

14th International Workshop on Modeling the Ocean (IWMO)

June 17 - 20, 2024

Sapporo, Japan

Date	Time	1st Author	Presenter (if not the 1st author)	Title
<b>June 17th</b>				
	9:00	<b>Welcome</b>		
		<b>Circulation and Dynamics in Open Ocean and Marginal Seas (16)</b>		
	9:20	<b>Changming</b>	<b>Dong</b>	Energy cascade and vertical heat transport by submesoscale processes and their parameterization
		Wenzhou	Zhang	Mechanism of oceanic eddies in modulating the sea surface temperature response to a strong typhoon in the western North Pacific
		<b>Xianliang</b>	<b>Chen</b>	Baroclinic nonlinear saturation and secondary instability of current-undercurrent meanders
		Jianping	Gan	Parameterization of the Vertical Mixing for the Luzon Undercurrent in the northern Western Pacific Ocean
		Takuro	Matsuta	Inertial Effect in Barotropic Channel Models under the Weakly Nonlinear Regime
	10:45	break		
	11:05	Toru	Miyama	Transition of the Kuroshio Large Meander path and its impact on the Seto Inland Sea
		Mingting	Li	The pathway of South Pacific water intruded into the sub-thermocline Makassar Strait during the winter of 2016-2017
		Tingting	Yan	Dynamical interactions between the Kuroshio Large Meander and the coastal circulation off the south coast of Japan
		Zhiqiang	Liu	Pathway and Age of South China Sea Waters in the Pacific and India Oceans
		Ruoying	He	Marine Heatwaves in the Deep-Sea Benthic Ecosystems of Northwest Atlantic Continental Margin
	12:20	Lunch		
	13:45	Humio	Mitsudera	Impacts of bottom topography on the formation of the North Pacific subtropical-subarctic frontal zone
		Yusuke	Ushijima	Temperature Difference between Non-Eddy-Resolving and Eddy-Resolving Ocean Models in the Upper Subtropical North Pacific Ocean
		<b>Yusuke</b>	<b>Terada</b>	Generation of the Equatorial Intermediate Current by Yanai waves in the eastern Pacific Ocean
		Ying	Chen	Seasonal Dynamics of Deep-Water Overflow in the Luzon Strait
		Joseph	Zhang	Internal tides reverse tidal currents around southern Taiwan
		Nan	Yuan	Ageostrophic current intrudes into the ice-shelf cavity
	15:15	break		
		<b>Coastal and Shelf Sea Processes (5)</b>		
	15:35	Jun	Wei	Dynamic response of coastal surface currents to tropical cyclones based on high-frequency radar observations
		<b>Weicong</b>	<b>Cheng</b>	Dynamics of the Counter-wind currents over the China Shelf Seas
		Yuezhang	Xia	Experimental Study on the Influences of Water Content, Mineral Component, and Biopolymer Content on Rheological Behavior of Cohesive Sediment
		<b>Wenjun</b>	<b>Zhu</b>	Climate Change Induced Coastal Flooding Impacts on the Georges River Estuary, Sydney, New South Wales, Australia
		Joanna	Staneva	What-If Scenario for nature-based solutions
	16:50	<b>photo session</b>		
	17:00	<b>Ice Breaker</b>		
<b>June 18th</b>				
		<b>Sea Ice Processes (6)</b>		
	9:00	<b>Takuji</b>	<b>Waseda</b>	Coupled processes of wave, wind, current, and ice in the Lützow Holm Bay Antarctica
		Zhaoru	Zhang	The response of Ross Sea shelf water properties to enhanced Amundsen Sea ice shelf melting
		Ryu	Saiki	Difference of Pre-conditioning impact between Heavy-ice-year and Light-ice year in the Okhotsk Sea

	Koji	Shimada	Integrated sea ice thickness algorithm based on thermodynamic and dynamic sea ice growth using AMSR2 data
	<b>Rin</b>	<b>Harada</b>	Parameterizations of the air-ice and ice-ocean drag coefficients depending on the roughness of sea ice floes
	Tsubasa	Kodaira	Submesoscale and Mesoscale Eddies Near the Sea Ice Edge in the Canada Basin, Arctic Ocean
10:40	break		
	<b>Land Ocean Interaction Processes (2)</b>		
11:00	<b>Shinichiro</b>	<b>Kida</b>	Development of an ocean-river-runoff seamless model
	<b>Peng</b>	<b>Xin</b>	Estimation of freshwater discharge from the Gulf of the Alaska drainage basins
11:40	Lunch		
	<b>Waves, Tides, Turbulence and Mixing (9)</b>		
13:15	Tal	Ezer	A turbulent model tests the Ekman theory and simulates the distribution of biological particles in the ocean
	Yasushi	Fujiwara	Numerical study of the wave-induced mass transport and consequent counter-current response in the coastal ocean
	Yan	Li	Coupled interaction between surface waves and a vertically sheared current
	<b>Shangfei</b>	<b>Lin</b>	Dynamic adjustment of coastal upwelling to conservative wave effects over a steep shelf
14:15	break		
14:35	Xiao Hua	Wang	Nearshore wave prediction using Graph Neural Network at Darwin Harbour, Australia
	Jinyu	Sheng	Examining Wave-Current Interaction during Hurricane Fiona over the Southeastern Canadian Shelf using a Coupled Circulation-Wave Model
	<b>Changhoon</b>	<b>Ko</b>	Analysis of seasonal submesoscale processes and characteristics through Lagrangian surface drifters
	Ayumi	Fujisaki-Manome	Modeling thermal structure in large freshwater lakes
	Yohei	Onuki	Breaking of internal waves simulated in a distorted domain model
	<b>Poster Session (7)</b>		
15:50	Xiaomei	Ji	The mechanical response of salinity stratification to multiple factors in a highly modified estuary
	Shintaro	Bunya	Ocean-to-Creek Scale ADCIRC-SWAN Tides, Storm Surge and Waves Prediction System with Data Assimilation
	<b>Koichiro</b>	<b>Kikkawa</b>	On nondimensional parameters describing Langmuir turbulence effects on the MLD under surface heating
	Hitoshi	Tamura	Coastal destruction in Tokyo Bay induced by Typhoon Faxai in 2019
	<b>Shoto</b>	<b>Nakamata</b>	Preliminary numerical study for wind waves with an air-sea two phase flow model
	Kyoko	Ohashi	Quantifying Hydrodynamic Connectivity among Canada's Atlantic Marine Protected Areas using the Lagrangian Particle-Tracking Method
	<b>Taiki</b>	<b>Adachi</b>	CMIP6 ensemble analysis for the Decadal prediction of the Kuroshio Extension
17:50	<b>Bus to Excursion/Banquet</b>		

## June 19th

	<b>Numerical Techniques and Approaches in Ocean Modeling and Data Analysis (6)</b>		
9:00	<b>Yoshimasa</b>	<b>Matsumura</b>	Eulerian-Lagrangian hybrid modeling of multiscale oceanic processes
	Jia	Wang	On the application of the two-time stepping Euler forward Runge-Kutta schemes to the rotating shallow water equations: Global truncation error, computational viscosity, consistency, inertial instabil
	Yu-Lin Eda	Chang	Projection of August 2021 pumice dispersion from the submarine eruption of Fukutoku-Oka-no-Ba volcano in the western North Pacific
	Shuyi	Zhou	A Physical-informed Neural Network for Improving Air-Sea Turbulent Heat Flux Parameterization
	Hoa T.T.	Nguyen	A Surrogate-Based Optimization Approach for Identifying Parameters in a 3D Marine Biogeochemical Model
	Huijie	Xue	Using Deep-Learning Models to Estimate Throughflows Across the Indonesian Seas
10:40	break		
	<b>Air-Sea Interaction Processes and Climate Variations (10)</b>		

11:00	<b>Hyojeong</b> Soon-Il <b>Borui</b>  <b>Li</b>  Guangli	<b>Kim</b> An <b>Wu</b>  <b>Zimeng</b>  Zhang	Understanding inter-model diversity in the NAO-AMOC relationship in CMIP6: implications for climate prediction Impact of Antarctic Ice Sheet Meltwater Pulse on Atlantic Meridional Overturing Circulation Deep reaching wave energy-flux in the off-equatorial central and western regions of the Pacific Ocean during the El Nino and La Nina events Interpreting Negative IOD Events Based on the Transfer Routes of Wave Energy in the Upper Ocean Attributing interdecadal variations of southern tropical Indian Ocean dipole mode to rhythms of Bjerknes feedback intensity
12:15	Lunch		
13:45	Fei Hajoon Alberto Jose Fanghua  Shuangling	Chai Song Bie Xu  Chen	Unraveling the Formation mechanism of Marine Heatwaves in the Northeast Pacific A significant changes in the mesoscale eddy demographics by wind-current interaction in the Southern Ocean Numerical modeling of Tropical Cyclone Idai (2019): the role of the underlying ocean on its evolution Development of an accelerated sea spray-mediated heat flux parameterization and an application for global tropical cyclone intensity forecasts Atmospheric CO2 dynamics under oceanic emission in the Equatorial Pacific
15:00	break		
	<b>Coupled Physical-Biogeochemical Processes (10)</b>		
15:20	Yign Yuntao <b>Yeonju</b> <b>Haoran</b>	Noh Wang <b>Choi</b> <b>Zhang</b>	Mixing of Tracers within the Ocean Mixed Layer for Autumn Phytoplankton Blooms Distribution and diffusion of the point-sources pollutants in the Pearl River Estuary Influence of Submesoscale Eddies on Autumn Phytoplankton Blooms The seasonal dynamics of phytoplankton following extreme aerosol deposition events
16:20	break		
16:40	Wentao <b>Min</b>  <b>Yumi</b>	Ma <b>Yang</b>  <b>Abe</b>	Lateral transport dominates the dissolved iron supply to the euphotic zone of the North Pacific Subtropical Gyre Simulations of PCBs in the Northwestern Pacific Ocean with a Three-Dimensional High-Resolution Hydrodynamic-Ecosystem-PCB Coupled Model Comparison of CMIP models with observations for historical ocean deoxygenation in the North Pacific
17:25	SC meeting		

## June 20th

	<b>Coupled Physical-Biogeochemical Processes</b>		
9:00	Joanna  Meng Menghong	Staneva  Xia Dong	Eutrophication hotspots, nitrogen fluxes and climate impacts in estuarine ecosystems: A model study of the Odra estuary system The coupled physical-biological based surface-groundwater Modeling System for the Chesapeake Bay Evaluation of the Effects of Submarine Groundwater on Nutrient Concentration and Primary Production in a Deep Bay of the Japan Sea
9:45	break		
	<b>Data Assimilation and Ocean Forecast Systems (4)</b>		
10:05	Yasumasa Peng Shun Shoichiro	Miyazawa Zhan Ohishi Kido	Skill assessment of an ensemble-based Northwestern Pacific Ocean forecast system Efficient Dynamical Downscaling of General Circulation Models Using Continuous Data Assimilation LETKF-based Ocean Research Analysis (LORA): A new ensemble ocean analysis dataset Preliminary results of SynObs Flagship Observing System Experiments
11:05	<b>OYSA award and Concluding Remark</b>		
12:00	<b>End</b>		