

Programme Agenda

Day 1 - 07/05/2018

Room: Magellan

Opening Session

Chairs: Engdahl, Marcus (ESA- ESRIN)

09:00 - 10:00

09:00 **Welcome Address**

ESA, ESA, ESA-ESRIN, Italy

09:10 **Workshop organisation and objectives**

Engdahl, Marcus, ESA-ESRIN, Italy

09:20 **Sentinel1 Mission Status**

Presenting author: Potin, Pierre

Potin, Pierre, ESA-ESRIN, Italy

09:40 **S-1 constellation performance status**

Presenting author: Miranda, Nuno

Miranda, Nuno, ESA-ESRIN, Italy

Sentinel 1

Chairs: Potin, Pierre (ESA- ESRIN), Miranda, Nuno (ESA- ESRIN)

10:00 - 10:40

10:00 **The Sentinel-1 Mission Performance Center activities and support for the SAR Oceanography community**

Presenting author: Hajduch, Guillaume

Hajduch, Guillaume (1); Vincent, Pauline (1); Cordier, Karen (1); Meadows, Peter (2); Piantanida, Riccardo (3); Small, David (4); Mouche, Alexis (5); Johnsen, Harald (6), 1: C.L.S, France; 2: BAE System Applied Intelligence; 3: Aresys; 4: Remote Sensing Laboratories (RSL), Univeristy of Zurich; 5: IFREMER; 6: NORUT

10:20 **Sentinel-1 WV High-Resolution Image Cross Spectra–perspectives for surface current retrieval from Sentinel1 Doppler**

Presenting author: Collard, Fabrice

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Collard, Fabrice (2); Johnsen, Harald (1); Engen, Geir (1); Recchia, Andrea (3); Chapron, Bertrand (4); Bras, Sergio (5), 1: Norut, Norway; 2: Ocean Datalab, France; 3: Aresys srl; 4: IFREMER, France; 5: ESA, ESTEC

Sentinel 1 (Continuation)

Chairs: Potin, Pierre (ESA- ESRIN), Miranda, Nuno (ESA- ESRIN)

11:10 - 11:50

11:10 Sentinel-1 WV OSW Validation

Presenting author: Johnsen, Harald

Johnsen, Harald (1); Mouche, Alexis (2); Grouazel, Antoine (2); Husson, Romain (3), 1: Norut, Norway; 2: Ifremer, France; 3: CLS, France

11:30 History on Sentinel-1 L2 wind product performance (OWI): Calibration/ Validation strategy, status and coming evolution

Presenting author: Vincent, Pauline

Vincent, Pauline (1); Hajduch, Guillaume (1); Husson, Romain (1); Grouazel, Antoine (2); Mouche, Alexis (2), 1: CLS, France; 2: Ifremer, France

Round Table - Sentinel 1

11:50 - 12:20

Target Detection

Chairs: Eltoft, Torbjørn (UiT the Arctic University of Norway), Brekke, Camilla (University of Troms)

13:20 - 15:00

13:20 Using Sentinel-1 dual-polarization incoherent images to detect iceberg

Presenting author: Marino, Armando

Marino, Armando (1); Dierking, Wolfgang (2,3); Soldal, Ingri Halland (3), 1: The Open University, United Kingdom; 2: Alfred-Wegener-Institut fuer Polarund Meeresforschung, Germany; 3: Tromso University, Norway

13:40 On the use of Sentinel-1 (IW/EW and WM modes) for iceberg detection applied to sail racing around the world

Presenting author: Viard, Jimmy

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Viard, Jimmy (1); Longép , Nicolas (1); Vincent, Pauline (1); Husson, Romain (1); Tournadre, Jean (2); Kerbaol, Vincent (1); Hajduch, Guillaume (1), 1: CLS, France; 2: IFREMER, France

14:00 Synergies between SAR and AIS data for the surveillance of the maritime traffic

Presenting author: Vadaine, Rodolphe

Vadaine, Rodolphe (1); Nguyen, Duong Van (2); Long p , Nicolas (1); Hajduch, Guillaume (1); Fablet, Ronan (2), 1: C.L.S.; 2: IMT Atlantique

14:20 Analysis of the Ship-Sea Contrast using Quasi Simultaneous Space-borne Single and Quad Polarization Data

Presenting author: Velotto, Domenico

Velotto, Domenico (1); Nunziata, Ferdinando (2); Marino, Armando (3), 1: German Aerospace Center (DLR), Germany; 2: Universit di Napoli Parthenope, Italy; 3: Open University, U.K.

14:40 Preliminary assessment of a wake-based ship detection process

Presenting author: Graziano, Maria Daniela

Graziano, Maria Daniela (1); D'Errico, Marco (2); Grasso, Marco (2), 1: University of Naples "Federico II", Piazzale Tecchio, 80, 80125, Naples, Italy; 2: University of Campania "Luigi Vanvitelli", Via Roma, 29, Aversa (CE), Italy

Target Detection (Continuation)

Chairs: Eltoft, Torbjrn (UiT the Arctic University of Norway), Brekke, Camilla (University of Troms)

15:30 - 16:30

15:30 Characterization and detection of icebergs in open water and sea ice using spaceborne Fully polarimetric SAR

Presenting author: Akbari, Vahid

Akbari, Vahid (1); Lohse, Johannes Philipp (1); Eltoft, Torbjrn (1); Dierking, Wolfgang (1,2), 1: UiT The Arctic University of Norway, Norway; 2: Alfred Wegener Institute for Polar and Marine Research (AWI)

15:50 A Ship Wake Detectability Model and its Application to Wake Detection

Presenting author: Tings, Bj rn

Tings, Bj rn; Velotto, Domenico, DLR, Germany

16:10 Analysis on Vessel Velocity Estimation in Synthetic Aperture Radar Image Domain.

Presenting author: Panico, Alessandro

Panico, Alessandro; Renga, Alfredo; Graziano, Maria Daniela, University of Naples, Italy

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Round Table - Target Detection

16:20 - 17:00

Room: James Cook

Coffee Break

10:40 - 11:10

Coffee Break

15:00 - 15:30

Room: Canteen

Lunch Break

12:20 - 13:20

Welcome Cocktail

17:00 - 19:00

Day 2 - 08/05/2018

Room: Magellan

Synoptic

Chairs: Johannessen, Johnny A. (Nansen Environmental and Remote Sensing Center), Holt, Benjamin (Jet Propulsion Laboratory), Aouf, Lotfi (Meteo-France)

09:00 - 10:20

09:00 **Advances in Studies of Upper Ocean Mesoscale Processes and Dynamics from satellite sensor synergy: Benefitting from the GlobCurrent and Ocean Virtual Laboratory Projects.**

Presenting author: Johannessen, Johnny A.

Johannessen, Johnny A. (1); Chapron, Bertrand (2); Collard, Fabrice (3); Kudryavtsev, Vladimir (4), 1: Nansen

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Environmental and Remote Sensing Center, Norway; 2: Ifremer; 3: OceanDataLab; 4: Russian State

Hydrometeorological University

09:20 Multi-sensor investigation of upwelling caused by cyclonic eddies

Presenting author: Alpers, Werner

Alpers, Werner, University of Hamburg, Germany

09:40 Observing Small Eddies with Multiple Sensors

Presenting author: Holt, Benjamin

Holt, Benjamin, Jet Propulsion Laboratory, United States of America

10:00 Synergistic use of Sentinel-1 SAR, Sentinel-2 MSI and Sentinel-3 OLCI to detect and monitor the January 2018 Sanchi oil spill incident in the China Sea.

Presenting author: Blondeau-Patissier, David Michel

Blondeau-Patissier, David Michel (1); Schroeder, Thomas (1); Irving, Paul (2); Witte, Christian (3), 1: CSIRO Oceans and Atmosphere, Brisbane, Australia; 2: Australian Maritime Safety Authority, Canberra, Australia; 3: Department of Science, Information Technology and Innovation, Brisbane, Australia

Synoptic (Continuation)

Chairs: Johannessen, Johnny A. (Nansen Environmental and Remote Sensing Center), Holt, Benjamin (Jet Propulsion Laboratory), Aouf, Lotfi (Meteo-France)

10:50 - 11:50

10:50 The Copernicus Maritime Surveillance service: Quasi real time SAR-based applications in the service of Member States

Presenting author: Vicente, Ricardo

Vicente, Ricardo; Lourenço, Pedro, European Maritime Safety Agency, Portugal

11:10 The assimilation of Sentinel-1A and 1B SAR wave spectra in the global CMEMS wave system

Presenting author: Aouf, Lotfi

Aouf, Lotfi (1); Dalphinnet, Alice (1); Husson, Romain (2); Law-Chune, Stephane (3), 1: Meteo-France, France; 2: CLS; 3: Mercator-Ocean

11:30 Meteo-marine parameters from Sentinel-1 SAR imagery: towards near real-time services for the Baltic Sea

Presenting author: Rikka, Sander

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Rikka, Sander (1); Pleskachevsky, Andrey (2); Jacobsen, Sven (2); Alari, Victor (1); Uiboupin, Rivo (1), 1: Tallinn University of Technology, Estonia; 2: German Aerospace Center (DLR)

Round Table - Synoptic

11:50 - 12:20

Other Applications

Chairs: da Silva, José Carlos (University of Porto), Antunes, Sónia Alexandra (EMSA)

13:20 - 15:00

13:20 CleanSeaNet: 10 years monitoring pollution in Europe

Presenting author: Antunes, Sónia

Antunes, Sónia; Santos, Sónia; Lourenço, Pedro, EMSA, Portugal

13:40 Remote sensing of film slicks with co-polarized X-C-S-band scatterometer and TerraSAR-X

Presenting author: Ermakov, Stanislav

Ermakov, Stanislav (1); Sergievskaya, Irina (1); da Silva, Jose (2); Kapustin, Ivan (1); Molkov, Alexander (1); Shomina, Olga (1), 1: Institute of Applied Physics RAS, Russian Federation; 2: Department of Geoscience, Environment & Spatial Planning, University of Porto

14:00 Oil Slick Characterization Using C-band and X-band Spaceborn SAR Images and Model Based Polarimetric Technique

Presenting author: Ivonin, Dmitry

Ivonin, Dmitry (1); Ivanov, Andrey (1); Brekke, Camilla (2); Skrunes, Stine (2), 1: Shirshov Institute of Oceanology RAS, Russian Federation; 2: University of Tromso - The Arctic University of Norway, Tromso, Norway

14:20 Algae blooms in the Baltic Sea observed in overlapping synthetic aperture radar and optical images combined with in-situ data

Presenting author: Johansson, A. Malin

Johansson, A. Malin (1); Skrunes, Stine (1); Brekke, Camilla (1); Johansson, Johannes (2); Karlson, Bengt (2), 1: UiT The Arctic University of Norway, Norway; 2: Swedish Meteorological and Hydrological Institute, Sweden

14:40 How to identify rain events over the ocean on C-band synthetic aperture radar images?

Presenting author: Alpers, Werner

Alpers, Werner (1); Zhang, Biao (2); Mouche, Alexis (3); Chan, Pak Wai (4), 1: University of Hamburg, Germany; 2:

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Nanjing University of Information Science and Technology, Nanjing, China; 3: Laboratoire d'Océanographie Spatiale, IFREMER, Plouzané, France; 4: Hong Kong Observatory, Hong Kong

Other Applications (Continuation)

Chairs: da Silva, José Carlos (University of Porto), Antunes, Sónia Alexandra (EMSA)

15:30 - 16:30

15:30 Long Oblique Internal Hydraulic Jumps at the Penghu Channel of the South China Sea

Presenting author: Ferreira, Adriana M. dos Santos

Ferreira, Adriana M. dos Santos; da Silva, José Carlos, University of Porto, Portugal

15:50 Radar signatures of internal solitary waves – revisited

Presenting author: da Silva, Jose C. B.

da Silva, Jose C. B. (1); Alpers, Werner (2); Magalhes, Jorge.M. (3), 1: University of Porto, Porto, Portugal; 2: University of Hamburg, Hamburg, Germany; 3: University of Porto, Porto, Portugal

16:10 Automatic Bathymetry Retrieval from Sentinel-1 and TerraSAR-X data

Presenting author: Wiehle, Stefan

Wiehle, Stefan; Pleskachevsky, Andrey; Jacobsen, Sven, German Aerospace Center (DLR), Germany

Round Table - Other Applications

16:30 - 17:00

Room: James Cook

Coffee Break

10:20 - 10:50

Coffee Break

15:00 - 15:30

Room: Canteen

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Lunch Break

12:20 - 13:20

Room: Big Hall

Poster Session/Demos/Drink

17:00 - 19:00

Exploring the use of SAR remote sensing to detect microplastics pollution in the oceans

Davaasuren, Narangerel (1); Marino, Armando (1); Boardman, Carl (1); Ackermann, Nicolas (2); Alparone, Matteo (3); Nunziata, Ferdinando (3), 1: The Open University, United Kingdom; 2: Swiss Federal Railways SBB, Luzern, Switzerland; 3: The Parthenope University of Naples, Italy

Demonstration of Spatially Coincident and Quasi-Simultaneously Collected Sentinel-1 and RADARSAT-2 Imagery for Enhanced Ocean Surveillance

Van Wychen, Wesley; Vachon, Paris, Defence Research and Development Canada, Canada

Iceberg detection extending the Dual-pol Ratio Anomaly Detector (DPoRAD) to ALOS-2 L-band quad-polarimetric data

Marino, Armando, The Open University, United Kingdom

Spatial Scale Effect on Wind Speed Retrieval from SAR Images

Zhang, Kangyu; Huang, Jingfeng; Guo, Qiaoying; Mansaray, Lamin R, Zhejiang University, China, People's Republic of

SAR Monitoring of the A-68 Iceberg Drifting Displacements

Parmiggiani, Flavio (1); Moctezuma-Flores, Miguel (2); Guerrieri, Lorenzo (1); Battagliere, Maria Libera (3), 1: ISAC-CNR, Bologna, Italy; 2: Dept. Telecomm., UNAM, Mexico City, Mexico; 3: Italian Space Agency (ASI), Rome, Italy

Coastal bathymetry estimation from Sentinel – 1 data.

Lamas, Luisa (1); Pinto, José Paulo (1); Sancho, Francisco (2); Azevedo, Alberto (2); Birrien, Florent (2); Vilar, Pedro (1); Moura, Ana (1), 1: Instituto Hidrográfico, Lisboa, Portugal; 2: Laboratório Nacional de Engenharia Civil, Lisboa, Portugal

Using SAR for Characterization of Offshore Wind Farm Wakes and Coastal Wind Speed Gradients

Hasager, Charlotte; Ahsbahs, Tobias; Badger, Merete; Hansen, Kurt S.; Volker, Patrick, Technical University of Denmark, Denmark

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SAR Remote Sensing of Internal Waves in the UK Continental Shelf. Automatic detection and impact estimation.

Kurekin, Andrey; Miller, Peter; Land, Peter, Plymouth Marine Laboratory, United Kingdom

Evaluation of Altimeter-based sea ice Lead detectors with Sentinel-1 data

Longépé, Nicolas (1); Thibaut, Pierre (1); Vadaine, Rodolphe (1); Poisson, Jean-Christophe (1); Guillot, Amandine (2); Boy, Francois (2); Picot, Nicolas (2), 1: CLS, France; 2: CNES, France

Automatic Iceberg Detection in the Barents Sea for Icebergs in Open Water, Fast Ice and Pack Ice

Soldal, Ingri Halland (1,2); Korosov, Anton (1); Marino, Armando (3), 1: Nansen Environmental and Remote Sensing Center, Norway; 2: University of Troms, Norway; 3: The Open University, United Kingdom

Pancake ice thickness mapping from wave dispersion observed in SAR imagery

Aulicino, Giuseppe (1); Wadhams, Peter (1); Parmiggiani, Flavio (2), 1: Universit Politecnica delle Marche, Ancona, Italy; 2: ISAC-CNR, Bologna, Italy

Analysis of the Oil Seep-affected Sea Surface Microwave Backscattering

Khenouchi, Horiya (1); Buono, Andrea (2); Nunziata, Ferdinando (2); Velotto, Domenico (3); Migliaccio, Maurizio (2); Smara, Youcef (1), 1: University of Sciences and Technology Houari Boumediene, Algiers, Algeria; 2: Universit degli Studi di Napoli Parthenope, Italy; 3: Remote Sensing Technology Institute, German Aerospace Center (DLR), Germany

Determining the dielectric constant of oil slick using Synthetic Aperture Radar

Quigley, Cornelius Patrick, UiT The Arctic University of Norway, Troms, Norway

The challenges of Automatic Oil Spill Detection and Polluter Identification Services

Hajduch, Guillaume; Vadaine, Rodolphe; Nhun Fat, Béatrice; Maaref, Nadia, C.L.S, France

A statistical approach of wake detection based on a priori information provided by AIS data

Hajduch, Guillaume; Vadaine, Rodolphe, C.L.S, France

Detection of range/azimuth ambiguities and permanent objects in the maritime domain by multi temporal stacking of SAR images

Hajduch, Guillaume; Vadaine, Rodolphe; Vincent, Pauline, C.L.S, France

SAR Observations of Ocean-Atmosphere Coupling over the Somali Current

Caruso, Michael; Graber, Hans, University of Miami, United States of America

Application of the Sentinel satellites for tracing surface slicks along the Irish Western Shelf

Mullins, Monica Mary; Croot, Peter L., National University of Ireland, Galway, Ireland

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An Empirical Algorithm for GF-3 SAR Wave Height Retrieval from Quad-Polarized Wave Mode Images

Wang, He (1); Yang, Jingsong (2); Wang, Jing (1), 1: National Ocean Technology Center, China, People's Republic of; 2: Second Institute of Oceanography, China, People's Republic of

Improving Sentinel-1 Ocean Wind Field Consistency and Accuracy by Minimizing Antenna Beam Signatures

Jacobsen, Sven; Velotto, Domenico; Pleskachevsky, Andrey; Wiehle, Stefan, German Aerospace Center (DLR), Germany

Multi-polarization methods to detect mud flat areas using C- and X-band spaceborne SAR data.

Ferrentino, Emanuele (1); Marino, Armando (2); Nunziata, Ferdinando (1); Migliaccio, Maurizio (1); Li, Xiaoming (3), 1: Universit degli studi di Napoli Parthenope, Engineering Department, Italy; 2: The Open University, Engineering and Innovation, Milton Keynes, United Kingdom; 3: Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China

Classification of Maritime Objects in TerraSAR-X Imagery

Velotto, Domenico (1); Tings, Björn (1); Bentes, Carlos (2), 1: German Aerospace Center (DLR), Germany; 2: Technical University of Munich, Germany

Ocean surface current retrievals from satellite and coastal remote sensing: A comparison of Envisat ASAR and HF-radar observations from the west coast of Norway.

Moiseev, Artem (1); Hansen, Morten W. (1); Johannessen, Johnny A. (1,2), 1: Nansen Environmental and Remote Sensing Center, Bergen, Norway; 2: Geophysical Institute, University of Bergen, Bergen, Norway

Identifying potentially harmful jellyfish blooms using SAR Sentinel 1 images

Orasi, Arianna (1); De Angelis, Roberta (1); Bruschi, Antonello (1); Drago, Aldo (2); Gaucci, Adam (2); Deidun, Alan (2); De Leo, Francesco (3); Zampardi, Serena (3); Ingrosso, Gianmarco (3); Boero, Ferdinando (3), 1: ISPRA, Italy; 2: University of Malta, Physical Oceanography Research Group, Dept. of Geosciences, Msida MSD 2080, Malta; 3: University of Salento DiSTeBA Centro Ecotekne, Lecce 73100, Italy

Sea Ice Drift Retrieval From Sentinel-1 Data

Demchev, Denis (1,2); Khmeleva, Viktoriya (2), 1: Arctic and Antarctic Research Institute, Russian Federation; 2: NANSEN INTERNATIONAL ENVIRONMENTAL AND REMOTE SENSING CENTRE, Russian Federation

Accuracy Assessment of Sentinel-1A/B Wind Speed Errors in the Korean Coast

Jang, Jae-Cheol; Park, Kyung-Ae; Park, Jae-Jin, Seoul National University, Korea, Republic of (South Korea)

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Impact of the SAR wind in regional wave model on the french Mediterranean sea

Dalphinnet, Alice (1); Aouf, Lotfi (1); Husson, Romain (2); Michaud, Hélose (3), 1: Météo-France, France; 2: Collecte Localisation Satellites, France; 3: Service Hydrographique et Océanographique de la Marine, France

Observing Oil Releases from Platforms Using Synthetic Aperture Radar

Skrunes, Stine; Johansson, Malin; Brekke, Camilla, UiT The Arctic University of Norway, Norway

Sargassum Monitoring in the Caribbean Sea with Sentinel-1 and Landsat-8 data

Hajduch, Guillaume; Husson, Romain; Nhun Fat, Béatrice; Longépé, Nicolas; Sutton, Marion, C.L.S, France

Ocean Surface Wind Speed Retrieval from Sentinel-1 dual-polarization imagery

Ye, Yufang; Eriksson, Leif E. B., Department of Space, Earth and Environment, Chalmers University of Technology, Sweden

Precise SAR Doppler calibration and application for sea ice drift estimation

Park, Jeong-Won; Hansen, Morten; Korosov, Anton, Nansen Environmental and Remote Sensing Center, Norway

New and Improved Geophysical Doppler Shift from Envisat ASAR - Impact on Near-Surface Wind Retrieval

Hansen, Morten Wergeland; Park, Jeong-Won; Moiseev, Artem, Nansen Center, Norway

Case Study of Oil Pollution from Ship in the Gulf of Lion Using Sentinel Data

Lavrova, Olga; Bocharova, Tatiana; Nazirova, Ksenia, Space Research Institute RAS, Russian Federation

Surface waves damping due to oil and oil derivatives film in application to ocean remote sensing

Sergievskaya, Irina; Ermakov, Stanislav; Lazareva, Tatyana, Institute of applied physics, Russian Federation

Air-Sea Interaction over Mesoscale Eddy through Sentinel-1A/B Wind Field

Park, Jae Jin; Park, Kyung Ae; Jang, Jae Cheol, Seoul National University, Korea, Republic of (South Korea)

Island-Induced Modification of Sentinel-1A/B Wind Forcing and Impact on Ecosystem

Park, Kyung-Ae; Jang, Jae Cheol; Park, Jae Jin, Seoul National University, Korea, Republic of (South Korea)

NEW WIND INVERSION METHODS USING SENTINEL-1 WIDE SWATH PRODUCTS

Husson, Romain (1); Mouche, Alexis (2); Berger, Henrick (1); Archer, Olivier (2); Vincent, Pauline (1); Longepe, Nicolas (1); Grouazel, Antoine (2), 1: CLS, France; 2: IFREMER, France

The NextGEOSS project and its user-driven approach to build a Earth Observations Data Hub : example of marine Pilots

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Voidrot, Marie-Francoise (1); Sutton, Marion (2); Hamre, Torill (3); Bye, Bente Lilja (4); Catarino, Nuno (5); De Lathouwer, Bart (6); Concalves, Pedro (7); Ksoll, Wolfgang (8); Grosso, Nuno (5); Meyer-Arneke, Julian (9); Mueller, Andreas (9); Goor, Erwin (10), 1: Open Geospatial Consortium Europe, France; 2: CLS, France; 3: NERSC, Norway; 4: BLB, Hnefoss, Norway; 5: Deimos, Portugal; 6: Open Geospatial Consortium Europe, Belgium; 7: Terradue, Portugal; 8: Viderum, Germany,; 9: German Aerospace Center DLR Oberpfaffenhofen, Germany; 10: VITO, Belgium

Analysing Oceanographic Products from the Sentinel Satellites to validate Modeled Sea Surface Wind Speed and Sea State Parameters from DWD and ESA

Hashemi, Mohammad (1); Rabus, Bernhard (1); Lehner, Susanne (2), 1: Simon Fraser University, Canada; 2: DLR, Oberpfaffenhofen, Münchner Strasse 20, D 82234 Wessling

Oil Spill Mixing Ratio Study Using Compact Polarimetry SAR

Li, Hai Yan (1,3); Wu, Jin (1,2); Perrie, William (3), 1: University of Chinese of Academic of Sciences, China, People's Republic of; 2: Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences; 3: Fisheries and Oceans Canada, Bedford Institute of Oceanography

Integrating incidence-angle dependence in the segmentation of UAVSAR images

Cristea, Anca; Doulgeris, Anthony Paul, UiT The Arctic University of Norway, Norway

Sea Ice Classification with Sentinel-1 using Multi-Block Classification

Zohary, Moein (1); Fabry, Pierre Laurent (1); Bercher, Nicolas (1); Femenias, Pierre (2); Bouffard, Jérôme (2), 1: ALONG-TRACK SAS, France; 2: ESA/ESRIN, Italy

A Study of Ice Edge Detection Based on a Sub-Aperture Coherence Method

Olsen, Ole Morten, Norwegian Space Centre, Norway

A data-driven calibration method for ocean surface current retrieval from Sentinel-1

Doppler centroid.

Collard, Fabrice (1); Johnsen, Harald (2); Engen, Geir (2); Recchia, Andrea (3); Chapron, Bertrand (4); Bras, Sergio (5), 1: Ocean Datalab, France; 2: Norut, Norway; 3: Aresys srl; 4: IFREMER, France; 5: ESA, ESTEC

Spiral Eddy Topology in the Mediterranean Sea from SAR images

Redondo, Jose Manuel (1); Jorge, Jose (1); Karimova, Svetlana (2), 1: UPC Barcelona Tech., Spain; 2: Space Research Institute, Russian Academy of Sciences

Day 3 - 09/05/2018

Room: Magellan

Programme Agenda

Winds

Chairs: Kerbaol, Vincent (CLS Brest, France), Yang, Jingsong (Second Institute of Oceanography, SOA)

09:00 - 10:50

09:00 Preliminary study of atmospheric boundary layer rolls with Sentinel-1 wave mode SAR vignettes

Presenting author: Wang, Chen

Wang, Chen (1,2); Mouche, Alexis (1); Foster, Ralph (3); Vandemark, Douglas (4); Chapron, Bertrand (1); Stopa, Justin (1), 1: Laboratoire d'Océanographie Physique et Spatiale, Ifremer, Brest, France; 2: UMR LabSTICC, Institut Mines-Telecom Atlantique, Brest, France; 3: Applied Physics Laboratory, 1013 NE 40th St, Seattle, Washington, USA; 4: Ocean Processes Analysis Laboratory, University of New Hampshire, New Hampshire, USA

09:20 Determination and use of the Wind field from SENTINEL-1 SAR in Coastal Areas

Presenting author: Zecchetto, Stefano

Zecchetto, Stefano, National Research Council of Italy, Istituto Scienze Atmosfera e Clima, Italy

09:40 SAR Wind Maps and Derived Products: New Possibilities for Offshore Wind Energy Exploitation

Presenting author: Hasager, Charlotte

Badger, Merete; Ahsbahs, Tobias; Karagali, Ioanna; Hasager, Charlotte, Technical University of Denmark, Denmark

10:00 A Novel Approach to SAR wind Retrieval

Presenting author: Nilsen, Vegard

Nilsen, Vegard; Engen, Geir; Johnsen, Harald, Norut, Norway

10:20 The Azimuth Cut-Off Method to Estimate Wind Speed under Extreme Weather Conditions

Corcione, Valeria (1); Nunziata, Ferdinando (1); Portabella, Marcos (2); Grieco, Giuseppe (3); Migliaccio, Maurizio (1), 1: Universit degli Studi di Napoli Parthenope, Dipartimento di Ingegneria, Naples, Italy; 2: The institute of Marine Sciences (ICM-CSIC), Spain; 3: Koninklijk Nederlands Meteorologisch Instituut (KNMI), De Bilt, The Netherlands

10:40 Sentinel-1 for hurricane monitoring

Presenting author: Mouche, Alexis

Mouche, Alexis (1); Chapron, bertrand (1); Zhao, Yili (1); Zhang, Biao (5); Johnsen, harald (2); Husson, romain (3); Longépé, nicolas (3); Collard, Fabrice (4), 1: Ifremer, France; 2: Norut, Norway; 3: Collecte Localisation Satellite, France; 4: Ocean Data Lab, France; 5: NUIST, China

Programme Agenda

Winds (Continuation)

Chairs: Kerbaol, Vincent (CLS Brest, France), Yang, Jingsong (Second Institute of Oceanography, SOA)

11:10 - 12:30

11:10 Using co-cross polarization coherence from TOPS SLC S-1 data for wind field retrieval

Presenting author: Longép , Nicolas

Longép , Nicolas (1); Husson, Romain (1); Mouche, Alexis (2); Pottier, Eric (3); Hajduch, Guillaume (1); Collard, Fabrice (4); Archer, Olivier (2), 1: CLS, France; 2: IFREMER, France; 3: University of Rennes I, France; 4: Ocean Data Lab, France

11:30 Analysis of the 2017 Atlantic Hurricane season Hurricane Irma derived from SAR Sentinel-1, RADARSAT-2 and TerraSAR-X data

Presenting author: Lehner, Susanne

Lehner, Susanne (1); Alexander, Soloviev (2); Cayla, Dean (2); Bernhardt, Rabus (3), 1: German Aerospace Center, Oberpfaffenhofen, Germany; 2: Nova Southeastern University; 3: Simon Fraser University

11:50 Effects of Asymmetric Secondary Eyewall on Tropical Cyclone Evolution in Hurricane Ike (2008)

Presenting author: Zhang, Guosheng

Zhang, Guosheng; Perrie, Will, Bedford Institute of Oceanography, Canada

12:10 Signature of the Agulhas Current in Synthetic Aperture Radar derived winds

Presenting author: Krug, Marjolaine

Krug, Marjolaine (1,2,3); Schilperoort, Daniel (2,3); Collard, Fabrice (4); Hansen, Morten (5); Rouault, Mathieu (2,3), 1: CSIR, South Africa; 2: University of Cape Town; 3: Nansen-Tutu Centre for Marine Environmental Research; 4: OceanDataLab; 5: Nansen Environmental and Remote Sensing Centre Bergen

Round Table - Winds

12:30 - 13:00

Sea Ice

Chairs: Brekke, Camilla (University of Troms), Eltoft, Torbj rn (UiT the Arctic University of Norway)

14:00 - 15:00

14:00 Retrieval of sea ice deformation from Sentinel-1 and assimilation into the Lagrangian sea

Programme Agenda

ice model

Presenting author: Korosov, Anton

Korosov, Anton; Rampal, Pierre, Nansen Environmental and Remote Sensing Center, Norway

14:20 Accuracy of a Phase-Correlation Technique for Fully Automated Sea Ice Motion Retrieval based on Sequential SAR Images

Presenting author: Frost, Anja

Frost, Anja; Wiehle, Stefan; Jacobsen, Sven, DLR, Maritime Safety and Security Lab Bremen, Germany

14:40 Assessing Deformation, Drift, and Topography of Sea Ice Using InSAR to Support Use and Management of Coastal Ice

Presenting author: Aldenhoff, Wiebke

Aldenhoff, Wiebke (1); Dammann, Dyre Oliver (1); Eriksson, Leif (1); Eicken, Hajo (2); Mahoney, Andrew (3); Meyer, Franz (3), 1: Chalmers University of Technology, Sweden; 2: International Arctic Research Center, University of Alaska Fairbanks, Alaska; 3: Geophysical Institute, University of Alaska Fairbanks, Alaska

Sea Ice (Continuation)

Chairs: Brekke, Camilla (University of Troms), Eltoft, Torbjørn (UiT the Arctic University of Norway)

15:30 - 16:30

15:30 Ice/water classification using dual-polarization C- and L-band synthetic aperture radar images over Fram Strait

Presenting author: Aldenhoff, Wiebke

Aldenhoff, Wiebke (1); Heuzé, Céline (2); Eriksson, Leif E. B. (1), 1: Chalmers University of Technology, Sweden; 2: University of Gothenburg, Sweden

15:50 Estimation of First-Year Sea Ice Melt Pond Fraction from Compact Polarization SAR

Presenting author: Li, Haiyan

Li, Haiyan (1,2); Perrie, Will (1), 1: Bedford Institute of Oceanography, Canada; 2: Key Laboratory of Computational Geodynamics, Chinese Academy of Sciences / Earth College, University of Chinese Academy of Sciences, Beijing, China

Round Table - Sea Ice

16:30 - 17:00

Programme Agenda

Room: James Cook

Coffee Break

10:50 - 11:10

Coffee Break

15:00 - 15:30

Room: Canteen

Lunch Break

13:00 - 14:00

Day 4 - 10/05/2018

Room: Magellan

Waves

Chairs: Collard, Fabrice (Ocean Datalab), Romeiser, Roland (University of Miami RSMAS)

09:00 - 10:40

09:00 **A new Approach to Ocean Wave Measurements by SAR, Using Spotlight-Mode Data and Multi-Subaperture Image Analysis**

Presenting author: Romeiser, Roland

Romeiser, Roland; Graber, Hans Christian, University of Miami RSMAS, United States of America

09:20 **A Multiscale Approach Analysis of Polarimetric SAR Images to study Multimodal Ocean Wave Systems**

Presenting author: Lorenzetti, Joao Antonio

Lorenzetti, Joao Antonio; Ortiz, Gustavo Prouvot, National Institute for Space Research / INPE, Brazil

09:40 **COASTAL SWELL MEASUREMENTS FROM SENTINEL-1 TOPS MODE**

Presenting author: Husson, Romain

Programme Agenda

Husson, Romain (1); Johnsen, Harald (2); Collard, Fabrice (3); Guitton, Gilles (3), 1: CLS, France; 2: NORUT, Norway; 3: OCEANDATALAB, France

10:00 SAR Image Cross-spectral Analysis of Intermediate Waves: Directional Properties and Potential in Deriving Surface Velocity

Presenting author: Li, Huimin

Li, Huimin; Chapron, Bertrand; Mouche, Alexis; Nougulier, Frédéric; Stopa, Justin, LOPS, Ifremer, France

10:20 Copernicus Level-3 Wave Products Based On Sentinel-1 Spectral Wave Measurements

Presenting author: Husson, Romain

Husson, Romain (1); Mouche, Alexis (2); Wang, He (3); Wang, Xuan (4); Collard, Fabrice (5); Aouf, Lotfi (6); Stopa, Justin (2); Charles, Elodie (1), 1: CLS, France; 2: IFREMER, France; 3: NOTC, Chine; 4: OUC, Chine; 5: OCEANDATALAB, France; 6: METEO-FRANCE, France

Waves (Continuation)

Chairs: Collard, Fabrice (Ocean Datalab), Romeiser, Roland (University of Miami RSMAS)

11:10 - 11:50

11:10 Measuring ocean waves in sea ice using SAR imagery: A quasi-deterministic approach evaluated with Sentinel-1 and in situ data

Presenting author: Arduin, Fabrice

Arduin, Fabrice (1); Stopa, Justin (1); Chapron, Bertrand (1); Mouche, Alexis (1); Collard, Fabrice (2), 1: LOPS, France; 2: OceanDataLab, France

11:30 Sea state in the marginal ice zone Observed by Sentinel-1 and TerraSAR-X Imagery, Results from the Sikuliaq Campiagn

Presenting author: Lehner, Susanne

Lehner, Susanne (1); Gemmrich, Johannes (2), 1: German Aerospace Center, Germany; 2: University of Victoria

Round Table - Waves

11:50 - 12:20

Missions

13:20 - 14:20

Programme Agenda

13:20 Capabilities of the Chinese GaoFen-3 Synthetic Aperture Radar for Ocean Observation

Presenting author: Li, Xiao-Ming

Li, Xiao-Ming, Institute of Remote Sensing and Digital Earth, CAS, China, People's Republic of

13:40 Ocean Winds and Waves from Chinese SAR Mode Sensors

Presenting author: Yang, Jingsong

Yang, Jingsong; Ren, Lin; Wang, Juan; Chen, Peng; Zheng, Gang, Second Institute of Oceanography, SOA, China

14:00 The Sea surface Kinematics Multiscale monitoring mission (SKIM): a pathfinder radar mission for mapping waves and currents

Presenting author: Arduin, Fabrice

Arduin, Fabrice (1); Chapron, Bertrand (1); Collard, Fabrice (2), 1: IFREMER, France; 2: Ocean Datalab, France

Summaries and Roadmap

14:20 - 15:30

14:20 Summaries and Roadmap

Engdahl, Marcus, ESA-ESRIN, Italy

Room: James Cook

Coffee Break

10:50 - 11:10

Room: Canteen

Lunch Break

12:20 - 13:20