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## 2009 Workshop on Modeling the Ocean Agenda

### Day 1: February 23, 2009 (Monday)

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- 08:15~09:00**    **Registration**
- 09:00~09:15**    **Welcome Remarks:** Yih-Shun Gou (President of National Taiwan Normal University)
- 09:15~09:30**    **Opening Remarks:** Lou-Chuang Lee (Minister of National Science Council)
- 09:30~11:40**    **Session 1A: Waves, Currents & Turbulence** **(Chair: Tal Ezer)**
- 09:30~10:00    George Mellor - Invited lecture: The Depth Dependent Current and Wave Interaction Equations
- 10:00~10:20    Yeli Yuan (invited): Ocean perturbation motion and its transportation effect
- 10:20~10:40    Lifeng Lu: Modeling of Surface Current Variabilities near the Yaeyama Islands by an Open Ocean, Tide, and Wind Wave Coupling Model
- 10:40~11:00    Fangli Qiao (invited): Wave-Circulation Coupled Numerical Model: One Way to Improve Forecaste and Simulation Ability
- 11:00~11:20    ~~Hari Warrior: A New Formulation for Turbulent Eddy Viscosity Based on Anisotropy for Numerical Ocean Models~~
- 11:20~11:40    Boris Galperin (invited): The Quasi-Normal Scale Elimination (QNSE) Theory of Stably Stratified Turbulence
- 11:40~13:00**    **Lunch Break**
- 13:00~15:30**    **Session 1B: Observation & Model Analyses** **(Chair: Fangli Qiao)**
- 13:00~13:30    Norden Huang - Invited lecture: An Introduction to Hilbert-Huang Transform and Its Applications
- 13:30~13:50    Kon-Kee Liu (invited): Simulation of Seasonal Variation of Phytoplankton Growth in the East China Sea
- 13:50~14:10    Chao Ma: The Kuroshio Extension: A Leading Mechanism for the Seasonal Sea-Level Variability along the West Coast of Japan
- 14:10~14:30    Chau-Ron Wu: Modeling Eddy Dynamics in the South China Sea and Philippine Sea
- 14:30~14:50    Vihang Bhatt: Seasonal Variability of the East Australian Current: The Role of JEBAR
- 14:50~15:10    Lie-Yauw Oey: Topocautics
- 15:10~15:30    Huijie Xue (invited): A 3-Dimensional Physical-Biogeochemical Model Study of Seasonal and Interannual Variability of Phytoplankton Biomass in the Gulf of Maine
- 15:30~15:50**    **Coffee Break**
- 15:50~18:00**    **Session 1C: Data Assimilation, Validations & Predictions** **(Chair: Jianping Gan)**
- 15:50~16:20    Pierre De Mey - Invited lecture: Data Assimilation and Array Design in the Coastal Ocean by Ensemble Methods
- 16:20~16:40    Charles Tang (invited): Assimilation of Sea Surface Temperature into Canadian East Coast Ocean Model
- 16:40~17:00    Paolo Oddo: The Adriatic Basin Forecasting System: New Model and System Development
- 17:00~17:20    Mauro Cirano: Towards an Operational Hydrodynamical Model for the Brazilian Shelf/Slope Region: Lessons Learned
- 17:20~17:40    Philip Chu: Development, Implementation and Skill Evaluation of NOAA/NOS Great Lakes Operational Forecasting System (GLOFS)
- 17:40~18:00    Yasumasa Miyazawa (invited): Japan Coastal Ocean Predictability Experiment - Comprehensive Operational Applications of POM -
- 19:00**            **Welcome Dinner (US\$20/person)**

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## 2009 Workshop on Modeling the Ocean Agenda

### Day 2: February 24, 2009 (Tuesday)

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<b>08:50~11:40</b>	<b>Session 2D: Regional to Global Processes &amp; Climate</b>	<b>(Chair: Leo Oey)</b>
08:50~09:20	Toshio Yamagata - Invited lecture: IOD, ENSO and Their Interactions	
09:20~09:40	Huang-Hsiung Hsu (invited): Recent Synchronized Abrupt Warming and Change in Dominant Atmosphere-Ocean Decadal Mode	
09:40~10:00	Patama Singhruck: Variability of the Indian and Pacific Oceans Associated with the Madden-Julian Oscillation Observed by Argo Floats	
10:00~10:20	Chiung-Wen June Chang: Oceanic Dynamics Associated with ENSO in Affecting the SST Variation in the Philippine Sea	
10:20~10:40	Ayumi Fujisaki: Investigation of Ice-Ocean Coupled System in the Sea of Okhotsk Using a Numerical Model	
10:40~11:00	Cheng-Ta Chen: How does the Air-Sea Interaction Affect Climate Predictability?	
11:00~11:20	Halimatun Muhamad: Modeling Of Climatological Wind-Driven Circulation and Thermohaline Structures of Peninsular Malaysia Eastern Continental Shelf Using Princeton Ocean Model	
11:20~11:40	Boris Galperin (invited): Nonlinear Waves (Zonons) in Zonostrophic Turbulence	
<b>11:40~13:00</b>	<b>Lunch Break</b>	
<b>13:00~15:30</b>	<b>Session 2E: Numerical Algorithms &amp; Internal Waves</b>	<b>(Chair: Yasumasa Miyazawa)</b>
13:00~13:30	Jarle Berntsen - Invited lecture: Estimation of the Internal Pressure Gradient	
13:30~13:50	Sen Jan: Numerical Study of Baroclinic Tides in Luzon Strait	
13:50~14:10	Guan-Yu Chen: Interaction between Internal Solitary Waves and an Isolated Atoll in the Northern South China Sea	
14:10~14:30	Guansuo Wang: Parallelization of the Wave-Circulation Coupled Model and Its Application	
14:30~14:50	Ke-Hsien Fu: The Shoaling of Internal Waves at the Northeast of Dongsha Atoll	
14:50~15:10	Weidong Zhou: A Time Integration with Split Stepping Used for POM	
15:10~15:30	Jun Wei: Validation and Application of an Ensemble Kalman Filter in the Selat Pauh Channel of Singapore	
<b>15:30~15:50</b>	<b>Coffee Break</b>	
<b>15:50~18:00</b>	<b>Session 2F: Air-Sea Interaction</b>	<b>(Chair: Chun-Chieh Wu)</b>
15:50~16:20	IL JU Moon - Invited lecture: A Physics-Based Parameterization of Air-Sea Momentum Flux at High Wind Speeds and Its Impact on Atmospheric and Oceanic Modeling	
16:20~16:40	Lian Xie (invited): A Coupled Regional Ocean-Atmosphere Modeling System (CROAMS) and its Application to Hurricane Katrina Simulation	
16:40~17:00	Chun-Chieh Wu (invited): Upper Ocean Thermal Structure, Rapid Intensification, and Supertyphoons: Part I	
17:00~17:20	I - I Lin: Upper Ocean Thermal Structure, Rapid Intensification, and Supertyphoons: Part II	
17:20~17:40	Yung-Yao Lan: Summer Observed Meteorology and Surface Energy Components Comparison with NCEP-DOE AMIP-II Reanalysis over the South China Sea	
17:40~18:00	Changshui Xia: The Summer Circulation of Bohai Sea from a Wave-Tide-Circulation Coupled Model	
<b>19:00</b>	<b>Ticketed Banquet (US\$30/person)</b>	

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**2009 Workshop on Modeling the Ocean Agenda**  
**Day 3: February 25, 2009 (Wednesday)**

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<b>08:50~11:40</b>	<b>Session 3G: Sediment, Marginal Seas &amp; Storm Surges</b>	<b>(Chair: Huijie Xue)</b>
08:50~09:20	Xiao Hua Wang - Invited lecture: A Three-Dimensional, Wave-Current Coupled, Sediment Transport Model for POM	
09:20~09:40	Michael Hartnett: Investigations into Storm Surges around the Irish Coast	
09:40~10:00	Lulu Qiao: Circulation and Sediments Transport due to Winter Storms in the Bohai Sea and Yellow Sea	
10:00~10:20	Alexey Krylov: Modelling of Radioactivity Transport in the Marine Environment with the Use of Princeton Ocean Model	
10:20~10:40	Ivan Dias Soares: An Application of POM to Regional Process Simulation off the Brazil Eastern Coast	
10:40~11:00	Xiaopei Lin: The Mechanism of Westward Shifting of Yellow Sea Warm Current	
11:00~11:20	Vlado Malačič: Applications of the Princeton Ocean Model in the Adriatic Sea	
11:20~11:40	Paolo Oddo: A Numerical Study of the Mesoscale Variability in the Adriatic Sea	
<b>11:40~13:00</b>	<b>Lunch Break</b>	
<b>13:00~15:30</b>	<b>Session 3H: Coastal &amp; Shelf Processes</b>	<b>(Chair: Lian Xie)</b>
13:00~13:30	Dong-Ping Wang - Invited lecture: Running Parallel Ocean Model (aka POM) on Blue Gene	
13:30~13:50	Jianping Gan (invited): Intensifications of Upwelling and Nutrient Enrichment Induced by the Widened Shelf and River Plume in the Northeastern South China Sea	
13:50~14:10	Yu-Lin Eda Chang: Bimodal Behavior of the Seasonal Upwelling off the Northeastern Coast of Taiwan	
14:10~14:30	Tal Ezer (invited): Applications of Circulation and Inundation Models to Support Biological and Environmental Studies	
14:30~14:50	<del>Donghui Jiang: On the Upwelling-Downwelling Events along the Coast of Jervis Bay, New South Wales</del>	
14:50~15:10	Oleg Pavlovski: POM-Based Modeling of Consequences of Hypothetical Accidental Radioactive Contamination of Saida-Bay in Murmansk Region of Russia	
15:10~15:30	Germo Väli: Simulation of Mesoscale Structure of an Anomalous Coastal Upwelling Event in the Southern Gulf of Finland, Baltic Sea	
<b>15:30~15:50</b>	<b>Coffee Break</b>	
<b>15:50~18:00</b>	<b>Session 3I: Group discussions</b>	
	1. Data assimilations	
	2. Numerical schemes & algorithms	
	3. Model physics	

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**2009 Workshop on Modeling the Ocean Agenda  
Day 4: February 26, 2009 (Thursday)**

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- 08:50~11:00    Session 4J: General Discussions**
1. Outstanding Young Scientist Awards
  2. Summary of group discussions
  3. Special issue, peer-reviewed papers
  4. Future collaborative modeling efforts
  5. Next workshop, date & place
- 11:00~11:20    Closing Remarks**
- Afternoon      Social Tour: National Palace Museum**

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**2009 Workshop on Modeling the Ocean Agenda**  
**Day 5: February 27, 2009 (Friday)**

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- 08:00~12:00**    **POM Training Class(I)** (only for POM Training Class List)
- 12:00~13:00**    **Lunch Break**
- 13:00~16:00**    **POM Training Class(II)** (only for POM Training Class List)