



Università
Ca' Foscari
Venezia

**International Conference THEMES 2019 -
Monitoring, modelling and predicting our
changing ocean and atmosphere: concepts,
methods, applications and opportunities**

27th-29th November 2019, Venice, Italy

Program

Wednesday 27th November	
<i>Location: Aula Magna Silvio Trentin Ca'Dolfìn - Dorsoduro 3825/e 30123 (VE)</i>	
8:30-10:00	<i>Registration and welcome drink/eat</i>
8:50-9:00	Angelo Rubino Opening and welcome speech
9:00-9:30	Opening key-note talk: Vincenzo Artale "Variability and stability of AMOC from recent ORAS5-ECMWF reanalysis"
Session 1: Chaired by Sara Rubinetti <i>Polar oceanography and climatology</i>	
10:00-10:15	Pierpaolo Falco "Rebound of shelf water salinity in the Ross Sea"
10:15-10:30	Paola de Ruggiero "Modeling studies of the intrinsic low-frequency variability of the Antarctic Circumpolar Current"
10:30-10:45	Vera Fofonova "Tidal asymmetry in the Sylt-Rømø Bight, south-eastern North Sea"
10:45-11:30	<i>Coffee break for all participants</i>
11:30-11:45	Andrea Bergamasco "Exploring the interannual ocean summer conditions in Terra Nova Bay (Antarctica): a modeling approach"
11:45-12:00	Giuliano Dreossi "The progressive loss of the climate signal in the Holtedahlfonna glacier, Svalbard"
12:00-12:15	Manuel Bensi "Periodic oscillations and low-frequency variability from oceanographic time series west of Svalbard (Arctic)"
12:15-14:00	<i>Lunch*</i>

Session 2: Chaired by Malek Belgacem <i>Oceanic processes</i>	
14:00-14:15	Eletta Negretti “The turbulent life of downslope oceanic dense currents”
14:15-14:30	Stefano Pierini “Gap-leaping and intruding western boundary currents investigated with the large Coriolis-LEGI rotating platform”
14:30-14:45	Maria Chiara De Falco “The dynamics of bi-directional exchange flows: implication for morphodynamic change within estuaries and sea straits”
14:45-15:00	Miroslav Gačić “Recent rotating table experiments fully sustain the internal mechanism theory (BiOS) of the North Ionian Gyre inversions”
15:00-15:15	Alexey Androsov “Ocean bottom pressure variability: Can it be reliably modeled?”
15:15-15:30	Davide Cavaliere “An Analytical Study on Internal Solitary Waves Interacting with a Sloping Bathymetry: Propagation, Breaking Location and Mixing”
15:30-16:30	<i>Coffee break for all participants</i>
Session 3: Chaired by Stefano Pierini <i>Tropical Meteorology and Oceanography</i>	
16:30-16:45	Annunziata Pirro “Eddies and currents in the Bay of Bengal during summer monsoons”
16:45-17:00	Francesco De Rovere “On the interchangeability of sea-surface and near-surface air temperature anomalies in climatologies”
17:00-17:15	Martin Schmidt “Interaction between the eastern tropical and subtropical Atlantic and the variable oxygen supply to the northern Benguela upwelling system”
17:15-17:30	Unsadisa Pitchou Tombani “How does the land-ocean thermal contrast between Central Africa landmass and its surrounding Ocean influence the water vapour budget and transport?”
17:30-17:45	Vlado Malačić “Small scale issues in oceanography of coastal waters due to economic development”
17:45-18:30	<i>Open discussion</i>

Thursday 28th November	
<i>Location: Aula Magna Silvio Trentin Ca'Dolfìn - Dorsoduro 3825/e 30123 (VE)</i>	
8:30-9:00	<i>Registration and welcome drink/eat</i>
9:00-9:30	Key-note talk: Carla Taricco “Long-term climate variability: direct observations and proxy data”
Session 4: Chaired by Piero Lionello <i>Coastal and regional Oceanography: the Mediterranean Sea</i>	
9:30-9:45	Werner Alpers “Investigation of upwelling south of Sicily using multi-sensor satellite data including SAR”
9:45-10:00	Ettore Salusti “Some forgotten problems in the Mediterranean sea about straits and channels: from local to climate insights”
10:00-10:15	Milena Menna “Recent changes in the surface dynamic of the Levantine Basin”
10:15-10:30	Salvatore Marullo “Sea Surface Temperature and Air-Sea Interaction in the Mediterranean Region: Direct measurements, satellite estimates and model based assessments”
<i>10:30-11:30</i>	<i>Coffee break for all participants</i>
11:30-11:45	Katrin Schroeder “Long term changes in the deep sea: examples from two Mediterranean Channels”
11:45-12:00	Malek Belgacem “Variability of inorganic nutrients in the Western Mediterranean Sea”
12:00-12:15	Giannetta Fusco “Long-term Mediterranean Water Outflow variability and trends from 1948 to 2010”
12:15-12:30	Naomi Krauzig “Sea surface warming in the Tyrrhenian Sea, the relation to local air-sea interaction and large-scale atmospheric and oceanic variability”
<i>12:30-14:00</i>	<i>Lunch*</i>
Session 5: Chaired by Katrin Schroeder <i>The Adriatic Sea and the Venice lagoon</i>	

14:00-14:15	Nicola Scafetta “Implications regarding the quiet solar luminosity variability problem for climate change”
14:15-14:30	Ivica Vilibic “Coastal boulder movement studies in the Adriatic Sea”
14:30-14:45	Camilla Bertolini “Using filtration activity to quantify the effects of acute climatic impacts on shellfish health in the Venice lagoon”
14:45-15:00	Petra Pranic “Extreme Adriatic Sea wave events under climate change”
15:00-15:15	Sara Rubinetti “Tidal variability in the Venetian Lagoon during the last 150 years”
15:15-16:00	<i>Coffee break for all participants</i>
16:00-16:15	Matjaz Licer “Lagrangian Trajectory Modelling for a Person lost at Sea during Extreme Adriatic Scirocco Storm of 29th October 2018”
16:15-16:30	Angela Pomaro “The 29 October 2018 storm in the Adriatic sea: how exceptional was it with respect to the 40-year data climatology recorded at the CNR Acqua Alta oceanographic tower”
16:30-17:00	Key-note talk: Piero Lionello “Extremes floods of Venice: characteristics, dynamics, past and future evolution”
17:00-17:30	Key-note talk: Georg Umgiesser “The prediction of floods in Venice in the light of the 12th of November 2019: methods, models and uncertainty”
17:30-17:45	Luigi Cavaleri “The exceptional storm of 29 October 2018 - physics, modelling and unresolved problems”
17:45-18:30	<i>Discussion moderated by Angelo Rubino</i>
20:30	<i>Social dinner*</i>

Friday 29th November

Location: Aula Magna Silvio Trentin Ca'Dolfin - Dorsoduro 3825/e 30123 (VE)

Session 6: Chaired by Davide Zanchettin *Climate monitoring, modelling and prediction*

9:00-9:15	Marco Marozzi “Distribution-free statistical methods for the analysis of simulated and observed climate data”
9:15-9:30	Chiara Cagnazzo “Evaluation and Quality Control of the Copernicus Climate Data Store Essential Climate Variables”
9:30-10:00	Key-note talk: Simona Bordoni “Mechanisms of delayed monsoon onset with warming”
10:00-10:15	Alessio Bellucci “Air-Sea interactions over the Gulf Stream in a multi-model, multi-resolution ensemble of HighResMIP present climate simulations”
10:15-10:30	Roberta D’Agostino “Time of Emergence of global and regional Hadley cell expansion in boreal winter”
10:30-11:00	<i>Coffee break for all participants</i>
11:00-11:15	Francesco Pausata “The Sahara Greening during the African Humid Period: an overview of its regional and global impacts”
11:15-11:30	Giusy Fedele “Kuroshio extension: interannual-to-decadal variability: Analyzing an ensemble of global hindcasts from a Dynamical System viewpoint”
11:30-11:45	Ilaria Bizzarri “Predictions by classical and recurrent neural networks of time series with pseudo-periodic behavior”
11:45-12:00	Kameswarrao Modali “Climate - Computation and Communication”
12:00-12:15	Ilaria Prodocimi “Areal models for spatially coherent trend detection: the case of British peak river flows”
12:15-12:30	Alexey Androsof “Modelling of the processes and phenomena with pronounced vertical movements”
12:30-14:00	<i>Open end of the workshop</i>

**at participants' cost*

All talk slots, except key-note talks, include a 12-minute presentation and 3 minutes for discussion.

Detailed list of contributions

Alpers Werner¹, Bignami Francesco² “Investigation of upwelling south of Sicily using multi-sensor satellite data including SAR” (1) Institute of Oceanography, University of Hamburg, Germany, (2) Istituto di science marine, CNR, Rome, Italy

Androsov Alexey¹, Boebel Olaf¹, Schröter Jens¹, Danilov Sergey¹, Macrander Andreas², Ivanicu Ioana³ “Ocean bottom pressure variability: Can it be reliably modeled?” (1) Alfred Wegener Institute for Polar and Marine Research, Am Handelshafen 12, 27570 Bremerhaven, Germany (2) Marine and Freshwater Research Institute, Reykjavik, Iceland (3) Helmholtz Centre for Ocean Research Kiel, GEOMAR, Kiel, Germany

Androsov Alexey¹, Voltzinger Naum E.², Fofonova Vera¹, Kuznetsov Ivan¹ “Modelling of the processes and phenomena with pronounced vertical movements” (1) Alfred Wegener Institute for Polar and Marine Research, Am Handelshafen 12, 27570 Bremerhaven, Germany (2) Institute of Oceanology, Russian Academy of Science, St. Petersburg, Russia

Artale Vincenzo^{1,2}, De Toma Vincenzo³ “Variability and stability of AMOC from recent ORAS5-ECMWF reanalysis” (1) ENEA - Centro Ricerche Frascati (Rome), Italy (2) Chunxue Yang, CNR-ISMAR, Rome (Italy) (3) Università Tor Vergata (Rome), Italy

Belgacem Malek^{1,2}, Chiggiato Jacopo¹, Borghini Mireno¹, Pavoni Bruno², Cerrati Gabriella³, Acri Francesco¹, Cozzi Stefano⁴, Ribotti Alberto⁵, Alvarez Marta⁶, Lauvset Siv K.^{7,8}, Schroeder Katrin¹, Barth Alexander⁹, Troupain Charles⁹ “Variability of inorganic nutrients in the Western Mediterranean Sea” (1) CNR-ISMAR, Arsenale Tesa 104, Castello 2737/F, 30122 Venezia, Italy (2) Dipartimento di Scienze Ambientali Informatica e Statistica, Università Ca' Foscari Venezia, Campus Scientifico Mestre, Italy (3) ENEA, Department of Sustainability, S. Teresa, Marine Environmental center, 19032 Pozzuolo di Leri (SP), Italy (4) CNR-ISMAR, Area Science Park–Basovizza, 34149 Trieste, Italy (5) CNR-IAS, Loc. Sa Mardini snc, Torregrande, 9170 Oristano, Italy (6) Instituto Español de Oceanografía, IEO, A Coruña, Spain (7) NORCE Norwegian Research Centre, Bjerknes Centre for Climate Research, 5007 Bergen, Norway (8) Geophysical Institute, University of Bergen and Bjerknes Centre for Climate Research, 5007 Bergen, Norway (9) University of Liège (Belgium)

Bellucci Alessio¹ and the PRIMAVERA Project partnership “Air-Sea interactions over the Gulf Stream in a multi-model, multi-resolution ensemble of HighResMIP present climate simulations” (1) Fondazione Centro EuroMediterraneo sui Cambiamenti Climatici, Bologna, Italy.

Bensi Manuel¹, Kovacevic Vedrana¹, Langone Leonardo², Miserocchi Stefano² “Periodic oscillations and low-frequency variability from oceanographic time series west of Svalbard (Arctic)” (1) OGS, Trieste, Italy; (2) ISP-CNR, Bologna, Italy

Bergamasco Andrea¹, Bergamasco Alessandro², Falcieri F.², Dinniman M.³, Marck S.⁴, Bergamasco Filippo⁵ “Exploring the interannual ocean summer conditions in Terra Nova Bay (Antarctica): a modeling approach” (1) CNR-Istituto Scienze Polari, Venezia (2) CNR-Istituto Scienze Marine, Venezia (3) Old Dominion University, Norfolk, Virginia (USA) (4) University of Washington (5) University Ca' Foscari - Venezia

Bertolini Camilla¹, Bouma Tjeerd², Pastres Roberto¹ “Using filtration activity to quantify the effects of acute climatic impacts on shellfish health in the Venice lagoon” (1) DAIS, Università Ca' Foscari Venezia (2) EDS, Royal Netherlands Institute of Sea Research (NIOZ), Yerseke

Bizzarri Iliaria¹, Alessio Silvia M.¹, Taricco Carla^{1,2}, Mancuso Salvatore², Rubinetti Sara³ “Predictions by classical and recurrent neural networks of time series with pseudo-periodic behaviour” (1) University of Turin, Dep. of Physics, Via Pietro Giuria 1, 10125, Torino, Italy (2) Osservatorio Astrofisico di Torino (OATo-INAF), via Osservatorio 20, 10025 Pino Torinese (Italy) (3) University Ca' Foscari of Venice, Dept. of Environmental Sciences, Informatics and Statistics, Via Torino 155, 30172, Mestre Venezia, Italy

Bordoni Simona¹ “Mechanisms of delayed monsoon onset with warming” (1) California Institute of Technology, USA

Cagnazzo Chiara¹, Santoleri Rosalia¹, Yang Chunxue¹, Caporaso Luca¹, Serva Federico¹, Mahmoud Yassmin¹, Artale Vincenzo², Marullo Salvatore² “Evaluation and Quality Control of the Copernicus Climate Data Store Essential Climate Variables” (1) ISMAR-CNR, Rome, Italy (2) ENEA, Rome, Italy

Castagno Pasquale¹, Capozzi Vincenzo¹, DiTullio Giacomo R.², Falco Pierpaolo¹, Fusco Giannetta¹, Rintoul Stephen R.³, Spezie Giancarlo¹, Budillon Giorgio¹ “Rebound of shelf water salinity in the Ross Sea” (1) Università di Napoli Parthenope, Italy; (2) University of Charleston, USA ; (3) CSIRO, Hobart, Tasmania

Cavaleri Luigi¹ “The exceptional storm of 29 October 2018 - physics, modelling and unresolved problems” (1) Institute of Marine Sciences, Italian National Research Council, Venice, Italy

Cavaliere Davide¹, La Forgia Giovanni², Falcini Federico², Adduce Claudia³, Martorelli Eleonora⁴, Alpers Werner⁵ “An Analytical Study on Internal Solitary Waves Interacting with a Sloping Bathymetry: Propagation, Breaking Location and Mixing” (1) Sapienza, Università di Roma (2) CNR-ISMAR (3) Università di Roma Tre (4) CNR-IGAG (5) Università di Amburgo

D'Agostino Roberta¹, Scambiati Ascanio Luigi², Jungclaus Johann¹, Lionello Piero^{2,3} “Time of Emergence of global and regional Hadley cell expansion in boreal winter” (1) Max Planck Institute for Meteorology, Hamburg, Germany (2) University of Salento, Lecce, Italy (3) CMCC, EuroMediterranean Center on Climate Change, Lecce, Italy

De Falco Maria Chiara¹, Adduce Claudia¹, Cuthbertson Alan², Laanearu Janek³, Malcangio Daniela⁴, Kaur Katrin³, Negretti Eletta⁵, Sommeria Joel⁵, Valran Thomas⁵, Viboud Samuel⁵ “The dynamics of bi-directional exchange flows: implication for morphodynamic change within estuaries and sea straits” (1) University Roma Tre, Department of Engineering, Rome, Italy, (2) University of Dundee, School of Science and Engineering (Civil Engineering), Dundee, UK, (3) Tallinn University of Technology, Department of Civil Engineering and Architecture, Tallin, Estonia, (4) Polytechnic University of Bari, Department of Civil, Environmental, Land, Building Engineering and Chemistry (DICATECh), Bari, Italy, (5) Laboratory of Geophysical and Industrial Flows, Grenoble, France.

De Ruggiero Paola¹, Celeste Antonio¹, Pierini Stefano¹ “Modeling studies of the intrinsic low-frequency variability of the Antarctic Circumpolar Current” (1) University Parthenope, Naples, Italy

Di Paolantonio Marco¹, Falcini Federico¹, Marullo Salvatore², Salusti Ettore¹ “Some forgotten problems in the Mediterranean sea about straits and channels: from local to climate insights” (1) CNR-ISMAR, Via Fosso del Cavaliere 100, 00133 Rome, Italy, (2) ENEA — Centro Ricerche Frascati - Dipartimento Sostenibilità dei Sistemi Produttivi e Territoriali (SSPT), Frascati, 00044, Italy

Dreossi Giuliano¹, Spolaor Andrea¹, Barbante Carlo^{1,2}, Barbaro Elena¹, Burgay Francois¹, Bjorkman Mats P.³, Capelletti David⁴, Scoto Federico¹, Cozzi Giulio¹, Dallo Federico¹, De Blasi Fabrizio¹, Divine Dmitry⁵, Gabrieli Jacopo¹, Gallet Jean-Charles⁵, Kohler Jack⁵, Isaksson Elisabeth⁵, Martma Tonu⁶, Maturilli Marion⁸, Shuler Thomas V.⁷, Stenni Barbara^{1,2}, Turetta Clara¹, Casado Mathieu⁸ (*in alphabetic order) “The progressive loss of the climate signal in the Holtedahlfonna glacier, Svalbard” (1) Institute of Polar Sciences-National Research Council of Italy (ISP-CNR), 30172, Venice-Mestre, Italy; (2) Department of Environmental Sciences, Informatics and Statistics, University Ca’ Foscari, Venice, Italy; (3) University of Gothenburg, Department of Earth Sciences, Box 60, 40530 Göteborg, Sweden; (4) Dipartimento di Chimica, Biologia e Biotecnologie, Università degli Studi di Perugia, 06123 Perugia, Italy; (5) Norwegian Polar Institute, Tromsø NO-9296, Norway; (6) Department of Geology, Tallinn University of Technology, Ehitajate tee 5, 19086 Tallinn, Estonia; (7) University of Oslo, Department of Geosciences, Oslo, Norway; (8) Alfred Wegener Institute, Potsdam, Germany

Fedele Giusy^{1,4}, Penduff Thierry², Pierini Stefano³, Alvarez-Castro M. Carmen⁴, Bellucci Alessio⁴, Masina Simona⁴ “KUROSHIO EXTENSION interannual-to-decadal variability: Analyzing an ensemble of global hindcasts from a Dynamical System viewpoint” (1) Ca’ Foscari University of Venice, Italy, (2) Université Grenoble Alpes, CNRS, IRD, Grenoble INP, IGE, Grenoble, France, (3) Parthenope University, Naples, Italy, (4) Euro-Mediterranean Center on Climate Change, Bologna, Italy

Fofonova Vera¹, Androsov Alexey¹, Sander Lasse¹, Kuznetsov Ivan¹, Amorim Felipe¹, Hass H. Christian¹, Wiltshire Karen H.¹ “Tidal asymmetry in the Sylt-Rømø Bight, south-eastern North Sea” (1) Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research

Fusco Giannetta¹, Cotroneo Yuri¹, Artale Vincenzo^{2,1} “Long-term Mediterranean Water Outflow variability and trends from 1948 to 2010” (1) Dipartimento di Scienze e Tecnologie - Università degli Studi di Napoli “Parthenope” Centro Direzionale - Isola C4, 80143 Napoli; (2) ENEA – Centro di Ricerca Frascati, Via E. Fermi, 45, 00044 Frascati (Rome), Italy

Gačić Miroslav¹, Barreto Ricardo V.², Bensi Manuel¹, Cardin Vanessa¹, Civitarese Giuseppe¹, Kovačević Vedrana¹, Malačić Vlado³, Menna Milena², Negretti Eletta⁴, Orlić Mirko⁵, Petelin Boris³, Rubino Angelo², Siena Giuseppe¹, Sommeria Joel⁴, Ursella Laura¹ “Recent rotating table experiments fully sustain the internal mechanism theory (BiOS) of the North Ionian Gyre inversions” (1) Istituto Nazionale di Oceanografia e di Geofisica Sperimentale -OGS, Borgo Grotta Gigante 42/C – 34010, Sgonico (TS), Italy (2) University Ca’ Foscari of Venice, Dept. of Environmental Sciences, Informatics and Statistics, Via Torino 155, 30172 Mestre, Italy (3) National Institute of Biology, Marine Biology Station, Piran, Fornače 41, 6330 Piran, Slovenia (4) LEGI, CNRS UMR5519, University of Grenoble Alpes, Grenoble, France (5) Andrija Mohorovičić Geophysical Institute, Faculty of Science, University of Zagreb, Horvatovac 95, 10000 Zagreb, Croatia

Krauzig Naomi¹, Falco Pierpaolo¹, Zambianchi Enrico¹ “Sea surface warming in the Tyrrhenian Sea, the relation to local air-sea interaction and large-scale atmospheric and oceanic variability” (1) Department of Science and Technology, Parthenope University of Naples, Italy

Licer Matjaz¹, Estival Solene², Reyes-Suarez Catalina³, Deponte Davide³, Fettich Anja⁴ “Lagrangian Trajectory Modelling for a Person lost at Sea during Extreme Adriatic Scirocco Storm of 29th October 2018”

(1) National Institute of Biology, Piran, Slovenia (2) Ecole Nationale Supérieure de Techniques Avancées, Paris, France (3) Istituto Nazionale di Oceanografia e Geofisica Sperimentale, Sgonico, Italy (4) Slovenian Environment Agency, Ljubljana, Slovenia

Lionello Piero¹ “Extremes floods of Venice: characteristics, dynamics, past and future evolution” (1) Università del Salento, Lecce, Italy

Malačič Vlado¹, Žagar Dušan², Petelin Boris¹, Perković Marko³ “Small scale issues in oceanography of coastal waters due to economic development” (1) National Institute of Biology, Marine Biology Station Piran, Slovenia (2) University of Ljubljana, Faculty of Civil and Geodetic Engineering, Ljubljana, Slovenia (3) University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia

Marozzi Marco¹ “Distribution-free statistical methods for the analysis of simulated and observed climate data” (1) University Ca’ Foscari of Venice, Mestre, Italy

Marullo Salvatore¹, Di Sarra Alcide¹, Yang Chunxue², Artale Vincenzo¹, Anello Fabrizio¹, Bommarito Carlo¹, Di Iorio Tatiana¹, Meloni Daniela¹, Monteleone Francesco¹, Pace Giandomenico¹, Piacentino Salvatore¹, Sferlazzo Damiano¹, Bellacicco Marco¹, Santoleri Rosalia² “Sea Surface Temperature and Air-Sea Interaction in the Mediterranean Region: Direct measurements, satellite estimates and model based assessments” (1) ENEA - Sezioni di Casaccia, Frascati, Palermo e Lampedusa (2) ISMAR - CNR Roma

Menna Milena¹, Notarstefano Giulio¹, Mauri Elena¹, Gerin Riccardo¹, Amitai Yael², Gildor Hezi², Poulain Pierre-Marie^{1,3} “Recent changes in the surface dynamic of the Levantine Basin” (1) Istituto Nazionale di Oceanografia e Geofisica Sperimentale - OGS, Trieste (2) Hebrew University, Israel (3) Centre for Maritime Research & Experimentation – CMRE

Modali Kameswarrao¹, Mueller Wolfgang², Pohlmann Holger^{2,3}, Rautenhaus Marc¹ “Climate - Computation and Communication” (1) Regional Computing Center, University of Hamburg (2) Max Planck Institute for Meteorology, Hamburg, Germany (3) Germany's National Meteorological Service (DWD)

Negretti Eletta¹, Wirth Achim¹, Tucciarone Francesco¹, Sommeria Joël¹ “The turbulent life of downslope oceanic dense currents” (1) LEGI-CNRS/UGA, Grenoble, France

Pausata Francesco¹ “The Sahara Greening during the African Humid Period: an overview of its regional and global impacts” (1) Department of Earth and Atmospheric Sciences, University of Quebec in Montreal (UQAM), Montreal, Canada

Pierini Stefano¹, de Ruggiero Paola¹, Negretti Maria Eletta², Schiller-Weiss Ilana³, Weiffenbach Julia³, Viboud Samuel², Valran Thomas², Dijkstra Henk³, Sommeria Joel² “Gap-leaping and intruding western boundary currents investigated with the large Coriolis-LEGI rotating platform” (1) Dipartimento di Scienze e Tecnologie, Università di Napoli Parthenope (2) LEGI-CNRS, Grenoble, France (3) Department of Physics and Astronomy, Utrecht University, The Netherlands

Pirro Annunziata^{1,2}, Fernando Harindra Joseph¹ and Wijesekera Hemantha³ “Eddies and currents in the Bay of Bengal during summer monsoons” (1) Department of Civil & Environmental Engineering and Earth Sciences, University of Notre Dame, USA (2) OGS - Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Trieste, Italy (3) Naval Research Laboratory, Stennis Space Center, USA

Pomaro Angela¹, Cavaleri Luigi¹ “The 29 October 2018 storm in the Adriatic sea: how exceptional was it with respect to the 40-year data climatology recorded at the CNR Acqua Alta oceanographic tower” (1) National Research Council of Italy - Institute of Marine Sciences (CNR-ISMAR)

Pranic Petra¹, Denamiel Clea¹, Vilibic Ivica¹ “Extreme Adriatic Sea wave events under climate change” (1) Institute of Oceanography and Fisheries, Split, Croatia

Prodocimi Ilaria^{1,2}, Dupont Emiko², Augustin Nicole H.², Kjeldsen Thomas R.³, Simpson Dan P.⁴, Smith Theresa R.² “Areal models for spatially coherent trend detection: the case of British peak river flows” (1) Department of Environmental Sciences, Informatics and Statistics, Ca' Foscari University of Venice, Venice, Italy (2) Department of Mathematical Sciences, University of Bath, Claverton Down, Bath, BA2 7AY, UK (3) Department of Architecture and Civil Engineering, University of Bath, Claverton Down, Bath, BA2 7AY, UK (4) Department of Statistical Sciences, University of Toronto, Sidney Smith Hall, 100 St.~George St., Toronto, Ontario M5S 3G3, Canada

Rubinetti Sara¹, Taricco Carla², Zanchettin Davide¹, Arnone Enrico², Rubino Angelo¹ “Tidal variability in the Venetian Lagoon during the last 150 years” (1) University Ca'Foscari of Venice, Dept. of Environmental Sciences, Informatics and Statistics, Via Torino 155, 30172, Mestre Venezia, Italy (2) University of Turin, Dep. of Physics, Via Pietro Giuria 1, 10125, Torino, Italy

Rubino Angelo¹, Zanchettin Davide¹, De Rovere Francesco¹, McPhaden Micheal J.² “On the interchangeability of sea-surface and near-surface air temperature anomalies in climatologies” (1) Cà Foscari University of Venice; (2) NOAA/Pacific Marine Environmental Laboratory

Scafetta Nicola¹, Willson Richard C.², Lee Jae N.^{3,4}, Wu Dong L.⁴ “Implications regarding the quiet solar luminosity variability problem for climate change” (1) Department of Earth Sciences, Environment and Georesources, University of Naples Federico II, Via Cinthia 21, 80126 Naples, Italy; (2) Active Cavity Radiometer Irradiance Monitor (ACRIM), Coronado, CA 92118, USA; (3) Joint Center for Earth Systems Technology, University of Maryland, Baltimore County, Baltimore, MD 21228, USA; (4) NASA Goddard Space Flight Center, Greenbelt, MD 20771, USA

Schmidt Martin¹, Mohrholz Volker¹, Nascimento Fernanda¹ “Interaction between the eastern tropical and subtropical Atlantic and the variable oxygen supply to the northern Benguela upwelling system” (1) Leibniz-Institute for Baltic Sea Research Warnemünde, Germany

Schroeder Katrin¹, Ben Ismail S.², Chiggiato J.¹, Borghini M.¹, Sparnocchia S.¹ “Long term changes in the deep sea: examples from two Mediterranean Channels” (1) CNR-ISMAR, Venezia, La Spezia and Trieste (ITALY) (2) INSTM, Salammbu, Tunisia

Taricco Carla^{1,2}, Rubinetti Sara³, Alessio Silvia M.¹, Arnone Enrico¹, Bizzarri Ilaria¹, Zanchettin Davide³, Rubino Angelo³ “Long-term climate variability: direct observations and proxy data” (1) University of Turin, Dep. of Physics, Via Pietro Giuria 1, 10125, Torino, Italy (2) Osservatorio Astrofisico di Torino (OATo-INAF), via Osservatorio 20, 10025 Pino Torinese (Italy) (3) University Ca'Foscari of Venice, Dept. of Environmental Sciences, Informatics and Statistics, Via Torino 155, 30172, Mestre Venezia, Italy

Tombani Unsadisa Pitchou¹, Longandjo Georges-Noel^{1,2} “How does the land-ocean thermal contrast between Central Africa landmass and its surrounding Ocean influence the water vapour budget and transport?” (1) Department of Oceanography, University of Cape Town, South Africa; (2) Nansen Tutu Centre for Environmental Marine Research, University of Cape Town, South Africa

Georg Umgiesser¹, Christian Ferrarin, Marco Bajo, Alessandro Tosoni, Alvise Papa, Maurizio Ferla, Andrea Valentini, Piero Lionello, Davide Zanchettin, Angelo Rubino, Xavier Bertin, André Fortunato, Ivan D.

Haigh, Mirko Orlic, Jacob Woge Nielsen, Enrique Alvarez Fanjul, Begoña Pérez Gómez, Marcello Miglieta, Maria Stefania Tesini, Fabio Raicich, Jacopo Chiggiato, Mauro Bastianini, Luigi Cavaleri “The prediction of floods in Venice in the light of the 12th of November 2019: methods, models and uncertainty” (1) ISMAR-CNR, Venice, Italy

Vilibic Ivica¹, Denamiel Clea¹, Sepic Jadranka¹, Biolchi Sara², Furlani Stefano², Devoto Stefano², Scicchitano Giovanni³, Korbar Tvrtko⁴, Macovaz Vanja⁵ “Coastal boulder movement studies in the Adriatic Sea” (1) Institute of Oceanography and Fisheries, Split, Croatia, (2) Department of Mathematics and Geosciences, University of Trieste, Trieste, Italy, (3) Studio Geologi Associati T.S.T., Catania, Italy, (4) Croatian Geological Survey, Department of Geology, Zagreb, Croatia, (5) Macovaz Studio, Trieste, Italy