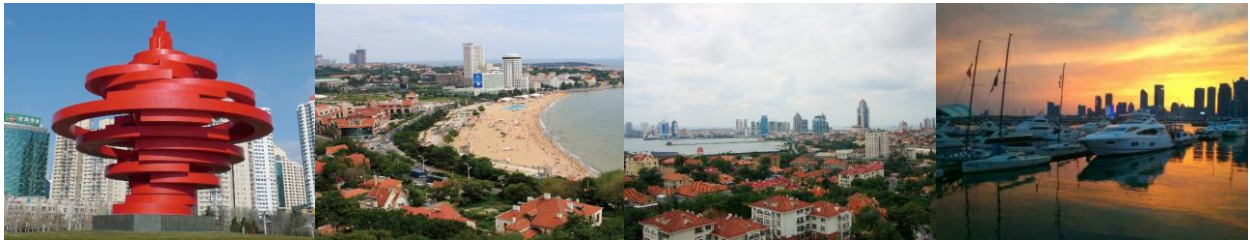




CLIVAR
Open Science Conference
Qingdao, 2016



CHARTING THE COURSE FOR CLIMATE AND OCEAN RESEARCH

19-23 SEPTEMBER 2016 QINGDAO, CHINA

19-23 September: **Open Science Conference**

OSC Programme

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青岛海洋科学与技术国家实验室

Qingdao National Laboratory for Marine Science and Technology



Programme at a glance

	CLIVAR2016 Early Career Scientists Symposium	OSC Registraion	CLIVAR 2016 Main Open Science Conference					CLIVAR2016 Early Career Scientists Symposium			
			DAY 1	DAY 2	DAY 3	DAY 4	DAY 5				
Date	Sunday 18-Sep	Sunday 18-Sep	Monday 19-Sep	Tuesday 20-Sep	Wednesday 21-Sep	Thursday 22-Sep	Friday 23-Sep	Saturday 24-Sep	Sunday 25-Sep		
Venue	FIO	Hyatt	QNLN	Hyatt	Hyatt	Hyatt	Hyatt	FIO	FIO		
AM	8:00 FIO ECSS Registration		7:30 Registration & 8:30 Transport to QNLN	9:00 Plenary 2	9:00 Plenary 3	9:00 Plenary 4	9:00 Plenary 5	9:00 Plenary: CLIVAR Science frontiers	9:00 OSC Science topics panel session: interactive discussion with senior scientists		
	9:00 Opening session			Climate Variability and Predictability	Understanding Ocean and Climate Processes	The Ocean in a Warmer World	Climate Information and Sustainable Development				
	9:30 Introduction to the OSC		10:00 Opening Session	10:30 Coffee/Tea	10:30 Coffee/Tea	10:30 Coffee/Tea	10:30 Coffee/Tea	10:30 Coffee/Tea	10:00 Coffee/tea	10:00 Coffee/tea	
	10:00 Coffee/Tea				11:00 Keynote	11:00 Posters Sessions 1.3 and 2	11:00 Posters Sessions 1.1 and 3	11:00 Posters Sessions 1.2 and 4, 5, 6	11:00 Plenary 6 Future of Climate and Ocean Science	10:30 Working group sessions	10:30 From research to operational—the development of an ocean & climate prediction system
	10:30 Plenary session: CLIVAR in the context of Major Climate Programmes										
11:15 Introduction to OSC Daily Themes											
Noon	12:30 Lunch		12:00 Lunch	12:00 Lunch	12:00 Lunch	12:00 Lunch	Closing Ceremony	12:30 Lunch	12:15 Closing Ceremony		
PM	14:00 Meet and Greet - Introductory Working group sessions	12:00-23:00 Registration	14:00 Plenary 1 Ocean's Role in Climate	14:00 Parallel 2.1 Intra-seasonal to Interannual	14:00 Parallel 3.1 Mixing & Stirring	14:00 Parallel 4.1 Modes	14:00 Working group sessions – preparation of summary presentations	14:00 Working group sessions – preparation of summary presentations	15:00 Coffee/tea		
				14:00 Parallel 2.2 Decadal	14:00 Parallel 3.2 Ocean & Climate Dynamics	14:00 Parallel 4.2 Sea Level					
				14:00 Parallel 2.3 Centennial to Millennial	14:00 Parallel 3.3 Upwelling	14:00 Parallel 4.3 Boundary Current Systems					
	15:30 Coffee/tea		15:30 Coffee/tea	15:30 Coffee/tea	15:30 Coffee/tea	15:30 Coffee/tea	16:00 Working group sessions	15:30 Penary: Working group presentations and workshop summary			
	16:00 Working group sessions		16:00 Parallel 1.1 Energy	16:00 Posters Sessions 1.3 and 2	16:00 Posters of Sessions 1.1 and 3	16:00 Posters Sessions 1.2 and 4, 5, 6					
16:00 Parallel 1.2 Carbon		16:00-17:00 Town halls 11									
		17:45 Transport to Hyatt	17:00-17:40 Keynote	17:00-17:40 Keynote	17:00-17:40 Keynote						
Evening		19:00-21:30 Icebreaker Reception at Hyatt	18:00-19:00 Town halls 1, 2, 3	18:00-19:00 Town halls 7, 8	19:30-22:00 Banquet at Hyatt	18:30 ECSS Banquet at Blue Horizon					
			19:00-19:30 Town hall light dinner break	19:00-19:30 Town hall light dinner break							
			19:30-20:30 Town halls 4, 5, 6	19:30-20:30 Town halls 9, 10							

September 19 (Monday, at QNLM): Ocean's Role in the Climate System

Time	Items		
08:30	Shuttle buses depart from Hyatt and Home Inn Hotels		
10:00	Opening Ceremony (Chair: Lixin Wu, Venue: Multifunctional Hall in the Academic Exchange Center)		
	<i>Detlef Stammer, Co-chair of CLIVAR 2016 OSC Scientific Organising Committee (SOC)</i>		
	<i>Guy Brasseur, Chair, WCRP Joint Scientific Committee</i>		
	<i>Vladimir Ryabinin, Executive Secretary, IOC of UNESCO (Video)</i>		
	<i>Congqiang Liu, Vice Director, Natural Science Foundation of China</i>		
	<i>Representative from Ministry of Science and Technology, China</i>		
	<i>Representative from State Oceanic Administration, China</i>		
	<i>Xinqi Zhang, Vice President of Qingdao National Laboratory for Marine Science and Technology (QNLM) and Mayor of Qingdao</i>		
11:00	Keynote:		
	Thomas Stocker: Anthropogenic Climate Change: Time to Focus on the Ocean		
11:45	Group photo		
12:00	Lunch and QNLM tours		
14:00	Plenary 1: (Chair: Fangli Qiao, Venue: Multifunctional Hall in the Academic Exchange Center)		
14:00	Monika Rhein: The ocean's role in the energy cycle		
14:20	Laurent Bopp: The ocean carbon sink, today and tomorrow: what we know, what we don't know		
14:40	Ray Schmitt: The Global Water Cycle		
15:00	Lijing Cheng: Historical ocean heat content estimation and the implication for assessing Earth's energy budget		
15:20	Questions and discussion		
15:30	Coffee/tea break		
16:00	Parallel sessions		
	Session 1.1 Energy	Session 1.2 Carbon	Session 1.3 Water
Chairs:	Karina von Schuckmann Mathew Palmer Kevin Trenberth	Pedro Monteiro Curtis Deutsch	Paul Durack Sonia Seneviratne Olga Zolina
Venue	No. 4 Meeting Room (4th floor) in the Exposition Hall	No.3 Meeting Room (3rd floor) in the Exposition Hall	Multifunctional Hall in the Academic Exchange Center
16:00	Trenberth, Kevin Insights into Earth's energy imbalance from multiple sources	Séférian, Roland Investigating the mechanisms behind the reinvigoration of the Southern ocean carbon sink	Dirmeyer, Paul Connections between oceans and continents via the atmospheric water cycle
16:15	Gulev, Sergey A new concept for space-time integration of surface turbulent heat fluxes and analysis of long-term change in basin-scale surface flux	Monteiro, Pedro Temporal and Spatial Scale-Sensitivities of Air-Sea CO ₂ Fluxes in the Southern Ocean	Greve, Peter Dry gets drier, wet gets wetter? Why ocean responses do not translate into land climate behaviour
16:30	Ponte, Rui Sea level accelerations, the recent surface warming slowdown and the planet's energy balance	Bishop, Stuart Current and Future Ocean Carbon Uptake - Carbon Hot Spot: A new field program to understand the role of eddies in carbon sequestration within the Kuroshio Extension region	Liu, Chunlei Current changes in precipitation and its extremes across wet and dry regions

16:45	Lago, Veronique An idealized 50 years decomposition of the impact changing surface conditions have on ocean subsurface temperature trends	Fay, Amanda Updated global trends in surface ocean pCO ₂ : decadal to multidecadal timescales	
17:00	Liang, Xinfeng Global ocean vertical heat flux and its bidecadal change	Rodgers, Keith Sources of uncertainties in 21st century projections of potential ocean ecosystem stressors	Zolina, Olga Changes in European extreme precipitation over the last decades
17:15	Swart, Neil Attribution of observed Southern Ocean warming and freshening using a new Super Ensemble	He, Yanchun Estimation of anthropogenic carbon in global ocean using transit time distribution and evaluation of its uncertainties based on ocean model output	Haine, Thomas Arctic Freshwater Export: Status, Mechanisms, and Prospects
17:45	Buses leave for Hyatt		
19:00	Icebreaker reception (Hyatt lawn)		

September 20 (Tuesday, Hyatt): Climate Variability and Predictability, Chair: Noel Baker

Time	Items		
09:00	Plenary 2: Hyatt Ballroom, 3rd floor		
09:00	<i>Harry Hendon: Progress in Sub-Seasonal and Seasonal Prediction</i>		
09:20	<i>Rowan Sutton: Decadal Climate Variability and Predictability</i>		
09:40	<i>Kim Cobb: Paleo-constraints on recent trends in tropical Pacific climate</i>		
10:00	<i>Iuliia Polkova: Predictive skill for regional interannual steric sea level and mechanisms for predictability</i>		
10:20	Questions and discussion		
10:30	Coffee/tea break		
11:00	Poster Sessions: 1.3, and 2 Hyatt Donghai Rooms (2 nd floor)		
14:00	Parallel sessions		
	Session 2.1 Intraseasonal to Interannual	Session 2.2 Decadal	Session 2.3 Centennial to Millennial
Chairs	<i>Aida Diongue Rodney G. Martinez Michael McPhaden</i>	<i>Paco Doblaz Reyes Yochanan Kushnir</i>	<i>Pascale Braconnot Axel Timmermann Kim Cobb</i>
Venue	Hyatt Ballroom 1 (3rd floor)	Hyatt Ballroom 2 (3rd floor)	Hyatt Ballroom 3 (3rd floor)
	14:00 Chen, Han-Ching The Role of Reversed Equatorial Zonal Transport in Terminating an ENSO Event	14:00 Newman, Matthew The Pacific decadal oscillation, revisited	14:00 Valdes, Paul Storm Tracks during the Deglaciation
	14:15 Knight, Jeff Tropical Rainfall, Rossby Waves and Regional Winter Climate Predictions	14:15 Thompson, Vikki A novel use of climate predictions to identify unprecedented climate extremes	14:15 Hu, Aixue Dependence of the AMOC stability on the background climate
	14:30 Spennemann, Pablo Characterization of soil moisture variability over South America: linkages to remote sources of variability	14:30 Ghosh, Rohit Impact of observed North Atlantic multidecadal variations to European summer climate: A linear baroclinic response to surface heating	
	14:45 Janicot, Serge The MISVA project: From a better understanding of the intraseasonal and synoptic variability toward forecast	14:45 Ruprich-Robert, Yohan The role of the Atlantic Multidecadal Variability on extreme climate conditions over North America and Europe	14:45 Shi, Xiaoxu Simulated response of the mid-Holocene Atlantic Meridional Overturning Circulation in ECHAM6-FESOM/MPIOM
	15:00 Yu, Bin Tropical atmospheric forcing of the wintertime North Atlantic Oscillation	15:00 Behrens, Erik Southern Ocean deep convection in global climate models: a driver for variability of subpolar gyres and Drake Passage transport on decadal timescales	15:00 Man, Wenmin The global monsoon response to volcanic eruptions in the CMIP5 past1000 simulations
	15:07 Li, Yuanlong Intraseasonal SST and Precipitation Variability of the Indian Summer Monsoon: Impact of Ocean Mixed Layer Depth	15:15 Danabasoglu, Gokhan Impacts of Ocean Model Parameterizations on the Atlantic Meridional Overturning Circulation (AMOC) Variability in the Community Earth System Model (CESM)	15:15 Jackson, Laura Timescales of AMOC collapse

	15:14 Yu, Yueyue Understanding and Predicting Subseasonal Extreme Events: Relationship between Warm Airmass Transport into the Upper Polar Atmosphere and Cold Air Outbreaks in Winter		
	15:21 McPhaden, Michael ENSO Diversity: Past, Present, and Future. Causes and Consequences of the 2015-16 El Niño		
15:30	Coffee/ tea break		
16:00	Poster Sessions:1.3, and 2 Hyatt Donghai Rooms (2nd floor)		
17:00	Keynote (Hyatt Ballroom, 3rd floor)		
	<i>Magdalena Balmaseda: Seamless Prediction and the interactions of time scales, earth system components and institutions</i>		
18:00 – 19:00	Town Hall Session 1-3		
	1. Introduction to YMC and WPOS	2. Ocean observing Satellites - future plans	3. PAGES Town Hall Meeting
Venue	Hyatt Ballroom 1, 3 rd floor	Hyatt Ballroom 2, 3 rd floor	Hyatt Ballroom 3, 3 rd floor
19:00 – 19:30	Town Hall light dinner break (Hyatt Ballroom Foyer, 3rd floor)		
19:30 – 20:30	Town Hall Session 4-6		
	4. Indo-Pacific teleconnection	5. WCRP future	6. Glacier Melt
	Hyatt Ballroom 1, 3 rd floor	Hyatt Ballroom 2, 3 rd floor	Hyatt Ballroom 3, 3 rd floor

September 21 (Wednesday. Hyatt): Understanding Ocean and Climate Processes

Chair: Jonathan Durgadoo

Time	Items		
09:00	Plenary 3 (Venue: Hyatt Ballroom 3rd floor)		
09:00	<i>Rym Msadek: Role of ocean dynamics in climate variability on interannual to multidecadal time scales</i>		
09:20	<i>Jennifer Mackinnen: Stirring and mixing in the Drake Passage</i>		
09:40	<i>Weidong Yu: Upwelling and Frontal Zones - Example of Complexity in the Monsoonal Indian Ocean</i>		
10:00	<i>Paulo Calil: Frontal Instabilities in the South Atlantic Subtropical Front and their Impact on Phytoplankton Blooms</i>		
10:20	Questions and discussion		
10:30	Coffee/tea break		
11:00	Poster Sessions: 1.1, and 3 Hyatt Donghai Rooms (2nd floor)		
12:30-13:30	Lunchtime Workshop for ECSS Venue: Hyatt Ballroom 1 (3rd floor) <i>Visualising and communicating climate data (Ed Hawkins, University of Reading, UK)</i>		
14:00	Parallel Sessions		
	3.1 Mixing and Stirring	3.2 Ocean and Climate Dynamics	3.3 Upwelling and Frontal Zones
Chairs	<i>Marina Levy Baylor Fox Kemper Sonya Legg</i>	<i>Shoshiro Minobe Matthew England</i>	<i>Enrique Curchitser Mauricio Mata</i>
Venue	Hyatt Ballroom 1 (3rd floor)	Hyatt Ballroom 2 (3rd floor)	Hyatt Ballroom 3 (3rd floor)
	14:00 Treguier, Anne Marie Influence of mesoscale and submesoscale dynamics on the seasonal cycle of the ocean mixed layer depth	14:00 Xie, Shang-Ping Ocean-atmosphere coupling in changing climate: SST pattern dynamics	14:00 Ruan, Xiaozhou Frontal structure and transport in southern Drake Passage from ocean gliders
	14:15 Le Sommer, Julien Variability of submesoscale dynamics in the North Atlantic Ocean	14:15 Zhang, Honghai The Meridional Mode in an Idealized Aquaplanet Model: Dependence on the Mean State	14:15 Chen, Gengxin Interannual Variability of Eastern Indian Ocean Upwelling: Local versus Remote Forcing
	14:30 Liu, Zhi Liang Geographical distribution and anisotropy of the oceanic inverse kinetic energy cascade	14:30 Karumuri, Ashok Nonlinearities in the evolutionary distinctions between El Niño and La Niña flavors	14:30 Escribano, Ruben Eastern boundary Upwelling systems (EBUS): interannual variability in the eastern south Pacific and biological response
	14:45 Qiao, Fangli Wave turbulence interaction induced vertical mixing and its effects in ocean and climate models	14:45 Yuan, Dongliang Climate Variability and Predictability Over the Indo-Pacific Ocean: Indonesian Throughflow variations in the eastern Indonesian seas during the onsets of the 2014 and 2015 El Niño	14:45 Fox Kemper, Baylor Effects of ocean surface gravity waves: on turbulence, climate, and frontogenesis.
	15:00 du Plessis, Marcel Ocean-atmosphere interactions on the submesoscale field of the Southern Ocean and its associated impacts on the mixed layer variability	14:52 Wang, Kun Ocean and cryosphere interactions: Tropical Pacific Climate Response to Projected Arctic Sea Ice Loss	15:00 Kopte, Robert Eastern boundary upwelling systems (EBUS): Intraseasonal to interannual variability of the Angola Current inferred from moored and shipboard measurements

	15:15 Hallberg, Robert Internal wave driven mixing: An energetically consistent replacement for the Osborn relationship in ocean mixing parameterizations	15:00 Keenlyside, Noel Tropical Atlantic Variability and Predictability - PREFACE project	15:15 Krebs, Martin Assessing different hypotheses about the origin of Benguela upwelling warm bias
		15:07 Farneti, Riccardo Coordinated ocean-ice reference experiments (core- ii): an assessment of antarctic circumpolar current and southern ocean meridional overturning circulation during 1958-2007	
		15:14 Shoshiro Minobe , Ping Chang , Steve Griffies On Extratropical Frontal- and Meso-scale Air-Sea Interaction	
		15:21 Ganeshan, Manisha How is the atmospheric boundary layer responding to the dynamic new Arctic Ocean?	
15:30	Coffee/tea break		
16:00	Poster Sessions: 1.1, and 3 Hyatt Donghai Rooms (2nd floor)		
17:00	Keynote (Venue: Hyatt Ballroom 3rd floor)		
	<i>Jennifer MacKinnon: The elephant and the mouse: multiple scales of ocean dynamic</i>		
18:00 – 19:00	Town Hall Session 7-8		
	7. HighResMIP	8. CLIVAR Science Plan	
Venue	Hyatt Ballroom 1, 3 rd floor	Hyatt Ballroom 2, 3 rd floor	
19:00- 19:30	Town Hall light dinner break (Venue: Hyatt Ballroom Foyer, 3rd floor)		
19:30 – 20:30	Town Hall Session 9-10		
	9. Future-Earth	10. Ocean and Climate Modeling	
Venue	Hyatt Ballroom 1, 3 rd floor	Hyatt Ballroom 2, 3 rd floor	

September 22 (Thursday, Hyatt): The Ocean in a Warmer World, Chair: Sarah Kang

Time	Items		
09:00	Plenary 4 (Venue: Hyatt Ballroom, 3rd floor)		
09:00	<i>Mike Alexander: Modes of sea surface temperature variability in a warmer world</i>		
09:20	<i>Fan Wang: Multi-scale and long-term variability of the western boundary currents in the warming up oceans</i>		
09:40	<i>Seung-Ki Min: Human-caused Indo-Pacific warm pool expansion</i>		
10:00	<i>Anny Cazenave: Present-day sea level changes at global and regional scales</i>		
10:20	Questions and discussion		
10:30	Coffee/tea break		
11:00	Poster Sessions: 1, 2 and 4, 5, 6 Hyatt Donghai Rooms (2nd floor)		
14:00	Parallel Sessions		
	Session 4.1 Climate Modes	Session 4.2 Sea Level	Session 4.3 Boundary Current Systems
Chairs	<i>Krishna AchutaRao Eric Guilyardi</i>	<i>Aimee Slangen Benoit Meyssignac</i>	<i>Sabrina Speich Toshio Suga</i>
Venue	Hyatt Ballroom 1 (3rd floor)	Hyatt Ballroom 2 (3rd floor)	Hyatt Ballroom 3 (3rd floor)
14:00	Zhu, Jiang Reduced ENSO Variability at the LGM Revealed by an Isotope-enabled Earth System Model	Jérôme Vialard Dominant modes of natural decadal sea-level variability in the Indian Ocean	Sato, Olga Seasonal to interannual variability of the meridional heat fluxes in the South Atlantic
14:15	Santoso, Agus Understanding extreme El Niño: the curious case of the 2015/16 event	Domingues, Catia Motta Upper-ocean thermal expansion and contribution to sea level change since 1970: from global mean rise to regional patterns	Mogollón Aburto, Rodrigo Response of biological production to the strengthening of the upwelling-favorable Trade Winds in the Northern Humboldt Current System: A Modeling Study
14:30	Milinski, Sebastian Tropical Atlantic decadal variability and how it is affected by external forcing	Yin, Jianjun Pacific Sea Level Rise Patterns and Global Surface Temperature Variability	Polito, Paulo Simionatto Can the OFES and CESM models reproduce long Rossby waves?
14:45	Stevenson, Samantha An Ensemble Approach to Understanding ENSO Diversity and Climate Change	Sasaki, Yoshinori Sea level variability around Japan during the 20th century simulated by a regional ocean model	Feng, Ming Downscale the future changes of the Indonesian Throughflow
15:00	Lee, June-Yi Two dominant boreal summer tropical-extratropical teleconnection modes in the Northern Hemisphere in a Warmer World	Piecuch, Christopher Annual sea level changes on the north American northeast coast: influence of local winds and barotropic motions	Lina Song Semi-annually alternating exchange of intermediate waters east of the Philippines
15:15	Li, Tim What controls the divergent projection of ENSO amplitude change under global warming?	Mori, Nobuhito Future projection of ocean wave climate change: a community approach to global and regional wave downscaling	Nam, SungHyun The 2014 warm anomalies observed in the eastern boundary current system off southern California

15:30	Coffee/tea break
16:00	Poster Sessions: 1.2, and 4,5,6 Hyatt Donghai Rooms (2 nd floor)
16:00-17:00	Town Hall Session 11: Ocean Observing (Venue: Hyatt Ballroom 1, 3 rd floor)
17:00	Keynote (venue: Hyatt Ballroom, 3 rd floor)
	<i>Wenju Cai: ENSO and greenhouse warming</i>
19:00	Banquet (Venue: Hyatt Ballroom, 3 rd floor)

September 23 (Friday, Hyatt), Chair: Dunxin Hu

Time	Items
	Plenary 5: Climate Information and Sustainable Development (Chair: Martin Visbeck)
Venue	Hyatt Ballroom, 3 rd floor
09:00	<i>Fei Chai: Coastal and Marine Ecosystems in a Changing World</i>
09:20	<i>Arame Tall: Crafting appropriate institutional frameworks for climate services: the experience of the National frameworks for climate services in Africa</i>
09:40	Panel Discussion (Panelists: Guy Brasseur, Fei Chai, Arame Tall, Thorsten Kiefer)
10:30	Coffee/ tea break
	Plenary 6: Future of Climate and Ocean Science (Chair: Annalisa Bracco)
Venue	Hyatt Ballroom, 3 rd floor
11:00	<i>Matt Collins: The Role of Climate Dynamics in Future Climate Change</i>
11:20	<i>Nicolas Gruber: Climate, carbon and ocean biogeochemistry at a time of change: Recent insights, emerging trends, and future outlook</i>
11:40	<i>Guy Brasseur: Understanding the multi-scale dynamics of the climate system: Challenges for WCRP in the Future</i>
12:00	Panel Discussion (Panelists: In-Sik Kang, Lynne Talley, Lixin Wu, Matt Collins, Nicolas Gruber, Guy Brasseur)
12:30	Reflections on the week– Detlef Stammer
	Best Poster Awards
	Closing remarks – Detlef Stammer and Guy Brasseur
13:30	Conference ends