10784-34  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Jia Liu, Jiahang Liu, Xi'an Institute of Optics and Precision Mechanics (China); Xianqiang He, Yan Bai, The Second Institute of Oceanography, SOA (China); Xiaoyan Chen, Peng Chen, The Second Institute of Oceanography (China); Tieqiao Chen, Yihao Wang, Feng Zhu, Xi'an Institute of Optics and Precision Mechanics (China)

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### **Remote sensing of near surface layer of the ocean**

Paper 10784-35  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Victor I. Titov, Viktor Bakhanov, Anastasiya Demakova, Institute of Applied Physics (Russian Federation); Irina Repina, A.M. Obukhov Institute of Atmospheric Physics of RAN (Russian Federation); Irina Sergievskaya, Institute of Applied Physics (Russian Federation)

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### **Phytoplankton initiation bloom magnitude in Algerian continental shelf waters using 11 years of ocean color observations**

Paper 10784-36  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Siham Benzouai, École Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral (Algeria), Univ. des Sciences et de la Technologie Houari Boumediene (Algeria); Feriel Louanchi, École Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral (Algeria); Youcef Smara, Univ. des Sciences et de la Technologie Houari Boumediene (Algeria)

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### **Validation of a green-red quasi-analytical algorithm for inherent optical properties in East China Sea**

Paper 10784-37  
 Time: 5:40 PM - 7:30 PM  
 Author(s): Liangliang Shi, Ocean College, Zhejiang Univ. (China); Zhihua Mao, Zhejiang Univ. (China); Zheng Wang, Nanjing University (China); Yiwei Zhang, State Key Lab. of Satellite Ocean Environment Dynamics (China); Zengzhou Hao, Qiankun Zhu, Difeng Wang, Fang Gong, State Key Lab. of Satellite Ocean Environment Dynamics (China), The Second Institute of Oceanography, SOA (China); Haiqing Huang, State Key Lab. of Satellite Ocean Environment Dynamics, SOA (China)


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### **A new algorithm based on phytoplankton absorption coefficient for red tide monitoring in the East China Sea**

Paper 10784-38

Time: 5:40 PM - 7:30 PM

Author(s): Xiaohui Xu, Jian Chen, Fangfang Shu, The Third Institute of Oceanography, SOA (China)


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**Simulation and analysis of UV-A radiance reaching the passive satellite sensors over case-I and case-II waters**

Paper 10784-39

Time: 5:40 PM - 7:30 PM

Author(s): Zhang Yiwei, Mao Zhihua, Tao Bangyi, Chen Peng, Shi Liangliang, State Key Lab. of Satellite Ocean Environment Dynamics (China)


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**Seasonal variability of remote sensing reflectance of the Gorky reservoir**

Paper 10784-40

Time: 5:40 PM - 7:30 PM

Author(s): Alexandr Molkov, Insitute of Applied Physics (Russian Federation); Elena Korchemkina, Marine Hydrophysical Institute (Russian Federation); Ivan Kapustin, George Leshev, Olga Danilichevaa, Insitute of Applied Physics (Russian Federation)


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**Underwater sky image as a tool for estimating some inherent optical properties of eutrophic water**

Paper 10784-41

Time: 5:40 PM - 7:30 PM

Author(s): Alexandr Molkov, Lev Dolin, George Leshev, Institute of Applied Physics (Russian Federation)


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**Comparison of Sentinel-2 and Landsat-8 OLI satellite images vs. high spatial resolution images (MIVIS and WorldView-2) for mapping *Posidonia oceanica* meadows**

Paper 10784-42

Time: 5:40 PM - 7:30 PM

Author(s): Luigi Dattola, Agenzia Regionale per la Protezione dell'Ambiente della Calabria (Italy); Francesco Sante Rende, ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale (Italy); Rocco Dominici, Univ. della Calabria (Italy); Pasquale Lanera, Rossella Di Mento, ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale (Italy); Simone Scalise, Piero Cappa, Area Marina Protetta Capo Rizzuto (Italy); Teresa Oranges, Agenzia Regionale per la Protezione dell'Ambiente della Calabria (Italy); Giovanni Aramini, Regione Calabria (Italy)


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**Lidar measurements spatial variability of optical properties of water in eutrophic reservoirs**

Paper 10784-43

Time: 5:40 PM - 7:30 PM

Author(s): Alexandr Molkov, Lev Dolin, Institute of Applied Physics (Russian Federation); Vadim Pelevin, P.P. Shirshov Institute of Oceanology (Russian Federation); Ivan Kapustin, Institute of Applied Physics (Russian Federation); Nikolay Belyaev, Boris Kononov, Viacheslav Kremenetskiy, P.P. Shirshov Institute of Oceanology (Russian Federation)

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