

# 9th Coastal Altimetry Workshop

Sunday, October 18 2015 - Monday, October 19 2015

Hyatt Regency Hotel, Reston, Virginia

## PROGRAMME

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Sunday, October 18 2015

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**13:00 - 13:30: Registration**

### Regency Ballroom:

**13:30 - 13:35:** Introduction: Jérôme Benveniste (ESA), Paolo Cipollini (NOC)

**13:35 - 14:00:** Solicited Talk: [\*The NASA Sea Level Change Team and its Relationship to Coastal Altimetry\*](#), Eric J. Lindstrom, NASA Physical Oceanography Program Scientist, United States.

### Session 1: Status and Prospects for LRM and SAR Altimetry in the Coastal Zone

**Session chairs:** Jessica Hausman (JPL/Caltech, United States), Walter H. F. Smith (NOAA, United States)

**14:00 - 14:20:**

[Prospects for the Use of Satellite Altimetry in Coastal Regions](#)

Remko Scharroo (EUMETSAT, Deutschland), Hans Bonekamp (EUMETSAT, Germany), Christelle Ponsard (EUMETSAT, Germany), Carolina Nogueira Loddó (EUMETSAT, Germany)

**14:20 - 14:40:**

[Simultaneous multi-waveform retracking in coastal regions : application to the NW Mediterranean Sea](#)

Fernando Niño (CNRS/Legos, France), Florence Birol (UPS/Legos, France), Denis Blumstein (CNES/Legos, France), Nicolas Fuller (CNRS/Legos, France)

**14:40 - 15:00:**

[Coastal SAR and PLRM Altimetry in German Bight and West Baltic Sea](#)

Salvatore Dinardo (SERCO/ESRIN, Italia), Luciana Fenoglio (TU Darmstadt, Germany), Christopher Buchhaupt (TU Darmstadt, Germany), Remko Scharroo (EUMETSAT, Germany), Joana Fernandez (UPorto, Portugal), Jerome Benveniste (ESA/ESRIN, Italy), Matthias Becker (TU Darmstadt, Germany)

**15:00 - 15:20:**

[A fast convolution based SAR retracker and its performance in coastal areas](#)

Christopher Buchhaupt (TU Darmstadt, Deutschland), Luciana Fenoglio-Marc (TU Darmstadt, Germany), Salvatore Dinardo (SERCO, ESA/ESRIN, Italy), Remko Scharroo (EUMETSAT, Germany), Matthias Becker (TU Darmstadt, Germany)

**15:20 - 15:40:**

[SAR altimetry performance in the coastal zone: an assessment with CryoSat-2 around the UK coast](#)

Paolo Cipollini (National Oceanography Centre, United Kingdom), David Cotton (Satellite Oceanography Consultants (SatOC), United Kingdom), Salvatore Dinardo (ESA/ESRIN, Italy), Jérôme Benveniste (ESA/ESRIN, Italy)

**15:40 - 16:00: Session 1 Discussion**

16:00 - 16:30: *Coffee break*

## Session 2: Evolution of the Wet Tropospheric Correction

**Session chairs:** Mathilde Cancet (NOVELTIS, France), Luciana Fenoglio-Marc (Technische Universität Darmstadt, Germany)

**16:30 - 16:50:**

[Recent developments in the GNSS-derived Path Delay \(GPD\) targeting at better wet tropospheric corrections for open-ocean and coastal studies](#)

Clara Lázaro (Universidade do Porto, Faculdade de Ciências, Portugal), M. Joana Fernandes (Universidade do Porto, Faculdade de Ciências, Portugal)

**16:50 - 17:10:**

[Inter-calibrated wet path delays for eight altimetric missions – impacts on coastal sea level](#)

M. Joana Fernandes (Universidade do Porto, Faculdade de Ciências, Portugal), Clara Lázaro (Universidade do Porto, Faculdade de Ciências, Portugal), Telmo Vieira (Universidade do Porto, Faculdade de Ciências, Portugal)

**17:10 - 17:30:**

[Wet-Tropospheric Path Delay Retrievals with High Spatial Resolution over Coastal Areas and Inland Water from the High-frequency Airborne Microwave and Millimeter-wave Radiometer \(HAMMR\) West Coast Flight Campaign](#)

Steven Reising (Colorado State University, United States), Shannon Brown (NASA/Caltech Jet Propulsion Laboratory, United States), Xavier Bosch-Lluis (Colorado State University, United States), Pekka Kangaslahti (NASA/Caltech Jet Propulsion Laboratory, United States), Alan Tanner (NASA/Caltech Jet Propulsion Laboratory, United States), Victoria Hadel (Colorado State University, United States), Thaddeus Johnson (Colorado State University, United States), Karen Ng (Colorado State University, United States), Sharmila Padmanabhan (NASA/Caltech Jet Propulsion Laboratory, United States), Oliver Montes (NASA/Caltech Jet Propulsion Laboratory, United States), Chaitali Parashare (NASA/Caltech Jet Propulsion Laboratory, United States), Behrouz Khayatian (NASA/Caltech Jet Propulsion Laboratory, United States), Douglas Dawson (NASA/Caltech Jet Propulsion Laboratory, United States), Todd Gaier (NASA/Caltech Jet Propulsion Laboratory, United States), Behzad Razavi (University of California at Los Angeles, United States)

**17:30 - 17:40: Session 2 Discussion**

**Grand Ballroom Foyer:**

**17:40 - 20:00: POSTER SESSION AND ICEBREAKER**

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**Monday, October 19 2015**

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**Grand Ballroom 2:**

## Session 3: New Datasets and Their Validation

**Session chairs:** Joana Fernandes (Universidade do Porto, Portugal), Remko Scharroo (EUMETSAT, Germany),

**08:30 - 08:50:**

[Coastal improvement for MSS improvement - DTU15MSS in Antarctica](#)

Ole Baltazar Andersen (Dr, Denmark), Gaia Piccioni (Student, DTU Space, Denmark)

**08:50 - 09:10:**

[A Global Coastal Altimetry Dataset for Coastal Dynamics and Sea Level Research](#)

Marcello Passaro (Univ. of Southampton GSNOCS - National Oceanography Centre, United Kingdom), Paolo Cipollini (National Oceanography Centre, United Kingdom), Jessica Hausman (Jet Propulsion Laboratory (JPL), California Institute of Technology, Pasadena, California, USA), Graham Quartly (Plymouth Marine Laboratory, United Kingdom), Helen Snaith (British Oceanographic Data Centre, United Kingdom)

**09:10 - 09:30:**

[Satellite altimetry data validation in San Matias Gulf, Argentina](#)

Martin Saraceno (CIMA/CONICET-UBA, UMI-IFAECI/CONICET-CNRS-UBA and DCAO, Universidad de Buenos Aires, Argentina), Loreley Selene Lago (CIMA/CONICET-UBA, UMI-IFAECI/CONICET-CNRS-UBA and DCAO, Universidad de Buenos Aires, Argentina), Laura Agustina Ruiz Etcheverry (CIMA/CONICET-UBA, UMI-IFAECI/CONICET-CNRS-UBA and DCAO, Universidad de Buenos Aires, Argentina), Marcello Passaro (University of Southampton, UK)

**09:30 - 09:50:**

[Using SARAL/AltiKa to improve Ka-band altimeter measurements for coastal zones, hydrology and ice: status of the PEACHI project](#)

Guillaume Valladeau (CLS, France), Pierre Thibaut (CLS, France), Nicolas Picot (CNES, France), Amandine Guillot (CNES, France), Sophie Le Gac (CNES, France)

**09:50 - 10:10:**

[Monitoring Coastal Upwelling using Altimetry: a Feasibility Study.](#)

Madeleine Cahill (CSIRO, Australia), Claire Dufau (CLS, France)

**10:10 - 10:30: Session 3 Discussion**

*10:30 - 11:00: Coffee break*

## Session 4: Coastal Altimetry and Models

**Session chairs:** Florence Birol (CTOH/LEGOS, France), John Wilkin (Rutgers University, United States)

**11:00 - 11:20:**

[The Altimetry for Regional and Coastal Ocean Models \(ARCOM\) pilot workshop](#)

Claire Dufau (CLS, France), Wilkin John (Rutgers University, USA), Mourre Baptiste (SOCIB, Spain)

**11:20 - 11:40:**

[Coastal Altimeter Data Assimilation: Matching dynamics and datum inside the 200-m isobath](#)

John Wilkin (Rutgers University, United States), Alexander López (Rutgers University, United States), Julia Levin (Rutgers University, United States)

**11:40 - 12:00:**

[Combining altimetry, numerical modeling and in-situ observations for the observation and the understanding of fine scale coastal processes in the Bay of Biscay](#)

Florence Toublanc (LEGOS/CNRS, France), Nadia Ayoub (LEGOS/CNRS, France), Florence Birol (CTOH/LEGOS, France), Patrick Marsaleix (LA/CNRS, France), Nicolas Fuller (CTOH/LEGOS, France)

**12:00 - 12:10: Session 4 Discussion**

## Session 5: Coastal Sea Level

**Session chairs:** Cristina Martin-Puig (NOAA, United States), Martin Saraceno (Universidad de Buenos Aires, Argentina)

**12:10 - 12:30:**

[Comparing coastal and open ocean sea level variability and trend from altimetric data](#)

Angelique Melet (LEGOS / CNES, France), Benoit Meyssignac (LEGOS / CNES, France), Marcellin Nonti (University of Abomey Calavi, Benin), Baptiste Chide (LEGOS, France), Florence Birol (LEGOS, France)

**12:30 - 12:50:**

[Fluctuation of annual sea level cycle and sea level rise acceleration in China Seas](#)

Yongcun Cheng (Center for Coastal Physical Oceanography, Old Dominion University, United States), Plag Hans-Peter (Mitigation and Adaptation Research Institute, Old Dominion University, United States), Ezer Tal (Center for Coastal Physical Oceanography, Old Dominion University, United States), Hamlington Benjamin D. (Center for Coastal Physical Oceanography, Old Dominion University, United States)

**12:50 - 13:00: Session 5 Discussion**

*13:00 - 14:00: Lunch break*

## Session 6: Applications to Coastal Circulation

**Session chairs:** : Kaoru Ichikawa (Kyushu University, Japan), Ananda Pascual (IMEDEA/CSIC-UIB, Spain)

**14:00 - 14:20:**

[Coastal Connections in the Southern Benguela Current During Periods of Interleaved Data](#)

P Ted Strub (Oregon State University, United States), Ricardo Matano (Oregon State University, USA), Vincent Combes (Oregon State University, United States), Corinne James (Oregon State University, United States), Juliet Hermes (University of Cape Town, South Africa), Charine Collins (University of Cape Town, South Africa)

**14:20 - 14:40:**

[Variability of surface circulation determined from coastal altimetry over the Tunisian shelf \(Central Mediterranean\)](#)

Fatma Jebri (INSTM, LEGOS, MIO), Bruno Zakardjian (Mediterranean Institute of Oceanography (MIO), France), Florence Birol (Laboratoire d'Etudes en Géophysique et Océanographie Spatiales (LEGOS), France), Jérôme Bouffard (RHEA for European Space Agency/ESRIN/EOP GMQ Section, Italy), Cherif Sammari (Institut National des Sciences et Technologies de la Mer (INSTM), Tunisia)

**14:40 - 15:00:**

[The impact of southwest Nova Scotian shelf inflow on the seasonal and inter-annual variability of freshness in the Gulf of Maine: Robust evidence from long-term altimeter observations](#)

Hui Feng (University of New Hampshire, United States), Doug Vandemark (University of New Hampshire, USA), John Wilkin (Rutgers University, USA)

**15:00 - 15:10: Session 6 Discussion**

## Session 7: Neighbouring Domains: Inland Waters and Ice

**Session chairs:** Ole Andersen (DTU Space, Denmark), Pierre Thibaut (CLS, France)

**15:10 - 15:30:**

[DAHITI - An Innovative Approach for Estimating Water Level Time Series over Inland Water using Multi-Mission Satellite Altimetry](#)

Christian Schwatke (DGFI-TUM, Deutschland), Denise Dettmering (DGFI-TUM, Germany)

**15:30 - 15:50:**

[The ICESat-2 Mission: Overview and Potential Applications to Coastal Altimetry](#)

Michael Jasinski (Hydrological Sciences Lab, NASA Goddard Space Flight Center, United States), James Morison (Applied Physics Lab, University of Washington, USA), Jeremy Stoll (Science Systems and Applications, Inc., NASA GSFC, USA), Thomas Neumann (Cryospheric Sciences Lab, NASA GSFC, USA), Thorsten Marcus (Cryospheric Sciences Lab, NASA GSFC, USA), Kelly Brunt (Morgan State Univ, NASA GSFC, USA), William Cook (Mesoscale Atmospheric Processes Lab, NASA GSFC, USA)

**15:50 – 16:00: Session 7 Discussion**

*16:00 - 16:30: Coffee break*

**16:30 – 17:30: Summaries From Session Chairs**

**17:30 – 18:30: Discussion, Recommendations, Conclusions**

## POSTERS

Sun, Oct 18 2015, 17:40 - 20:00 - **Grand Ballroom Foyer**

(Posters are allowed to stay up for viewing also on Monday 19)

### Technical issues in coastal altimetry

**TEC\_001** - [Retrieval of coastal sea surface height from along-track continuous AltiKa data](#)

Xi-Feng Wang (ESST, Kyushu University), Kaoru Ichikawa (RIAM, Kyushu University)

**TEC\_002** - [Towed and static GPS buoys for CAL/VAL and SSH](#)

Cédric Brachet (CNRS - INSU Technical Division), Michel Calzas (CNRS - INSU Technical Division), Christine Drezén (CNRS - INSU Technical Division), Lionel Fichen (CNRS - INSU Technical Division), Antoine Guillot (CNRS - INSU Technical Division), Philippe Téchiné (LEGOS UMR 5566), Laurent Testut (LEGOS UMR 5566), Pascal Bonnefond (GEOAZUR UMR 7329), Olivier Laurain (GEOAZUR UMR 7329)

**TEC\_003** - [Classification of altimeter Waveforms for an Improved Estimation of Water Level Time Series over Inland Water](#)

Christian Schwatke (DGFI-TUM), Denise Dettmering (DGFI-TUM)

**TEC\_004** - [Analysis of Cryosat-2 altimeter waveforms for the detection and characterization of ship targets](#)

Jesus Gomez-Enri (Associate Professor), Scozzari Andrea (Institute of Information Sciences and Technologies (CNR-ISTI)), Soldovieri Francesco (Institute for Electromagnetic Sensing of the Environment (CNR-IREA)), Coca Josep (University of Cadiz), Vignudelli Stefano (Institute of Biophysics (CNR-IBF))

**TEC\_005** - [Use of satellite altimetry data in the Rio de la Plata estuary](#)

Laura Agustina Ruiz Etcheverry (CIMA/CONICET-UBA, UMI-IFAECI/CONICET-CNRS-UBA and DCAO, Universidad de Buenos Aires), Jesus Gomez-Enri (Department of Applied Physics. University of Cádiz), Martin Saraceno (CIMA/CONICET-UBA, UMI-IFAECI/CONICET-CNRS-UBA and DCAO, Universidad de Buenos Aires)

### Applications of coastal altimetry data

**APP\_001** - [Sea level variability in the Baltic Sea](#)

Qing Xu (Key Laboratory of Coastal Disasters and Defense of Ministry of Education, Hohai University; College of Harbor, Coastal and Offshore Engineering, Hohai University; Center for Coastal Physical Oceanography, Old Dominion University), Cheng Yongcun (Center for Coastal Physical Oceanography, Old Dominion University), Plag Hans-Peter (Mitigation and Adaptation Research Institute, Old Dominion University)

**APP\_002** - [Regional X-TRACK altimeter products for coastal applications: updates and evolutions](#)

Nicolas Fuller (LEGOS/CTOH, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France), Florence Birol (LEGOS/CTOH, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France), Fernando Nino (LEGOS/CTOH, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France), Florent Lyard (LEGOS, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France), Sara Fleury (LEGOS/CTOH, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France), Damien Allain (LEGOS, UMR5566 CNRS-CNES-IRD-Université de Toulouse III. OMP, 14 Av. E. Belin, 31400 Toulouse, France)

**APP\_003** - [On the Lofoten Basin and its permanent eddy](#)

Leon Chafik (NOAA (Laboratory for Satellite Altimetry)), Rossby Thomas (Graduate School of Oceanography, URI)

**APP\_004** - [Radar Altimetry Toolbox](#)

Albert Garcia-Mondejar (isardSAT Ltd.), Escolà Roger (isardSAT Ltd.), Moyano Gorka (isardSAT Ltd.), Roca Mònica (isardSAT Ltd.), Terra-Homem Miguel (DEIMOS Engenharia), Friaças Ana (DEIMOS Engenharia), Martinho Fernando (DEIMOS Engenharia), Ernst Schrama (TU Delft, Faculty of Aerospace Engineering), Naeije Marc (TU Delft, Faculty of Aerospace Engineering), Ambrozio Americo (DEIMOS / ESRIN), Dinardo Salvatore (Serco / ESRIN), Benveniste Jérôme (ESA / ESRIN)

**APP\_005** - [Improved satellite altimeter mapped sea level anomalies in the Mediterranean Sea: A comparison with tide gauges](#)

Marta Marcos (IMEDEA(UIB-CSIC)), Pascual Ananda (IMEDEA (UIB-CSIC)), Pujol Isabelle (CLS)

**APP\_006 - [Coastal sea level monitoring in the Bay of Bengal using SAR and LRM altimetry.](#)**

Gaia Piccioni (Masters), Salvatore Dinardo (Dr), Jerome Benveniste (Dr), Ole Andersen (DTU Space, Denmark)

**APP\_007 - [Seaweed mapping along Karachi coast using geospatial techniques](#)**

Muhammd Danish Siddiqui (Institute of space Technology), Muhammad Abdullah (Institute of space technology ), Arjumand Zaidi (Institute of space technology ), Maha Qaisar (Institute of space technology)

**APP\_008 - [Identification of potential fishing zones using geo-spatial techniques](#)**

Muhammad Abdullah (Institute of Space Technology), Saad Malik (Institute of space Technology ), Muhammad Danish Siddiqui (Institute of space Technology )

**APP\_009 - [Tropical Cyclone Intensity Analysis Using Geospatial Techniques](#)**

Maha Qaisar (Institute of Space Technology), Muhammad Danish Siddiqui (Institute of Space Technology), Muhammad Abdullah Siddiqui (Institute of Space Technology), Arjumand Zaidi (Institute of Space Technology)

**APP\_010 - [Passive tracer simulations of inflows into the Mid-Atlantic Bight & Gulf of Maine](#)**

Alexander Lopez (Rutgers University), John Wilkin (Rutgers University), Julia Levin (Rutgers University), Doug Vandemark (University of New Hampshire)

**APP\_011 - [Patterns of the Loop Current System and Regions of Sea Surface Height Variability in the Eastern Gulf of Mexico Revealed by Self-Organizing Maps](#)**

Yonggang Liu (University of South Florida), Robert Weisberg (University of South Florida), Stefano Vignudelli (Consiglio Nazionale delle Ricerche, Area Ricerca CNR)

**APP\_012 - [Ice, Cloud and land Elevation Satellite-2 Mission Applications](#)**

Sabrina Delgado Arias (Science Systems and Applications Inc./NASA Goddard Space Flight Center), Molly Elizabeth Brown (University of Maryland), Vanessa Escobar (Science Systems and Applications Inc./NASA Goddard Space Flight Center), Thomas Neumann (NASA Goddard Space Flight Center), Michael Jasinski (NASA Goddard Space Flight Center)

**APP\_013 - [The NASA Applied Sciences Program for the GRACE Satellite Missions](#)**

Michael Jasinski (Hydrological Sciences Laboratory, NASA Goddard Space Flight Center), Margaret Srinivasan (Caltech Jet Propulsion Laboratory), Erik Ivins (Solid Earth Group, Caltech Jet Propulsion Laboratory), John Bolten (Hydrological Sciences Laboratory, NASA GSFC), Brad Doorn (Science Mission Directorate, NASA Headquarters)

**APP\_014 - [U.S. Regional Sea Level Indices from Water Level Stations and Satellite Altimetry](#)**

Zervas Chris (NOAA/National Ocean Service), Eric Leuliette (NOAA/NESDIS), Stephen Gill (NOAA/NOS), Laury Miller (NOAA/NESDIS)

**APP\_015 - [Regional Altimeter Data for Brazilian Applications](#)**

Claire Dufau (CLS), Victor Bastos-Daheer (REMO, CHM), Renato Parkinson (CENPES,Petrobras)

**APP\_016 - [Analysis of changes in coastal sea level from the new SL\\_cci altimetry product and tide gauge data](#)**

Francisco Mir Calafat (National Oceanography Centre), Paolo Cipollini (National Oceanography Centre), Jérôme Benveniste (European Space Agency/ESRIN)