



February 28 – March 1, 2019
C-Cube Chikushi Campus, Kyushu University , Fukuoka, Japan

Conveners:

Hideharu Sasaki (APL, JAMSTEC)
Shinichiro Kida (RIAM, Kyushu University)
Niklas Schneider (IPRC, University of Hawaii)
Yukio Masumoto (The University of Tokyo)

Support:

This meeting is supported by the joint research program of Research Institute for Applied Mechanics (RIAM), Kyushu University

Schedule

February 28, Thursday

12:30-13:00: Registration

13:00-13:10: Opening Remarks

Invited Presentations (Chair: S. Kida)

13:10-13:40: *On the stability of buoyant coastal currents: A view from the Eady model of baroclinic instability*

Shih-Nan Chen (National Taiwan Univ.), C.-J. Chen (National Taiwan Univ.)

13:40-14:10: *Spreading of the South Pacific Tropical Water and Antarctic Intermediate Water over the maritime continent*

Lei Zhou (Shanghai Jiao Tong Univ.)

14:10-15:00 Poster Session

Session 1: Air-Sea Interaction (Chair: A. Yamamoto)

15:00-15:15: *Ocean response to atmospheric variability over the Indo-Pacific warm pool: a case for high vertical resolution*

Kelvin Richards (IPRC, Univ. Hawaii)

15:15-15:30: *Modeling Asian monsoon precipitation climatology: Representation of air-sea interactions over the tropical Indian Ocean*

Hariharasubramanian Annamalai (IPRC, Univ. of Hawaii), B. Taguchi (RCAST, Univ. of Tokyo), F. Hanf (IPRC, Univ. of Hawaii), J. P. McCreary (IPRC, Univ. of Hawaii)

15:30-15:45: *Kuroshio Extension and Gulf Stream's influences on the variability of near-surface baroclinicity and the associated atmospheric fields*

Bunmei Taguchi (RCAST, Univ. of Tokyo), K. Nishii (Mie Univ.), H. Nakamura (RCAST, Univ. of Tokyo)

15:45-16:00: *A metric for surface heat flux effect on horizontal SST gradients and its application to OFES*

Tomoki Tozuka (Univ. of Tokyo), S. Ohishi (ISEE, Nagoya Univ.), M. F. Cronin (PMEL, NOAA)

16:00-16:15 Break

(Chair: K. Aoki)

16:15-16:30: *Scale-dependence of observed equivalent neutral wind response to ocean-mesoscale sea surface temperatures*

Niklas Schneider (IPRC, Univ. of Hawaii)

16:30-16:45: *Coupled ocean-atmosphere interaction mediated by SST and surface current: Distinctive impacts and scale dependence*

Hyodae Seo (WHOI)

Session 2: Model Development

16:45-17:00: *RAHOTS: Radial basis functions Along Helix On The Sphere*

Takeshi Enomoto (DPRI, Kyoto Univ.)

17:00-17:15: *A 4D variational scheme for nearshore wave model*

Qingyang Song (ISEE, Nagoya Univ.), R. Mayerle (FTZ/CRL, CAU)

17:15 End of First Day

March 1, Friday

Session 3: Climate Variability (Chair: R. Masunaga)

9:30-9:45: *Westerly Wind Burst (WWB)/Easterly Wind Surge (EWS)-like stochastic forcing and the effects on ENSO prediction by the SINTEX-F system*

Takeshi Doi (APL, JAMSTEC), S. K. Behera (APL, JAMSTEC), T. Yamagata (APL, JAMSTEC)

9:45-10:00: *Mid-latitude source of the ENSO-spread in SINTEX-F ensemble predictions*

Tomomichi Ogata (APL, JAMSTEC), T. Doi (APL, JAMSTEC), Y. Morioka (APL, JAMSTEC), S. Behera (APL, JAMSTEC)

10:00-10:15: *Analyzing atmospheric processes behind the South China sea winter cold tongue using model outputs*

Marvin Xiang Ce Seow (Univ. of Tokyo), T. Tozuka (Univ. of Tokyo), Y. Morioka (APL/JAMSTEC)

10:15-10:30: *Anatomy of the Indian Ocean Dipole using a regional ocean model*

Shoichiro Kido (Univ. of Tokyo), T. Tozuka (Univ. of Tokyo), W. Han (Univ. of Colorado Boulder)

10:30-10:45: *On the emergence of Atlantic Multidecadal SST signal: A key role of the mixed layer depth variability driven by North Atlantic Oscillation*

Ayako Yamamoto (APL, JAMSTEC), Hiroaki Tatebe (JAMSTEC), M. Nonaka (APL, JAMSTEC)

10:45-11:00 Coffee Break

Session 4: Western Pacific and Marginal Seas (Chair: Q. Song)

11:00-11:15: *Sea surface temperature trend in the East China Sea during the 20th century simulated by a regional ocean model*

Yoshi N. Sasaki (Hokkaido Univ.), C. Umeda (Hokkaido Univ.)

11:15-11:30: *A north-south contrast of subsurface salinity anomalies in the northwestern Pacific from 2002-2013*

Youfang Yan (SCSIO, CAS), L. Svendsen (Univ. of Bergen, BCCR), C. Wang (SCSIO, CAS), N. Keenlyside (Univ. of Bergen, BCCR), D. Xu (SOA)

11:30-11:45: *80-member ensemble forecast of Kuroshio in JCOPE*

Kunihiro Aoki (APL, JAMSTEC), Y. Miyazawa (APL, JAMSTEC), T. Hihara (APL, JAMSTEC)

11:45-12:00: *An LETKF-based ocean reanalysis for the Asia-Oceania region using Himawari-8 SSTs and SMOS/SMAP SSS*

Shun Ohishi (ISEE, Nagoya Univ.), T. Hihara (APL, JAMSTEC), H. Aiki (ISEE, Nagoya Univ.), J. Ishizaka (ISEE, Nagoya Univ.), Y. Miyazawa (APL, JAMSTEC), M. Kachi (EORC, JAXA)

12:00-12:15: *Long-term simulation of physical and biogeochemical compartments using DREAMS2*

Haejin Kim (RIAM, Kyushu Univ.), K. Takayama (RIAM, Kyushu Univ.), N. Hirose (RIAM, Kyushu Univ.)

12:15-13:30 Lunch Break

Session 5: Ocean Dynamics (Chair: S. Kido)

13:30-13:45: *Seasonality in transition scale from balanced to unbalanced motions in the world ocean*

Bo Qiu (Univ. of Hawaii), S. Chen (Univ. of Hawaii), P. Klein (JPL, Caltech), J. Wang (JPL, Caltech), H. Torres (JPL, Caltech), L.-L. Fu (JPL, Caltech), D. Menemenlis (JPL, Caltech)

13:45-14:00: *The life-cycle of annual waves in the Pacific Ocean as identified by a seamless diagnosis for the energy flux*

Hidenori Aiki (ISSE, Nagoya Univ.), T. Shimura (Nagoya Univ.)

14:00-14:15: *Improvement and dynamics of barotropic water exchange between the Sea of Okhotsk and Pacific by tidal forcing in OGCM*

Hung Wei Chou (ILTS, Hokkaido Univ.), H. Mitsudera (ILTS, Hokkaido Univ.), K. Yamazaki (ILTS, Hokkaido Univ.), H. Nishikawa (ILTS, Hokkaido Univ.)

14:15-14:30 Photo Session

14:30-15:30 Poster Session

Session 6: New Version of OFES (OFES2) (Chair: S. Ohishi)

15:30-15:45: *An increase of the Indonesian Throughflow by internal tidal mixing in a high-resolution quasi-global ocean simulation*

Hideharu Sasaki (APL, JAMSTEC), S. Kida (RIAM, Kyushu Univ.), R. Furue (APL, JAMSTEC), M. Nonaka (APL, JAMSTEC), Y. Masumoto (Univ. of Tokyo)

15:45-16:00: *Evaluation of the water mass inside Indonesian Seas from OFES2 through lagrangian analysis*

M Riza Iskandar (Tohoku Univ.), T. Suga (Tohoku Univ.), H. Sasaki (APL/JAMSTEC), Y. Jia (IPRC, Univ. of Hawaii), K. Richards (IPRC, Univ. of Hawaii)

16:00-16:15: *The fate of surface freshwater entering the Indonesian Seas*

Shinichiro Kida (RIAM, Kyushu Univ.), K. Richards (IPRC, Univ. of Hawaii), H. Sasaki (APL, JAMSTEC)

16:15-16:30: *Revisiting the generation mechanism of Benguela Niños using OFES2 output*

Ingo Richter (APL, JAMSTEC)

16:30-16:45: *Wind-driven and intrinsic interannual-to-decadal variability in the Kuroshio Extension*

Masami Nonaka (APL, JAMSTEC), H. Sasaki (APL, JAMSTEC), B. Taguchi (RCAST Univ. of Tokyo), N. Schneider (IPRC, Univ. of Hawaii)

16:45-17:00 Closing Remarks

17:00 Adjourn

Poster Presentations

Impacts of temperature measurements from sea turtles on seasonal prediction around the Arafura Sea

Takeshi Doi (APL, JAMSTEC), A. Storto (CMRE), T. Fukuoka (AORI, Univ. of Tokyo), H. Suganuma (ELNA), K. Sato (AORI, Univ. of Tokyo)

How deterministic are the deep zonal jets?

Ryo Furue (APL, JAMSTEC), M. Nonaka (APL, JAMSTEC), H. Sasaki (APL, JAMSTEC)

Effects of suspended sediment matter by high riverine discharge on surface river plume and vertical estuary circulation: a simulation study for the Tango Bay, Japan

Yasuhiro Hoshihara (AORI, Univ. of Tokyo), Y. Matsumura (AORI, Univ. of Tokyo), H. Hasumi (AORI, Univ. of Tokyo), S. Itoh (AORI, Univ. of Tokyo), S. Nakada (NIES)

Generation mechanisms of the Benguela Niño with a focus on local amplification

Ryo Kobayashi (Univ. of Tokyo), T. Tozuka (Univ. of Tokyo)

Experimental Seasonal Climate Prediction using CFES —Preliminary Results—

Nobumasa Komori (APL, JAMSTEC), B. Taguchi (RCAST, Univ. of Tokyo), A. Kuwano-Yoshida (DPRI, Kyoto Univ.), T. Doi (APL, JAMSTEC), M. Nonaka (APL, JAMSTEC)

Verification for subsurface oceanic structure in OFES outputs driven by different wind data sets (NCEP/NCAR and QSCAT) in the tropical Pacific Ocean

Hiroshige Fukunaga (Tokai Univ.), **Kunio Kutsuwada** (Tokai Univ., *presenter), A. Kakiuchi (Tokai Univ.), H. Sasaki (APL, JAMSTEC), Y. Sasaki (RCGC, JAMSTEC)

The life-cycle of annual waves in the Indian Ocean as identified by a seamless diagnosis for the energy flux

Zimeng Li (Nagoya Univ.), H. Aiki (ISEE, Nagoya Univ.)

Subtropical mode water (STMW) in meso- and submeso-scale model

Fuli Yuan (Zhejiang Univ. Zhoushan), **Cong Liu** (Zhejiang Univ. Zhoushan, *presenter), P. Li (Zhejiang Univ. Zhoushan), H. Sasaki (APL/JAMSTEC)

Estimation of ocean thermal energy potential in the Aguni Basin

Tianran Liu (RIAM, Kyushu Univ.), B. Wang (RIAM, Kyushu Univ.), N. Hirose (RIAM, Kyushu Univ.)

Seasonality and regional characteristics of sea-surface wind responses to mesoscale SST features

Ryusuke Masunaga (IPRC, Univ. of Hawaii), N. Schneider (IPRC, Univ. of Hawaii)

Generation and dissipation of meso-scale eddies in the southern Indian ocean

Takuro Matsuta (Univ. of Tokyo), Y. Masumoto (Univ. of Tokyo)

Role of river discharges from the Kamchatka Peninsula in the Okhotsk Sea

Toru Miyama (APL, JAMSTEC), H. Misudera (ILTS, Hokkaido Univ.)

Mechanisms of reemergence in the North Pacific revealed by mixed layer heat budget analysis

Kazumichi Murata (Univ. of Tokyo), S. Kido (Univ. of Tokyo), T. Tozuka (Univ. of Tokyo)

Salinity frontogenesis/frontolysis in the northeastern subtropical Pacific region

Shun Ohishi (ISEE, Nagoya Univ.), S. Katsura (AORI, Univ. of Tokyo), H. Aiki (ISEE, Nagoya Univ.)

A new framework for near-surface wind convergence over the Kuroshio Extension and Gulf Stream in wintertime: The role of atmospheric fronts

Rhys Parfitt (Florida State Univ.), **Hyodae Seo (WHOI, *presenter)**

Seasonal energy analysis for baroclinic waves in equatorial Atlantic through a diagnostic scheme for energy flux

Qingyang Song (ISEE, Nagoya Univ.), H. Aiki (ISEE, Nagoya Univ.)

Effect of altimeter data assimilation on the ecosystem distributions of the DREAMS2

Katsumi Takayama (RIAM, Kyushu Univ.), N. Hirose (RIAM, Kyushu Univ.)

An interior pathway of Fukushima tracer across the KE

Ella Cedarholm (Univ. of New Hampshire), I. Rypina (WHOI), A. Macdonald (WHOI), **Sachiko Yoshida (WHOI, *presenter)**

Information

Homepage of the Meeting

http://www.jamstec.go.jp/apl/ofes_ws9/

Information for Oral Presentations

Each presentation is allocated 15 minutes (12 minutes for presentation and 3 minutes for discussion). The presenters can use their own lap top computers, although Windows and Mac computers are prepared.

Information for Poster Presentations

The board size for each poster presentation is W82 (cm) x H168 (cm).

Access to Chikushi Campus of Kyushu University

<https://www.riam.kyushu-u.ac.jp/en/center/access-e.html>

Campus Map

