44th Liège Colloquium on Ocean Dynamics: Remote sensing of colour, temperature and salinity – new challenges

Meeting Place: "Petits Amphis" - B7b - 202

Program

	Monday (07/05)	**Tuesday (08/05)**	**Wednesday (09/05)**	**Thursday (10/05)**	**Friday (11/05)**
08:30	Registration				
09:00		**Session 2** – The arrival of salinity	**Session 5** – Advancing Operational Applications	**Session 7** - Mix and Match: merging satellite data	**Session 10** – Advancing visible radiometry of the oceans II
09:40	Opening of the colloquium	Keynote by Lagerloef G. et al.	Keynote by Merchant C.J.		
10:00	**Session 1** – Remotely sensing diurnal variability				
10:20					
10:40					
11:00				**Session 8** - Advancing visible radiometry of the oceans I	Keynote by Doerffer R et al.
11:20	Keynote by Young-Je Park				
11:40			**Session 6** – Ecosystem dynamics: physical and		
12:00					
12:20					
12:40					
14:00	Keynote speaker: While J et al.	**Session 3** - Short Posters Presentation	biological interactions Ken Buesseler	**Session 9** - Troubled waters	**Session 11** – Remote Sensing: Applications
14:20					
14:40					
15:00					
15:20					end at 15:40
15:40		**Session 4** - Fronts			
16:00		Keynote by Cornillon P and K Obenour		Social event	
16:20					
16:40					
17:00					
17:20		Poster session - Cheese and wine reception			
17:40					
18:00	Ice Breaker party		Colloquium dinner		

Monday		
08:30 - 10:00	Registration	
10:00 - 10:10	Opening of the colloquium by Aida Alvera-Azcarate and Kevin Ruddick	
Session 1 – Remotely sensing diurnal variability		
Session 1.1 – Geostationary Ocean Colour Remote Sensing		
Chair: Pierre-Philippe Mathieu		
10:10 -10:40	Keynote speaker: Young-Je Park	Toward detection of sub-diurnal variation of ocean color from space
10:40 -11:00	Zhifeng Yu et al.	Assessment of the variation of total suspended sediment concentrations in Hangzhou Bay using GOCI, MODIS and HJ-1A/1B
11:00 - 11:20	Zhongping Lee et al.	Towards high-temporal resolution observation of euphotic zone depth in the North Sea
11:20 -11:40	**Coffee**	
11:40 - 12:00	Fang Shen et al.	Remotely-sensed sediment dynamics on multi-temporal scales in the Yangtze Estuary and adjacent coast
12:00 - 12:20	Vanhellemont Q et al.	Obtaining high quality ocean colour products at high temporal frequency by exploiting the synergy between polar-orbiting and geostationary sensors
12:20 - 12:40	Kevin Ruddick et al	Challenges and opportunities for geostationary remote sensing – the next ocean colour revolution
12:40 - 14:00	**Break**	

Monday

Session 1.2 – Sea Surface Temperature diurnal cycle		
Chair: Chris Merchant		
14:00 - 14:30	Keynote speaker: While J et al.	Initial progress in producing an analysis system of the diurnal cycle of SST
14:30 - 14:50	Le Borgne P et al.	Comparison of SEVIRI and buoy derived diurnal warming estimates
14:50 - 15:10	Chevallier C. et al.	Monitoring the Ushant Front with MSG/SEVIRI derived Sea Surface Temperature data
15:10 - 15:30	Marullo S et al.	Combining model and geostationary satellite data to reconstruct the hourly SST field over the Mediterranean Sea
15:30 - 15:50	Uiboupin R and J. Laanemets	Estimation of biases in sea surface temperature obtained by MODIS and AATSR for composite map in case of highly variable temperature fields
15:50 - 16:10	**Coffee**	
Session 1.3 – Sea Surface Temperature bias		
16:10 - 16:30	Hoyer JL et al.	A Multi-sensor satellite sea surface temperature bias adjustment method for the Arctic Ocean
16:30 - 16:50	O'Carroll A	Spatial variability of observational biases and errors determined from collocations of IASI, AVHRR and buoy SSTs
16:50 - 17:10	Tomazic I et al.	Assessing the impact of space and time resolution of brightness temperature simulation conditions in correcting SEVIRI SST over the Adriatic Sea
Session 1.4		
17:10 - 17:30	Shang et al.	A satellite based study on HAB in the East China Sea
17:30 - 20:30	**Ice Breaker party**	

Tuesday

Session 2 - The arrival of salinity

Chair: Bruno Buongiorno Nardelli

09:00 - 9:30	Keynote speaker: Lagerloef G. et al.	Aquarius Satellite Salinity Measurements; Performance, Calibration and Early Science Results During the First Eight Months
09:30 - 09:50	Guimbard S et al.	SSS retrieval from space: an comparison study using SMOS and Aquarius data
09:50 - 10:10	Alory G et al.	Sea Surface Salinity off Panama in the Eastern Pacific: seasonal dynamics from in situ and SMOS data
10:10 - 10:30	Boutin J et al.	Sea surface salinity as measured by SMOS and by surface autonomous drifters: impact of rain
10:30 - 10:50	Yin Xiaobin et al. (Presented by Boutin J.)	Impact of wind speed error on SMOS SSS retrieval
10:50 - 11:10	**Coffee**	
11:10 - 11:30	Reul N et al.	Observations of Ocean surface response to Hurricane Igor: A Salty Tropical Cyclone Wake observed from Space
11:30 - 11:50	Umbert M et al.	Turbulence-inspired fusion methods for ocean remote sensing data
11:50 - 12:10	Wu Xiongbin et al.	Remote Sensing of Sea Surface Conductivity Distribution by HF SurfaceWave Radar
12:10 - 12:30	Salisbury J et al.	Spatial and temporal coherence between Amazon River discharge, salinity, and light absorption by colored organic carbon in western tropical Atlantic surface waters
12:30 - 14:00	**Break**	

Session 3 - Short poster presentations

Chair: Aida Alvera-Azcarate

14:00 - 15:20	Short oral presentation of different posters	
15:20 - 15:40	**Coffee**	

Session 4 - Fronts!

15:40 - 16:10	Keynote speaker: Cornillon P and K Obenour	Thirty Years of Global SST Front Probability
16:10 - 16:30	Kazmin A.	Variability of the large-scale oceanic frontal zones as revealed from analysis of the global satellite SST data
16:30 - 16:50	Kirches G et al.	Detection and Analysis of Fronts in the North Sea
16:50 - 17:10	Miller P.I.	Ocean front maps for integrating dynamic thermal, colour and salinity features
17:10 - 20:00	**Poster session - Cheese and wine reception**	

Wednesday

Session 5 – Advancing Operational Applications		
Chair: Anne O'Carroll		
09:00 - 09:30	Keynote speaker: Christopher J. Merchant	Generating a Climate Data Record for Sea Surface Temperature
09:30 - 09:50	Gentemann et al.	AMSR-E and WindSAT version 7 microwave SSTs
09:50 - 10:10	Kaiser-Weiss et al.	Application of products provided by the Group of High Resolution Sea Surface Temperature (GHRSST)
10:10 - 10:30	Donlon C et al.	The GMES Sentinel-3 Mission: Overview and Status
10:30 - 10:50	**Coffee**	
10:50 - 11:10	Brewin R et al.	The Ocean Colour Climate Change Initiative: a roundrobin comparison of in-water bio-optical inversion algorithms
11:10 - 11:30	Peters SWM and CoBiOS team	Harmonization of ocean color products
Session 6 – Ecosystem dynamics: physical and biological interactions		
11:30 - 11:50	Borges A et al.	Estimating pCO2 from remote sensing in the Belgian Coastal Zone
11:50 - 12:10	Pan et al.	A Study of Ocean Responses to Typhoon over the South China Sea by Using Satellite Sea Surface Temperature Data
12:10 - 12:30	Dingtian Yang and Xiujuan Shan	Cool Water Brought by Upwelling Benefits Coral Reef in the background of Global Warming along South Coast of Hainan Island,
12:30 - 14:00	**Break**	
Chair: Carsten Brockmann		
14:00 - 14:20	Tilstone G et al.	Variability in phytoplankton size, primary and export production in the North Atlantic from satellite data
14:20 - 14:40	Soppa M et al.	Comparison of remotely sensed phytoplankton functional types retrievals in the Southern Ocean
14:40 - 15:00	Eleveld MA et al.	Sense and Sensibility: Remote Sensing of Ocean Colour, its Accuracies, and Implications for Models
15:00 - 15:20	Capet A. et al.	Interannual variability of Black Sea's hydrodynamics and connection to atmospheric patterns
15:20 - 15:40	**Coffee**	
15:40 - 16:00	Bresciani M et al.	Observation of cyanobacteria bloom in the Curonian Lagoon with multi-source satellite data
16:00 - 16:20	Bracher A et al.	Temporal and spatial dynamics of phytoplankton composition in the Western Pacific and link to halocarbon emissions
16:20 - 16:40	Chu PC and Y.H. Kuo	Ocean Color for Detection of Red Tides in the Southwestern Florida Coastal Region
16:40 - 17:00	Yuanzhi Zhang et al.	Remote estimation of chlorophyll-a concentration in the Pearl River estuary and coastal waters in northern South China Sea
20:00 - 23:00	**Colloquium Dinner: "Château de Colonster"**	

Thursday

Session 7 - Mix and Match: merging satellite data

Chair: Gary Lagerloef

09:00 - 09:20	B. Buongiorno Nardelli et al	Towards high resolution mapping of 3D mesoscale dynamics from observations: results of the MESCLA project
09:20 - 09:40	Roberts-Jones J and M Martin	Recent updates to the background uncertainty estimates in OSTIA system
09:40 - 10:00	Hoareau N et al.	Data assimilation and data fusion in a regional simulation
10:10 - 10:30	Jingang Jiang et al.	Reconstruction of incomplete satellite SST data sets combining optical and microwave remote sensing products over the China Sea by the DINEOF methodology
10:30 - 10:50	Alvera-Azcarate A. et al.	An EOF-based technique to compute merged high resolution sea surface temperature fields
10:50 - 11:10	**Coffee**	

Session 8 - Advancing visible radiometry of the oceans I

Chair: David Doxaran

11:10 - 11:30	Lavender S et al. (Presented by K. Barker)	The Importance of Quality Control for Science: Spaceborne Medium Resolution Optical Sensors
11:30 - 11:50	Sebastiá MT et al.	Coastal waters monitoring: spatial or spectral resolution?
11:50 - 12:10	Bernard S et al.	Ocean Colour Signal Characterisation and New Algorithms for Eutrophic and Hypertrophic Coastal and Inland Waters
12:10 - 12:30	Saux-Picart S et al.	Remote sensing of assimilation number for marine phytoplankton
12:30 - 14:00	**Break**	

Session 9 - Troubled waters

Chair: Kathryn Barker

14:00 - 14:20	Liste M et al.	Modeling and observation of freshwater and sediment plumes at the Catalan Coast
14:20 - 14:40	De Boer G et al.	Harmonic and DINEOF analysis for North Sea SPM patterns
14:40 - 15:00	Dogliotti AI et al.	Variability of La Plata River extremely turbid waters using MODIS-Aqua images and its relation to fish habitat selection
15:00 - 15:20	**Coffee**	
15:20 - 15:40	Fettweis M et al.	Weather and climate related spatial variability of high turbidity areas in the North Sea and the English Channel
15:40 - 16:00	Doxaran et al	Contribution to the validation of GOCI products over turbid waters with MERIS, MODIS and field measurements data
16:00 - 18:00	**Social Event**	

Friday

Session 10 – Advancing visible radiometry of the oceans II

Chair: To be advised

09:00 - 09:30	Keynote speaker: Doerffer R et al.	Including temperature and salinity variations of pure water optical properties in a Case 2 water retrieval algorithm
09:30 - 09:50	Odermatt D et al.	Beyond the two cases of water - water constituent retrieval algorithms and validity ranges
09:50 - 10:10	Rousseau V et al.	Development and validation of an algorithm estimating primary production in the Southern North Sea
10:10 -10:30	KrasemannH. and D.Müller	Ocean Colour Time series of MERIS data comparing various algorithms
10:30 - 10:50	**Coffee**	
10:50 - 11:10	Lei H and B Zhou	Harmful Algal Bloom Detection with MODIS Inherent Optical Properties Products: A Decision Tree Application
11:10 - 11:30	Kopelevich O et al.	The problem of satellite monitoring of coccolithophore blooms in the Black Sea
11:30 - 11:50	Goyens C et al.	Inter-comparison and improvement of atmospheric correction algorithms based on worldwide in-situ data taken in highly turbid waters
11:50 - 12:10	Lapucci C et al.	Chlorophyll_a algorithms for MODIS and MERIS full resolution imagery: a comparison between Case 1 and Case 2 Ligurian and North Tyrrhenian waters
12:10 - 12:30	Brockmann C et al.	CoastColour Approach for Consensus Case 2 Regional Algorithm Protocols
12:30 - 14:00	**Break**	

Session 11 – Remote Sensing: Applications

Chair: Kevin Ruddick

14:00 - 14:20	Bouali M. and A. Ignatov	Quantification and reduction of striping on MODIS/VIIRS top-of-atmosphere clear-sky ocean radiances and derived products
14:20 - 14:40	Grishin N and A Kostianoy	Satellite monitoring of the nord stream gas pipeline construction in russian waters of the gulf of Finland in 2010-2011
14:40 - 15:00	Stanichny S et al.	Harmful algae bloom and oil pollutions – spectral manifestations and impact on the upper layer properties
15:00 - 15:20	Shevyrnogov A.P. and G.S. Vysotskaya	Ocean dynamics on a global scale using satellite measurements

Posters

Posters should fit within a vertical frame of 125 * 92 cm.

Posters highlighted in Yellow will be accompanied by a short oral presentation

Temperature

Order	Title	Authors
1	A New Generation of Ship-Deployed Hyperspectral Infrared Interferometers to Extend the Climate Data Record of Sea-Surface Temperature into the VIIRS,	Peter J Minnett, Migel Angle Izaguirre, Malgorzata Szczodrak, Luc Rochette
2	Comparison of ocean model outputs and MSG/SEVIRI hourly sea surface temperature fields	Françoise Orain, Pierre Le Borgne, Bruno Levier, Gilles Garric
3	Estimation and Validation of the Peruvian Sea Surface Temperature using NOAA - AVHRR and In-Situ Data with PACHA-RICAJ Software	Joel Rojas Acuña, José Carlos Eche Llenque, Edward Alburqueque Salazar
4	Oceanography at EUMETSAT	Anne O'Carroll, Hans Bonekamp, Graig Anderson, Ewa Kwiatkowska, Julia Figasaldaña
5	Error Characteristics of MODIS sea surface temperature (SST) Algorithm	Ajoy Kumar
6	Validation of the regional algorithms for the sea surface temperature observation using the AVHRR NOAA sensors in the Black and Caspian Seas	Lebedev S. Solovyov D. and Kostianoy A.

Salinity

7	SMOS Sea Surface Salinity Validation in South China Sea	Yongzheng Ren, Xiaoming Li, Qing Dong, Xiaoyang Wen
8	Evaluation of SMOS Sea Surface Salinity over Bay of Bengal	H Rahaman, M Ravichandran
9	SMOS CP34 Soil Moisture and Ocean Salinity maps	Jordi Font, Carolina Gabarró, Maria Piles, Joaquim Ballabrera, Antonio Turiel et al.

Various

10	Cabo Pulmo: a comparison between in situ and satellite oceanographic measurements	A. Trasviña-Castro, O. Aburto-Oropeza, E. González-Rodríguez, M.A. Cosio-López
11	Identification of Weibull Distribution for Global Significant Wave Heights from Radar Altimetry Tutorial (RAT)	P.C. Chu
12	In-situ data and remote sensing of temperature, salinity and chlorophyll on the North Western Black Sea	Maria-Emanuela Mihailov, Luminita Buga, Viorel Malciu, George Sarbu
13	Long-term dynamics of chlorophyll concentration and sea surface temperature in the ocean surface layer (by satellite data)	G. Vysotskaya
14	Manifestation of the mesoscale phenomena in surface roughness, altimetry, optical and thermal properties of the upper layer	A. Kubryakov, S.Stanichny, R.Sanichnaya, S.Djenidi
15	Mesoscale in the coastal zone of the Southern Baja California Peninsula	E. González-Rodríguez, A. Trasviña-Castro
16	Monitoring changes of Nam Co Lake using remote sensing data (2000-2009)	Yanhong Wu, Junsheng Li
17	Short term upwelling/downwelling events in Fortune Bay, Newfoundland	A.W. Ratsimandresy, G. Mabrouk, D. Hamoutene, J. Salcedo, P. Goulet, R. Losier, D. Drover, L. Sheppard

Posters

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Colour

18	A Preliminary Study on Bi-directional Reflectance Distribution of Inland Water	Antonio Turiel, Justino Martinez, Marta Umbert, Fernando Pérez,
19	An algorithm for the attenuation of the photosynthetically available radiation (KPAR): application to MODIS and MERIS imagery and validation with Smart	Bouchra Nechad, Kevin Ruddick
20	Comparing in-situ measurements of water leaving reflectance with MERIS data applied to different atmospheric correction algorithms	H. Krasemann, D.Müller
21	Concentration of the suspension and Chlorophyll-A derived from optical scanners for the coastal waters	Vladimir Kushnir
22	Deep ocean warming assessed from altimeters, GRACE, and a non-Boussinesq OGCM	Y. Tony Song
23	Estimation of suspended sediments concentrations in coastal ocean using in-situ and Hyperion data	Qianguo Xing, Chuqun Chen, Mingjing Lou, Ping Shi
24	Estimation of the total absorption a( ) and the backscattering bb( ) parameters using a neural network inversion in coastal waters	Cédric Jamet
25	Extraction of the Douro river plume size from MERIS Total Suspended Matter data using classification and segmentation methods	A. Teodoro, H. Almeida, H. Gonçalves
26	Harmful Algal Bloom Detection with MODIS Inherent Optical Properties Products: A Decision Tree Application	H. Lei, B.Zhou
27	Hyperspectral analysis of coral reefs by using a water column correction algorithm	Chaoya Yang, Dingtian Yang
28	Influence of suspended particle concentration, composition and size on the variability of inherent optical properties of the Southern North Sea	Rosa Astoreca, David Doxaran, Kevin Ruddick, Véronique Rousseau, Christiane Lancelot
29	Marine dynamic and structur of the West Madagascar	Rananantsoa Heriniaina, Juliano Dany, Bemiasa John
30	Model assessment for coastal water absorption coefficients in East China Sea	J. Huang, X. L. Chen, L. Q. Chen
31	Monitoring of multi-year algal bloom dynamics in the North Sea using MERIS and	D. Van der Zande, K. Ruddick
32	Optimal interpolation of Chlorophyll-A satellite observations in the North Sea and Baltic Sea	Hoyer, J. L., Dobrynin, M., Howe E.
33	Retrieval of oceanic phytoplankton with a combined phytodoas-RTM method utilizing hyper spectral satellite measurements	T. Dinter, A. Sadeghi, A. Wolanin, B. Taylor, M. Vountas, A. Bracher
34	Studies of the bio-optical characteristics of the Russian northern seas by using satellite and ship data (the White Sea as an example)	V. Burenkov, O. Kopelevich, M. Kravchishina, S. Sheberstov, S. Vazyulya
35	Study of red tide developing in the Persian Gulf and Oman Sea using remote sensing data from Modis Sensor	Samad Hamzei, A.A. Bidokhti
36	Suspended sediment monitoring and assessment for Yellow River Estuary from Landsat TM/ETM+ imagery	Minwei Zhang , Qing Dong, Tinwei Cui, Cunjin Xue
37	The use of new DEIMOS-1 high-resolution satellite imagery to study the spatial variability of Guadalquivir River plume (SW Iberian Peninsula).	I. Caballero, E. P. Morris, J. Ruiz, G. Navarro
38	Using self-organizing maps to identify phytoplankton groups from remotely sensed data in case 1 waters	Z. Ben Mustapha, S. Alvain, C. Jamet and H.Loisel
39	Variability of the spring bloom in the Labrador Sea from SeaWiFS and Seaglider	Eleanor Frajka-Williams, Peter B. Rhines, Charles C. Eriksen

Posters

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40	Influence of strong wind event on phytoplankton bloom during northeast monsoon in northern South China Sea	Caiyun Zhang
41	Fusion between Remote Sensing and in situ SPM data in the North Sea	Johannes Pein, Johannes Schulz-Stellenfleth, Emil V. Stanev
42	A novel approach to the high resolution interpolation of in situ Sea Surface Salinity using satellite SST data	B.Buongiorno Nardelli
43	Remote sensing of phytoplankton variability off South-Western Iberia: a sentinel for climate change?	Lilian A. Krug, Ana B. Barbosa, Rita B. Domingues, Helena M. Galvã O, Joachim Luís, Trevor Platt, Paulo Relvas, Shubha Sathyendranath
44	ISECA:Information System on the Eutrophication of our Coastal Areas	V. Martinez-Vicente1, G.H.Tilstone1, S.B. Groom1, R. Santer2
45	Application of the geostationary ocean color imager (GOCI) for the temporal variations in coastal water turbidity	J.K. Choi, J.H. Ryu, H.S. Lim, Y.J. Park
46	Temporal and spatial dynamics of phytoplankton composition in the Western Pacific and link to halocarbon emissions	A. Bracher, T. Dinter , B. Taylor , B. Quack , F. Wottle
47	Reconstruction of Total Suspended Matter data over the North Sea using DINEOF: use of the Gaussian anamorphosis transformation	A. Alvera-Azcarate, G. Neukermans, A. Barth, K. Ruddick, J.-M. Beckers

Poster Short Oral Presentations for the 44th International Liège Colloquium on Ocean Dynamics;

Tuesday 10 May at 14:00

Order	Time	Title	Authors
1	14:00	Comparison of ocean model outputs and MSG/SEVIRI hourly sea surface temperature fields	Françoise Orain, Pierre Le Borgne, Bruno Levier, Gilles Garric
2		Short term upwelling/downwelling events in Fortune Bay, Newfoundland	A.W. Ratsimandresey, G. Mabrouk, D. Hamoutene, J. Salcedo, P. Goulet, R. Losier, D. Drover, L. Sheppard
3		A Preliminary Study on Bi-directional Reflectance Distribution of Inland Water Optical Field	Antonio Turiel, Justino Martinez, Marta Umbert, Fernando Pérez, Adriano Camps
4	14:15	Hyperspectral analysis of coral reefs by using a water column correction algorithm	Chaoya Yang, Dingtian Yang
5		Optimal interpolation of Chlorophyll-A satellite observations in the North Sea and Baltic Sea	Hoyer, J. L., Dobrynin, M., Howe E.
6		Studies of the bio-optical characteristics of the Russian northern seas by using satellite and ship data (the White Sea as an example)	V. Burenkov, O. Kopelevich, M. Kravchishina, S. Sheberstov, S. Vazyulya
7	14:30	Suspended sediment monitoring and assessment for Yellow River Estuary from Landsat TM/ETM+ imagery	Minwei Zhang , Qing Dong, Tinwei Cui, Cunjin Xue
8		Using self-organizing maps to identify phytoplankton groups from remotely sensed data in case 1 waters	Z. Ben Mustapha, S. Alvain, C. Jamet and H.Loisel
9		Fusion between Remote Sensing and in situ SPM data in the North Sea	Johannes Pein, Johannes Schulz-Stellenfleth, Emil V. Stanev
10	14:45	A novel approach to the high resolution interpolation of in situ Sea Surface Salinity using satellite SST data	B.Buongiorno Nardelli
11		Application of the geostationary ocean color imager (GOCI) for the temporal variations in coastal water turbidity	J.K. Choi, J.H. Ryu, H.S. Lim, Y.J. Park
12		Temporal and spatial dynamics of phytoplankton composition in the Western Pacific and link to halocarbon emissions	A. Bracher, T. Dinter , B. Taylor , B. Quack , F. Wottle
13	15:00	Reconstruction of Total Suspended Matter data over the North Sea using DINEOF: use of the Gaussian anamorphosis transformation	A. Alvera-Azcarate, G. Neukermans, A. Barth, K. Ruddick, J.-M. Beckers