

# OceanSAR 2006

## ST. JOHN'S, NL CANADA

OCTOBER 23-25, 2006

ATLANTIC ROOM  
INSTITUTE FOR OCEAN TECHNOLOGY

### PROGRAM

SUNDAY, OCTOBER 22, 2006		
19h00	Icebreaker Reception and Registration <i>Fairmont Newfoundland Hotel</i>	
MONDAY, OCTOBER 23, 2006		
DAY 1, AM		
8h30	Welcome Addresses	<ul style="list-style-type: none"> <li>Organizing Committee,</li> <li>Institute for Ocean Technology,</li> <li>Province of Newfoundland &amp; Labrador</li> </ul>
8h40	Conference Program Format and Outcomes	<i>Organizing Committee, Yves Crevier</i> Canadian Space Agency St. Hubert, QC, Canada
8h50	<a href="#">Keynote Address</a> From Svalbard to St. John's	<b>Johnny Johannessen</b> Nansen Environmental & Remote Sensing Center Bergen, Norway
9h10	<a href="#">Keynote Address</a> Creating a Smart Bay	<b>Neil Cater</b> Canadian Centre for Marine Communications St. John's, NL, Canada
<b>SESSION 1</b>	<b>STEWARDSHIP OF COASTAL AND MARINE ENVIRONMENTS</b>	<i>Chair: Desmond Power</i> C-CORE St. John's, NL, Canada
9h40	<a href="#">Keynote Address</a> Needs and Requirements: Stewardship of Coastal Waters – the Information Systems Perspective	<b>Jerzy Graff</b> BMT Limited UK
10h00	<a href="#">Keynote Address</a> State-of-the-Art in the Use of SAR for Stewardship of the Coastal and Marine Environment	<b>Gordon Staples</b> ( <i>Jeff Hurley – presenting</i> ) MDA Richmond, BC, Canada
10h20	<b>Break</b>	
10h40	WiSAR - A Tool for Operational Wind Retrieval from Synthetic Aperture Radar Data	<b>Jochen Horstmann</b> GKSS Research Center Germany
11h00	SAR-Based Oil Pollution Surveillance in Canada: Operational Challenges	<b>Roger De Abreu</b> Environment Canada Ottawa, ON, Canada
11h20	Reducing Subjectivity in Oil Detection using SAR: The Detection Triangle	<b>Jeff Hurley</b> MDA Geospatial Services Cantley, QC, Canada

11h40	<b>INTERACTIVE SESSION DAY 1</b> <i>Introductions</i>	
	Oil Spill Segmentation of SAR Images via Graph Cuts	<b>Sonia Pelizzari</b> Instituto de Telecomunicações, Universidade Técnica de Lisboa Portugal
	SAR Observations of Oil Spills and Natural Surface Slicks in the Black Sea	<b>Vladimir V. Malinovsky</b> ( <i>Stein Sandven – presenting</i> ) Marine Hydrophysical Institute of Ukrainian Academy of Science Ukraine
	Algorithm Development for Operational Satellite SAR Classification and Mapping of Great Lakes Ice Cover	<b>George Leshkevich</b> NOAA Ann Arbor, MI, USA
	Maritime Traffic Monitoring Using a Single Spaceborne SAR Sensor? Algorithms and Applicability	<b>Gonçalo Valadão</b> ( <i>Sonia Pelizzari – presenting</i> ) Instituto de Telecomunicações, Instituto Superior Técnico
	Canadian Space Agency's Hurricane Watch Program, Supporting Research on Wind Field Retrieval from RADARSAT-1 Images	<b>Sonya Banal</b> Canadian Space Agency St. Hubert, QC, Canada
	Assisted Acquisition Planning for Maritime Surveillance with Commercial Satellite Imagery	<b>Jeff Secker</b> Defence R&D Canada Ottawa, ON, Canada
12h10	<b>Lunch</b>	
12h50	Ship Monitoring from SAR: An Automated Detection System for Ships and Oil Spills	<b>Christopher Wackerman</b> General Dynamics AIS Arlington, VA, USA
13h10	RADARSAT-1 Observations from Davis Strait to Baffin Bay for Off-shore Oil Spill Detection	<b>Paul Budkewitsch</b> Natural Resources Canada Ottawa, ON, Canada
13h30	Discussion	
<b>SESSION 2</b>	<b>MONITORING AND SURVEILLANCE FOR SECURITY AND DOMAIN AWARENESS</b>	<b>STEWARDSHIP OF COASTAL AND MARINE ENVIRONMENTS</b>
		<i>Chair:</i> <b>Jeff Hurley</b> MDA Richmond, BC, Canada
13h50	<a href="#">Keynote Address</a> Monitoring and Surveillance for Security and Domain Awareness - Needs and Requirements	<b>Brian Whitehouse</b> Alliance for Marine Remote Sensing Association Halifax, NS, Canada
14h10	<a href="#">Keynote Address</a> Monitoring and Surveillance for Security and Domain Awareness: SAR State-of-the-Art	<b>Paris Vachon</b> Defence R&D Canada Ottawa, ON, Canada
14h30	<b>Break</b>	
14h50	The Interdepartmental Marine Security Working Group	<b>Laura Hoy</b> Transport Canada Marine Security Ottawa, ON, Canada
15h10	Project Polar Epsilon: Joint Space-Based Wide Area Surveillance and Support Capability	<b>LCdr Andrew Samoluk</b> Department of National Defence Ottawa, ON, Canada
15h30	Requirements for Polarisation Combination for Ship Detection in the Barents Sea	<b>Tonje Nanette Arnesen</b> Norwegian Defence Research Establishment Norway
15h50	Observation of Vessel Heave with Airborne SAR	<b>Michael Henschel</b> Defence R&D Canada Ottawa, ON, Canada
16h10	Discussion	
16h30	<b>Workshop End of Day 1</b>	
19h00	<b>Social Event – Rally in the Alley</b> <i>Club One, George Street</i>	

**TUESDAY, OCTOBER 24, 2006**

**DAY 2, AM**

<b>SESSION 3</b>	<b>OPERATIONAL OCEAN MANAGEMENT</b>	<i>Chair: Dean Flett</i> Environment Canada Ottawa, ON, Canada
8h30	<a href="#">Keynote Address</a> Needs and Requirements: Status of the Development and Implementation of a NOAA SAR Products System for Coastal and Marine Operational Applications	<b>William Pichel</b> NOAA Camp Springs, MD, USA
8h50	<a href="#">Keynote Address</a> Operational Ocean Management: SAR State of the Art	<b>Johnny A. Johannessen</b> Nansen Environmental & Remote Sensing Center Bergen, Norway
9h10	Satellite and Modeling Components of the Southern California Coastal Ocean Observing System	<b>Ben Holt</b> Jet Propulsion Laboratory Pasadena, CA, USA
9h30	IBPlott - a system for operational use of space borne SAR information in the Baltic Sea	<b>Robin Berglund</b> Technical Research Centre of Finland Finland
9h50	The Capability of Hurricane Wind Monitoring by SAR	<b>Hui Shen</b> Bedford Institute of Oceanography Bedford, NS, Canada
<b>10h10</b>	<b>Break</b>	
10h30	Operational Utilization of SAR-Derived Winds for Forecast Operations at the Pacific Storm Prediction Centre	<b>Laurie Neil</b> Environment Canada Vancouver, BC, Canada
10h50	Fine Scale Wind Patterns in Coastal Embayments Using RADARSAT-1	<b>Jim Helbig</b> Fisheries and Oceans Canada St. John's, NL, Canada
11h10	High Resolution Wind Field Retrievals off the Norwegian Coast: Comparing ASAR Observations and MM5 Simulations	<b>Johnny Johannessen</b> Nansen Environmental & Remote Sensing Center Bergen, Norway
11h30	Evaluation of Earth Observation Wind Data for Marine Search and Rescue Drift Forecasting	<b>Julien Choisnard</b> C-CORE <i>now with - Meteorological Research Branch</i> Environment Canada
11h45	Discussion	<b>OPERATIONAL OCEAN MANAGEMENT</b>
12h10-12h30	<b>INTERACTIVE SESSION DAY 2 Introductions</b>  Measurement of Hurricane Winds using Synthetic Aperture Radars  The Near-real time High-resolution Ice Map service for the Ships of the Italian Antarctic Program  Ice Drift and Area Flux in the Fram Strait from ENVISAT ASAR Data  Toward an Automated and Standardized SAR Coastal Environmental Toolkit  Towards the Support of the St. Lawrence Global Observatory (SLGO)	<b>Jochen Horstmann</b> GKSS Research Center Germany  <b>Flavio Parmiggiani</b> ISAC-CNR Bologna, Italy  <b>Stein Sandven</b> Nansen Environmental & Remote Sensing Center Solheimsviken, Norway  <b>Christopher Wackerman</b> General Dynamics AIS Arlington, VA, USA  <b>Guy Aube</b> Canadian Space Agency St. Hubert, QC, Canada
<b>12h30 – 13h30</b>	<b>Lunch</b>	
<b>SESSION 4</b>	<b>NATIONAL &amp; INTERNATIONAL COLLABORATIONS AND PROGRAMS</b>	<i>Chair: Yves Crevier</i> Canadian Space Agency St. Hubert, QC, Canada

13h30	<a href="#">Keynote Address</a> Ocean SAR Observational Requirements in GEOSS	<b>Mike Manore</b> Natural Resources Canada Ottawa, ON, Canada
13h50	<a href="#">Keynote Address</a> Creating a Successful International Consortium – Lessons Learned from 30 Years of Collaboration	<b>Charles Randell</b> C-CORE St. John's, NL, Canada
14h10	The Norwegian SatOcean Programme –A Multi-use Concept for Operational Marine Services	<b>Guro Dahle Strom</b> Norwegian Space Center Oslo, Norway
14h30	Ocean Monitoring Services for the Spanish Coast	<b>Celestino Gomez Cid</b> GMV SA Madrid, Spain
14h50	Coordination for Earth Observation Marine Surveillance and Monitoring in Canada	<b>Yves Crevier</b> Canadian Space Agency St. Hubert, QC, Canada
15h10	<b>Break</b>	
15h30	ESA Sentinel-1 SAR Mission	<b>Malcolm Davidson</b> European Space Agency Noordwijk, The Netherlands
15h50	RADARSAT Constellation - Changing the Paradigm of Maritime Surveillance	<b>Guy Seguin</b> Canadian Space Agency St. Hubert, QC, Canada
16h10	Polar View - A Euro-Canadian Consortium Serving Polar Regions with SAR-Based Services	<b>Thomas Puestow</b> C-CORE St. John's, NL, Canada
16h30	Support for Science and Operations in Alaskan Waters	<b>Don Atwood</b> Alaska Satellite Facility, University of Alaska Fairbanks, Alaska
16h50	Discussion	<b>ENHANCED NATIONAL AND INTERNATIONAL COLLABORATION PLAN</b>
17h30	<b>Workshop End of Day 2</b>	
19h00	<b>Workshop Banquet - Fairmont Newfoundland Hotel</b>	

**WEDNESDAY, OCTOBER 25**

**DAY 3, AM**

<b>SESSION 5</b>	<b>ADVANCES IN SAR INFORMATION EXTRACTION</b>	<i>Chair:</i> <b>Christopher Wackerman</b> General Dynamics AIS Arlington, VA, USA
8h30	<a href="#">Keynote Address</a> What is the Future for Marine SAR Exploration	<b>Christopher Wackerman</b> General Dynamics AIS Arlington, VA, USA
8h50	Applicability of Conventional Scatterometer Model Functions to High-Resolution SAR Wind Retrievals: The Effect of Spatial Averaging	<b>Frank Monaldo</b> Johns Hopkins University APL Maryland, USA
9h10	High Resolution Surface Winds in the Coastal Transitional Zone from SAR Satellite Imagery and MC2 Weather Prediction Model	<b>Philippe Beaucage</b> INRS (Université du Québec) QC, Canada
9h30	Impact of Satellite Winds on Marine Wind Estimates	<b>Will Perrie</b> Bedford Institute of Oceanography Dartmouth, NS, Canada
9h50	Improved Bayesian Wind Vector Retrieval Scheme	<b>Vincent Kerbaol</b> BOOST Technologies France
<b>10h10</b>	<b>Break</b>	
10h30	Variational Assimilation of SAR Imagery for Near-Shore Regional Wave Estimation	<b>David Walker</b> General Dynamics AIS Arlington, VA, USA
10h50	Role of Synthetic Aperture Radar for Observing "Local Generation" of Internal Solitary Waves in the Bay of Biscay	<b>José da Silva</b> Institute of Oceanography, Univ. Lisbon Portugal
11h10	Synthetic Aperture Radar for Ocean Current Feature Retrievals and Surface Velocity Estimates	<b>Johnny Johannessen</b> Nansen Environmental & Remote Sensing Center Bergen, Norway
11h30	TerraSAR-X and Beyond: High-Resolution Mapping of Surface Current Fields by Spaceborne Along-Track InSARs	<b>Roland Romeiser</b> Institute of Oceanography, University of Hamburg Germany
11h50	<b>INTERACTIVE SESSION DAY 3 Introductions</b>  Wind Direction Editors for Use in the Generation of Synthetic Aperture Radar Wind Speed Imagery  A Three-Scale Ocean Bistatic Microwave Scattering Simulation Model  A Simplified Asymptotic Theory for Ocean Surface Electromagnetic Wave Scattering  SAR Imaging of Shallow Water Sand Ridges Aligned with Tidal Current  Radar Imaging of Current Features: A Synergy of Backscatter Power and Doppler Shift	<b>Todd Sikora</b> Millersville University Millersville, PA, USA  <b>Xiaoqing Wang</b> Chinese Academy of Science China  <b>Alexis Mouche</b> IFREMER/LOS France  <b>Xiaofeng Li</b> NOAA Camp Springs, MD, USA  <b>Vladimir Kudryavtsev</b> Nansen International Environmental and Remote Sensing Center Bergen, Norway

	Ocean Waves Retrieval in Coastal Zone	<b>Fabrice Collard</b> BOOST Technologies France
	Marine Wind Analysis with the Benefit of Radarsat-1 Synthetic Aperture Radar Data	<b>Richard Danielson</b> Dalhousie University Halifax, NS, Canada
12h30	Lunch	
13h30	Extracting Geophysical Parameters from Multi-Polarization SAR Imagery	<b>Donald Thompson</b> Johns Hopkins University APL Maryland, USA
13h50	Doppler Centroid Anomaly Extraction and Interpretation	<b>Fabrice Collard</b> BOOST Technologies France
14h10	Improved Iceberg Detection with Envisat Dual Co-polarization SAR	<b>Carl Howell</b> C-CORE St. John's, NL, Canada
14h30	Extreme Wind and Wave Conditions Observed by Synthetic Aperture Radar on a Global and Regional Scale	<b>Susanne Lehner</b> German Aerospace Center (DLR) Germany
14h50	Discussion	<b>ADVANCES IN SAR</b>
15h10	Break	
15h30	Closing Session	<ul style="list-style-type: none"> <li>• Summary Presentation <ul style="list-style-type: none"> <li>– <b>Moderator:</b> Desmond Power</li> <li>– <b>Presenter:</b> Ron Brown EOMSCC – Integrated EO Solutions</li> </ul> </li> <li>• Discussion <ul style="list-style-type: none"> <li>– From St. John's to OceanSAR 2008</li> </ul> </li> <li>• Acknowledgement and Final Thanks</li> </ul>
16h50	<i>OPTIONAL TOUR</i> Institute for Ocean Technology - IOT	