

# **Toshiaki Shinoda**

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Science & Engineering, Physical & Environmental Sciences  
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## **Education**

PhD, University of Hawaii (December 1993).

## **Professional Employment**

Associate Professor, Texas A&M University-Corpus Christi. (August 2013 - Present).  
Oceanographer, Naval Research Laboratory. (2007 - 2013).  
Research Scientist 3, CIRES, University of Colorado. (2007 - 2007).  
Research Scientist 2, CIRES, University of Colorado. (1998 - 2007).  
Research Scientist 1, CIRES, University of Colorado. (1995 - 1997).  
Postdoctoral Research Associate, Univ. of Hawaii. (1994 - 1995).

## **TEACHING**

### **Teaching Experience**

#### **TAMUCC**

CMSS 6307, COASTAL AND MARINE SYSTEMS (new course)  
ESCI 3351, OCEANOGRAPHY  
ESCI 4360, PHYSICAL OCEANOGRAPHY  
ATSC 3306, ATMOSPHERIC THERMODYNAMICS (new course)  
ESCI 5350, FUNDAMENTALS OF PHYSICAL OCEANOGRAPHY  
ESCI 6590, ADVANCED TOPICS: Physical Oceanography  
CMSS 5392, THESIS I: THESIS PROPOSAL  
CMSS 5596, DIS: Air- sea interactions and upper-ocean variability in the Maritime  
Continent  
ESCI 4498, INTERNSHIP IN ENVIRO SCIECE  
CMSS 6596, DIRECTED INDEPENDENT STUDY  
CMSS 6996, RESEARCH

#### **Others**

ATOC 5051, Introduction to Physical Oceanography, PAOS, University of Colorado  
(guest lecture)  
GEOC 407 Atmosphere, Weather and Climate, Colorado School of Mines (guest lecture)

## SCHOLARLY AND CREATIVE ACTIVITIES

### Publications

#### Refereed

##### Journal Articles

Shinoda, T., Zamudio, L., Guo, Y., Metzger, E. J., Fairall, C. (2019). Ocean variability and air- sea fluxes produced by atmospheric rivers. *Scientific Report*. doi.org/10.1038/s41598-019-38562-2

Guo, Y., Shinoda, T., Guan, B., Waliser, D. E., Chang, E.K.M. (2019) Statistical Relationship between Atmospheric Rivers, Extratropical Cyclones, and Anticyclones. *J. Climate*. (Submitted)

Feng, X., Shinoda, T. (2019) Air-sea flux variability in the southeast Indian Ocean and its relation with Ningaloo Niño. *Frontiers in Marine Science*, Special issue "Advances in Understanding Marine Heatwaves and Their Impacts". (Submitted)

Hermes, J., Masumoto, Y., Beal, L., Roxy, M., Vialard, J., Andres, M., Annamakai, H., Behera, S., d'Adamo, N., Doi, T., Feng, M., Han, W., Hendon, H., Hood, R., Kido, S., Lee, C., Lee, T., Lengaigne, M., Lumpkin, R., Navaneeth, K., Miligan, B., McPhaden, M. J., Ravichandran, M., Shinoda, T., Singh, A., Sloyan, M., Strutto, P., Subramanian, A., Thurston, S., Tozuka, T., Ummenhofer, C., Alakkat, U. S., Venkatesan, R., Wang, D., Wiggert, J., Yu, L., Yu, W. (2019) A sustained ocean observing system in the Indian Ocean for climate related scientific knowledge and societal needs. *Frontiers in Marine Science*. (Submitted)

Zhang, L., Han, W., Li, Y., Shinoda, T. (2018) Mechanisms for Generation and Development of Ningaloo Niño. *J. Climate*, <https://doi.org/10.1175/JCLI-D-18-0175.1>

Pei, S., Shinoda, T., Soloviev, A., Lien, R.-C. (2018). Upper ocean response to the atmospheric cold pools associated with the Madden-Julian Oscillation. *Geophysical Research Letters*. doi.org/10.1029/2018GL077825

Fu, J., Wang, W., Ren, H. L., Jia, X., Shinoda, T. (2018). Three different downstream fates of the boreal-summer MJOs on their passages over the Maritime Continent. *Climate Dynamics*, 51, 1841-1862. /doi.org/10.1007/s00382-017-3985-2

Fu, J., Wang, W., Zhu, Y., Ren, H.-L., Jia, X., Shinoda, T. (2018). Impacts of Different Cumulus Schemes on the Pathways Through Which SST Feedbacks to the Madden-Julian Oscillation. *J. Climate*. 31, 5559-5579.

Fu, J., Wang, W. Q., Shinoda, T., Ren, H.-L., Jia, X.L. (2017). Toward Understanding the Diverse Impacts of Air-Sea Interactions on MJO Simulations. *JGR-Oceans*, 122(11), 8855-8875.

Shinoda, T., Han, W., Zamudio, L., Lien, R.-C., Katsumata, M. (2017). Remote Ocean Response to the Madden-Julian Oscillation during the DYNAMO Field Campaign: Impact on Somali Current System and the Seychelles-Chagos Thermocline Ridge. *Atmosphere*, 8(9)(171), Special Issue on "Madden-Julian Oscillation".

Li, Y., Han, W., Ravichandran, M., Wang, W., Shinoda, T., Lee, T. (2017). Bay of Bengal Salinity Stratification and Indian Summer Monsoon Intraseasonal Oscillation: 1. Intraseasonal Variability and Causes. *Journal of Geophysical Research-Oceans*, DOI: 10.1002/2017JC012691.

Li, Y., Han, W., Wang, W., Ravichandran, M., Lee, T., Shinoda, T. (2017). Bay of Bengal Salinity Stratification and Indian Summer Monsoon Intraseasonal Oscillation: 2. Impact on SST and convection. *Journal of Geophysical Research-Oceans*, DOI: 10.1002/2017JC012692.

Guo, Y., Shinoda, T., Lin, J.-L., Chang, E.K.M. (2017). Variations of the Mid-latitude Storm Track Activity associated with the Madden-Julian Oscillation. *J. Climate*. [dx.doi.org/10.1175/JCLI-D-16-0513.1](https://doi.org/10.1175/JCLI-D-16-0513.1)

Shinoda, T., Han, W., Jensen, T., Zamudio, L., Metzger, E. J., Lien, R.-C. (2016). Impact of the Madden-Julian Oscillation on the Indonesian Throughflow in Makassar Strait during the CINDY/DYNAMO field campaign. *Journal of Climate*, 29(17), 6085-6108.

Jensen, T. G., Shinoda, T., Chen, S., Flatau, M. (2016). Ocean response to CINDY/DYNAMO MJOs in air-sea coupled COAMPS. *J. Meteorol. Soc. Jpn*, Special Issue on "The coordinated international field campaign on the Madden-Julian Oscillation", 93, 157-178.

Chen, G., Han, W., Li, Y., Wang, D., Shinoda, T. (2015). Intraseasonal Variability of Upwelling in the Equatorial Eastern Indian Ocean. *J Geophys. Res.-Oceans*, 120, 7598-7615, DOI: 10.1002/2015JC011223.

Lin, J.-L., Qian, T., Shinoda, T., Li, S. (2015). Is the Tropical Atmosphere in Convective Quasi-Equilibrium? *J. Climate*, 28, 4357-4372.

Chen, S., Flatau, M., Jensen, T., Shinoda, T., Cummings, J., Schmidt, J. M., May, P. W., Liu, M., Ciesielski, P. E., Fairall, C., Lien, R.-C., Moum, J., Baranowski, D. B., Chi, N.-H., de Szoeke, S., Edson, J. (2015). A Study of CINDY/DYNAMO MJO Suppressed Phase. *J. Atmos. Sci.*, 72, 3755-3779.

Li, Y., Han, W., Shinoda, T., Ravichandran, M., Wang, J.-W. (2014). Revisiting the Wintertime Intraseasonal SST Variability in the Tropical South Indian Ocean: Impact of the Ocean Interannual Variation. *J. Phys. Oceanogr.*, 44(7), 1886-1907.

Lin, J.-L., Qian, T., Shinoda, T. (2014). Stratocumulus Clouds in Southeastern Pacific Simulated by Seven CMIP5/CFMIP Global Climate Models. *J. Climate*, 27(8), 3000-3022.

- Li, Y., Han, W., Shinoda, T., Wang, C., Lien, R.-C., Moum, J., Wang, J.-W. (2013). Effects of Solar Radiation Diurnal Cycle on the Tropical Indian Ocean Mixed Layer Variability during Wintertime Madden-Julian Oscillation Events. *J. Geophys. Res.*, 118, 4945-4964, DOI:10.1002/jgrc.20395.
- Hung, M.-P., Lin, J.-L., Wang, W., Kim, D., Shinoda, T., Weaver, S.J. (2013). MJO and Convectively Coupled Equatorial Waves Simulated by CMIP5 Climate Models. *J. Climate*, 26, 6185-6214.
- Shinoda, T., Jensen, T., Flautau, M., Chen, S. (2013). Surface wind and upper ocean variability associated with the Madden-Julian Oscillation simulated by the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS). *Mon. Wea. Rev.*, 141, 2290-2307.
- Shinoda, T., Jensen, T., Flautau, M., Chen, S., Han, W., Wang, C. (2013). Large-scale oceanic variability during the CINDY/DYNAMO field campaign from satellite observations. *Remote Sensing –Special issue on Observing the Ocean’s Interior from Satellite Remote Sensing*, 5, 2072-2092.
- Shinoda, T. (2012). Observation of First and Second Baroclinic Mode Yanai Waves in the Ocean. *Q. J. R. Meteorol. Soc.*, 137, DOI:10.1002/qj.968.
- Shinoda, T., Han, W., Metzger, E.J., Hurlburt, H. E. (2012). Seasonal Variation of the Indonesian Throughflow in Makassar Strait. *J. Phys. Oceanogr.*, 42, doi:10.1175/JPOD-11-0120.1.
- Zheng, Y., Lin, J.-L., Shinoda, T. (2012). The Equatorial Cold Tongue Simulated by IPCC AR4 Coupled GCMs: Upper Ocean Heat Budget and Feedback Analysis. *J. Geophys. Res. Oceans*, 117, doi:10.1029/2011JC007746.
- Shinoda, T., Hurlburt, H.E., Metzger, E.J. (2011). Anomalous Tropical Ocean Circulation associated with La Nina Modoki. *J. Geophys. Res. Oceans*, 116, doi:10.1029/2011JC007304.
- Hurlburt, H.E., Metzger, E.J., Sprintall, J., Riedlinger, S.N., Arnone, R.A., Shinoda, T., Xu, X. (2011). Circulation in the Philippine Archipelago simulated by 1/12° and 1/25° global HYCOM and EAS NCOM. *Oceanography*, 24(1), 2847.
- Zheng, Y., Shinoda, T., Lin, J.-L., Kiladis, G.N. (2011). Sea Surface Temperature Biases under the Stratus Cloud Deck in the Southeast Pacific Ocean in 19 IPCC AR4 Coupled General Circulation Models. *J. Climate*, 24, 4139-4164.
- Han, W., Meehl, G.A., Rajagopalan, B., Fasullo, J.T., Hu, A., Lin, J.-L., Large, W., Wang, J.-W., Quan, X.-W., Trenary, L.L., Wallcraft, A., Shinoda, T., Yeager, S. (2010). Indian Ocean Sea Level Change in a Warming Climate. *Nature Geoscience*, 546-550, DOI:10.1038/NCEO901.
- Lin, J.-L., Shinoda, T., Qian, T., Han, W., Roundy, P., Zheng, Y. (2010). Intraseasonal Variation of Winter Precipitation over the Western United States Simulated by 14 IPCC AR4 Coupled GCMs. *J. Climate*, 23, 3094-3119.

- Shinoda, T. (2010). Observed Dispersion Relation of Yanai Waves and 17-Day Tropical Instability Waves in the Pacific Ocean. *Scientific Online Letters on the Atmosphere*, 6, 17-20.
- Shinoda, T., Lin, J.-L. (2009). Interannual variability of the upper ocean in the southeast Pacific stratus cloud region. *J. Climate*, 22, 5072-5087.
- Lin, J.-L., Shinoda, T., Liebmann, B., Qian, T., Han, W., Roundy, P., Zhou, J., Zheng, Y. (2009). Intraseasonal Variability Associated with South American Monsoon Simulated by 14 IPCC AR4 Coupled GCMs. *Mon. Wea. Rev.*, 137, 2931-2954.
- Shinoda, T., Kiladis, G., Roundy, P. (2009). Statistical representation of equatorial waves and tropical instability waves in the Pacific Ocean. *Atmospheric Research-Special Issue on Ocean-Atmosphere Coupling*, 94, 37-44.
- Shinoda, T., Roundy, P., Kiladis, G. (2008). Variability of intraseasonal Kelvin waves in the equatorial Pacific Ocean. *J. Phys. Oceanogr.*, 38, 921-944.
- Han, W., Shinoda, T., Fu, L., McCreary, J.P. (2006). Impact of atmospheric intraseasonal oscillation on the Indian Ocean dipole. *J. Phys. Oceanogr.*, 36, 670-690.
- Shinoda, T. (2005). Impact of diurnal cycle of solar radiation on intraseasonal SST variability in the western equatorial Pacific. *J. Climate*, 18, 2628-2636.
- Shinoda, T., Han, W. (2005). Influence of Indian Ocean dipole on atmospheric subseasonal variability. *J. Climate*, 18, 3891-3909.
- Shinoda, T., Alexander, M.A., Hendon, H.H. (2004). Remote response of the Indian Ocean to interannual SST variations in the tropical Pacific. *J. Climate*, 15, 3500-3508.
- Shinoda, T., Hendon, H.H., Alexander, M.A. (2004). Surface and subsurface dipole variability in the Indian Ocean and its relation with ENSO. *Deep Sea Res.*, 51, 619-635.
- Shinoda, T., Hendon, H.H. (2002). Rectified wind forcing and latent heat flux produced by the Madden-Julian oscillation. *J. Climate*, 15, 3500-3508.
- Shinoda, T., Hendon, H.H. (2001). Upper ocean heat budget in response to the Madden-Julian Oscillation in the western equatorial Pacific. *J. Climate*, 14, 4147-4165.
- Shinoda, T., Hendon, H., Glick, J. (1999). Intraseasonal surface fluxes in the tropical western Pacific and Indian Oceans from NCEP reanalyses. *Mon. Wea. Rev.*, 127, 678-693.
- Shinoda, T., Hendon, H.H., Glick, J. (1998). Intraseasonal variability of surface fluxes and sea surface temperature in the tropical western Pacific and Indian Oceans. *J. Climate*, 11, 1685-1702.

Shinoda, T., Hendon, H.H. (1998). Mixed layer modeling of intraseasonal variability in the tropical western Pacific and Indian Oceans. *J. Climate*, 11, 2668-2685.

Shinoda, T., Lukas, R. (1995). Lagrangian mixed layer modeling of the western equatorial Pacific. *J. Geophys. Res.*, 100, 2523-2541.

#### Online Document

Shinoda, T., (2019). Intra-seasonal air-sea coupling: Madden-Julian Oscillation and Monsoon Intra-seasonal Oscillation. *IndOOS Review*, Chapter 13.  
<http://www.clivar.org/indoos-decadal-review-2006-2016>

#### Technical Report

Shinoda, T., S. DeCarlo, S. Kennan, R. Lukas, F. Santiago-Mandujano, Jeffrey Snyder (1995) Shipboard Measurements From R/V Moana Wave During TOGA COARE Enhanced Monitoring Cruises. SOEST Tech. Rept. 95-07, School of Ocean and Earth Science and Technology, University of Hawaii, 201 pp (available at [http://www.soest.hawaii.edu/COARE/em/data rep info.html](http://www.soest.hawaii.edu/COARE/em/data_rep_info.html).)

### Presentations (Selected)

#### Recent Conference/Meeting (2010-2018)

Shinoda, T., Han, W., Zamudio, L., Feng, X., "Influence of Atmospheric Rivers on the Leeuwin Current System," AGU Fall Meeting, Washington DC. (December 2018).

Pei, S., Shinoda, T., "Evaluation of Upper Ocean Vertical Mixing Parameterizations in simulating diurnal and intraseasonal SST variability associated with the Madden-Julian Oscillation," AGU Fall Meeting, Washington DC. (December 2018).

Tamasiunas, M. N., Shinoda, T., "Seasonal and intraseasonal ocean variability in the Indonesian Seas from the high resolution ocean reanalysis," AGU Fall Meeting, Washington DC. (December 2018).

Shinoda, T., "Intra-seasonal air-sea coupling: Madden-Julian Oscillation and Monsoon Intra-seasonal Oscillation," IndOOS Review Meeting, Jakarta, Indonesia. (March 2018).  
*Invited*

Shinoda, T., Han, W., Zamudio, L., Lien, R.-C., Katsumata, M., "Remote ocean response to the Madden-Julian Oscillation during the DYNAMO field campaign: Impact on Somali Current system and thermocline ridge," AGU Ocean Sciences Meeting, Portland, Oregon. (February 2018).

Feng, X., Shinoda, T., "Spatial and temporal variability of surface heat fluxes in the southeast Indian Ocean," AGU Ocean Sciences Meeting, AGU, Portland, Oregon. (February 2018).

Pei, S., Shinoda, T., Soloviev, A., Lien, R.-C., "Upper ocean response to the atmospheric cold pools associated with the Madden-Julian Oscillation," AGU Ocean Sciences Meeting, AGU, Portland, Oregon. (February 2018).

Guo, Y., Shinoda, T., Guan, B., Waliser, D., "Statistical Relationship between the Atmospheric River and Extratropical Cyclone," AMS Meeting, Austin, Texas. (January 2018).

Shinoda, T., Zamudio, L., Guo, Y., "Ocean variability and air-sea fluxes produced by Atmospheric Rivers," AGU Fall Meeting, New Orleans, Louisiana. (December 2017).

Shinoda, T., "The Madden-Julian oscillation and monsoon active-break phases, and their impact on the ocean," CLIVAR/GOOS Indian Ocean Panel Meeting, WCRP, Perth, Australia. (January 2017). *Invited*

Shinoda, T., Han, W., Zamudio, L., Lien, R., "Impact of the Madden-Julian Oscillation on the low-latitude western boundary current variability in the Indian Ocean," AGU Meeting, San Francisco, CA. (December 2016).

Fu, J., Wang, W., Shinoda, T., Ren, H., Jia, X., "Three Different Downstream Fates of the Boreal Summer MJOs on their Passages over the Maritime Continent," AGU Meeting, San Francisco, CA. (December 2016).

Fu, J., Wang, W., Shinoda, T., "Diversified effects of air-sea interaction on shaping the MJO in nature and models," 20th AMS Conference of Air-Sea Interaction, Madison, WI. (August 2016).

Fu, J., Wang, W., Shinoda, T., "Why Does Air-sea Coupling Have Diversified Impacts on MJO Simulation In Different Models: Sensitivity to Cumulus Parameterization?," AOGS Meeting, Beijing, China. (August 2016).

Ridout, J., Shriver, J., Richman, J., Wallcraft, A., Flatau, M., Reynolds, C., Shinoda, T., Jensen, T., Chen, C., Barton, N., "Ocean Surface Current Effects in DYNAMO Hindcasts with the Navy Earth System Model," AMS 32nd Conference on Hurricanes and Tropical Meteorology, AMS, Puerto Rico. (April 2016).

Shinoda, T., Ridout, J., Flatau, M., Reynolds, C., Jensen, T. G., "Large-scale Oceanic Variability associated with the Madden-Julian Oscillation during DYNAMO Predicted by a Global Coupled Model," AGU Ocean Sciences Meeting, New Orleans, Louisiana. (February 2016).

Jensen, T. G., Chen, S., Flatau, M., Shinoda, T., "Ocean-Atmosphere Interaction during the 2011 DYNAMO MJOs in COAMPS Simulations," AMS Meeting, New Orleans, Louisiana. (January 2016).

Flatau, M., Ridout, J., Reynolds, C., Shinoda, T., Chen, S., Schmidt, J., "The Interaction of Eastward Propagating Equatorial Modes with the Maritime Continent," AMS Meeting, New Orleans, Louisiana. (January 2016).

Guo, Y., Shinoda, T., "Variations of the Mid-latitude Storm Track Activity in Association with the Madden-Julian Oscillation," AMS Meeting, New Orleans, Louisiana. (January 2016).

Shinoda, T., Ridout, J., Flatau, M., Reynolds, C., "Prediction of Ocean Circulation Associated with the MJO during CINDY/DYNAMO by a Global Coupled Model," AGU Meeting, San Francisco. (December 2015).

Flatau, M., Chen, S., Shinoda, T., "THE Interaction of Eastward Propagating Equatorial Modes with the Maritime Continent," AGU Meeting, San Francisco. (December 2015).

Shinoda, T., "Prediction of ocean circulation during DYNAMO by a global coupled prediction system," CLIVAR/GOOS Indian Ocean Panel Meeting, Goa, India. (December 2015). *Invited*.

Han, W., Li, Y., Shinoda, T., Wang, C., Ravichandran, M., Wang, J., "Revisiting the Processes That Determine Wintertime Intraseasonal SST Variability in the Thermocline Ridge of the Tropical South Indian Ocean," AGU Meeting, AGU, San Francisco. (December 2014). *Invited*

Shinoda, T., "Upper Ocean Processes Associated with the Madden-Julian Oscillation in the Indian Ocean," NOAA Webinar, NOAA. (August 13, 2014). *Invited*

Shinoda, T., Han, W., Jensen, T., Flatau, M., Chen, S., Li, Y., Wang, C., "Modeling of ocean variability during CINDY/DYNAMO," Progress of the MJO research through the field campaigns, JAMSTEC, Sapporo, Japan. (July 2014).

Shinoda, T., Han, W., Zamudio, L., Jensen, T. G., Wang, C., "Simulation of the Remote Ocean Variability Produced by the MJO During the CINDY/DYNAMO Campaign," AOGS Meeting, Sapporo, Japan. (July 29, 2014).

Lin, J., Qian, T., Shinoda, T., "Stratocumulus Clouds in Southeastern Pacific Simulated by CMIP5/CFMIP Global Climate Models," 7th International Scientific Conference on the Global Water and Energy Cycle, Hague, Netherland. (July 15, 2014).

Jensen, T.G., Shinoda, T., Chen, S., Flatau, M., "Air-sea Interaction, Equatorial Dynamics and Mixed Layer Response in the Indian Ocean During DYNAMO," AGU Ocean Sciences Meeting, Honolulu, Hawaii. (February 2014).

Shinoda, T., Han, W., Zamudio, L., Jensen, T., Wang, C., "Remote Ocean Response to the Madden-Julian Oscillation during the DYNAMO Field Campaign: Satellite Observations and Ocean Modeling," AGU Ocean Sciences Meeting, Honolulu, Hawaii. (February 2014).

Li, Y., Han, W., Shinoda, T., Wang, C., "Wintertime Intraseasonal SST Variability in the Tropical South Indian Ocean: Impact of the Ocean Internal Variation," AGU Ocean Sciences Meeting, Honolulu, Hawaii. (February 2014).

Jensen, T., Shinoda, T., Flatau, M., Chen, S., "Air-Sea Interaction and Ocean Response from COAMPS During DYNAMO," ONR Review. Monterey (September 2013). *Invited*



Flatau, M., Chen, S., Shinoda, T., Jensen, T., "MJO Initiation and Atmosphere Ocean Interaction during DYNAMO," ONR Review. Monterey (September 2013). *Invited*

Shinoda, T., Jensen, T., Flatau, M., Chen, S., "Upper Ocean Variability in the Indian Ocean associated with the MJO: Satellite observations and COAMPS experiments," ONR Review. Monterey (September 2013). *Invited*

Shinoda, T., The large-scale context for the CINDY/DYNAMO field campaign: Surface wind and upper ocean variability. CLIVAR/GOOS Indian Ocean Panel Meeting, Lijiang, China. (July 2013). *Invited*

Shinoda, T., Mezger, E. J., Han, W., Wang, C., "Anomalous circulation in the Indonesian Seas during the CINDY/DYNAMO field campaign," MJO Field Data and Science Workshop, Kona, Hawaii. (March 2013).

Li, Y., Han, W., Shinoda, T., Wang, C., Lien, R.-C., Moum, J., Wang, J., "How Does Solar Diurnal Cycle Affect Intraseasonal SST During CINDY/DYNAMO Field Campaign?," MJO Field Data and Science Workshop, Kona, Hawaii. (March 2013).

Shinoda, T., Jensen, T. G., Flatau, M., Chen, S., Han, W., Wang, C., "Migration of Seychelles-Chagos thermocline ridge (SCTR) during CINDY/DYNAMO Field Campaign," MJO Field Data and Science Workshop, Kona, Hawaii. (March 2013).

Shinoda, T., Ocean variability associated with the MJO simulated by a regional coupled model. CLIVAR/GOOS Indian Ocean Panel Meeting, Cape Town, South Africa. (October 2012). *Invited*

Shinoda, T., Jensen, T. G., Flatau, M., Chen, S., Han, W., Wang, C., Oceanic Variability during the CINDY/DYNAMO Field Campaign from Satellite Observations., 18th Conference on Air Sea Interaction, AMS, Boston. (July 2012).

Chen, S., Fairall, C., Flatau, M., Jensen, T., Cummings, J., Shinoda, T., "Comparison of observed bed and model simulated ocean feedback in the Madden-Julian Oscillation. 18th Conference on Air Sea Interaction," 18th Conference on Air Sea Interaction, Boston. (July 2012).

Baranowski, D., Flatau, M., Mathews, A., Chen, S., Jensen, T., Shinoda, T., "The development of the diurnal warm layer and the ocean mixed layer during different phases of MJO as observed by the iRobot Sea Glider," 18th Conference on Air Sea Interaction., Boston (July 2012).

Shinoda, T., "Ocean Variability and Air-Sea Interaction using COAMPS," ONR/LASP meeting, Boston. (July 2012). *Invited*

Flatau, M., Chen, S., Jensen, T., Shinoda, T., "Precipitation in TRMM and in Coupled COAMPS Using the EOF Based Mesoscale MJO Index," 13th Conference on Hurricanes and Tropical Meteorology, Ponte Vedra Beach, Florida. (April 2012).

Shinoda, T., Han, H., Wang, C., Zamudio, L., "Upper Ocean Variability During CINDY/DYNAMO Field Campaign Simulated by an Ocean General Circulation Model,"

13th Conference on Hurricanes and Tropical Meteorology, Ponte Vedra Beach, Florida. (April 2012).

Chen, S., Flatau, M., Jensen, T. G., Cummings, J., Shinoda, T., "Model Simulated Equatorial Convection over the Indian Ocean," 13th Conference on Hurricanes and Tropical Meteorology, Ponte Vedra Beach Florida. (April 2012).

Shinoda, T., Hurlburt, H., Metzger, E. J., "Anomalous Tropical Ocean Circulation associated with La Nina Modoki," AGU Ocean Sciences Meeting. Salt Lake City, Utah (February 2012).

Jensen, T., Chen, S., Flatau, M., Shinoda, T., "Coupled Modeling of Air-Sea Interaction in the Indian Ocean During MJO Events in 2009," AGU Ocean Sciences Meeting. Salt Lake City, Utah (February 2012).

Shinoda, T., Jensen, T., Flatau, M., Chen, S., "Surface wind and upper ocean variability associated with the Madden-Julian Oscillation simulated by the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS)," AMS Meeting, New Orleans, LA. (January 2012).

Chen, S., Flatau, M., Jensen, T., Cummings, J., Shinoda, T., "Air-Sea-Wave Coupled COAMPS Simulations of Tropical Convection," Bay of Bengal Monsoon Workshop, Woods Hole Oceanographic Institution. (November 2011).

Jensen, T. G., Shinoda, T., Chen, S., Flatau, M., "Modeling of Air-Sea Interaction in the Bay of Bengal: Eddies, Salinity Fronts and Fresh Water Pathways," Bay of Bengal Monsoon Workshop, Woods Hole Oceanographic Institution. (November 2011).

Shinoda, T., "Upper Ocean Variability in the Bay of Bengal Simulated by Global Eddy-Resolving HYCOM," Bay of Bengal Monsoon Workshop, Woods Hole Oceanographic Institution. (November 2011).

Shinoda, T., Han, W., Metzger, E. J., Hurlburt, H. E., "Circulations in the Indonesian Seas Simulated by Global Eddy-Resolving Ocean General Circulation Model," Weekly seminar at the Woods Hole Oceanographic Institution. (November 2011).

Jensen, T. G., Shinoda, T., Flatau, M., Chen, S., "Coupled Modeling of Mesoscale Air-Sea Interaction in the Indian Ocean during an MJO," University of Hawaii. (September 2011).

Shinoda, T., Jensen, T. G., Flatau, M., Chen, S., "Surface wind and upper ocean variability associated with the MJO simulated by COAMPS," ONR/LASP (Littoral Air-Sea Processes) Meeting, (August 2011). *Invited*

Shinoda, T., "Observation of Yanai Waves in the Ocean," AMS Meeting. Seattle, Washington (January 2011).

Hurlburt, H. E., Metzger, E. J., Sprintall, J., Riedlinger, S. N., Arnone, R. A., Shinoda, T., Xu, X., "Circulation in the Philippine Archipelago simulated by 1/12° and 1/25° global HYCOM and EAS NCOM," Layered Ocean Modeling Workshop. (January 2011).

Zheng, Y., Shinoda, T., Kiladis, G. N., Lin, J.-L., "Sea Surface Temperature Biases under the Stratus Cloud Deck in the Southeast Pacific Ocean in 19 IPCC AR4 Coupled General Circulation Models ", AGU Meeting. San Francisco (December 2010).

Shinoda, T., Han, W., Metzger, E. J., Hurlburt, H., "Seasonal variation of Indonesian Throughflow," AGU Meeting., San Francisco (December 2010).

Shinoda, T., Zheng, Y., Lin, J.-L., Kiladis, G. N., "The role of ocean dynamics in the double-ITCZ problem," AGU Meeting of America, Foz do Iguassu, Brazil. (August 2010).

Shinoda, T., "Observed dispersion relation of Mixed Rossby Gravity Waves," 29th Conference on Hurricanes and Tropical Meteorology, Tucson, Arizona. (May 2010).

Zheng, Y., Shinoda, T., Kiladis, G., Lin, J.-L., "SST Biases under the Stratus Cloud Deck in the Southeast Pacific Ocean in 19 IPCC AR4 CGCMs," 29th Conference on Hurricanes and Tropical Meteorology, Tucson, Arizona. (May 2010).

Shinoda, T., Han, W., Metzger, E. J., Hurlburt, H., "Seasonal variation of Indonesian Throughflow at the Makassar Strait," European Geosciences Union General Assembly. Vienna, Austria (May 2010).

Shinoda, T., "17-day tropical instability waves in satellite observations and HYCOM," AGU Ocean Sciences Meeting, Portland, Oregon. (February 2010).

### **Invited Lecture/Seminar (Selected)**

"Role of extratropical cyclone and air-sea interaction in the development of atmospheric rivers" Scripps Institution of Oceanography, May 2018

"Observation of equatorially trapped waves in the ocean" University of Louisiana, March 2013.

"Subseasonal variability in the ocean" International Centre for Theoretical Physics (ICTP), Trieste, Italy, November 2012.

"Seasonal Variation of the Indonesian Throughflow" University of South Florida, April 2011.

"Upper ocean response to the atmospheric intraseasonal oscillation" University of Tokyo, January 2008.

"Upper ocean response to the Madden-Julian oscillation" Old Dominion University, October 2006.

"Upper ocean response to the Madden-Julian oscillation" Naval Research Laboratory, May 12, 2006.

"Subseasonal air-sea interaction in the tropical Indian Ocean and its relation with dipole variability" Naval Research Laboratory, May 11, 2006.

"Influence of Indian Ocean dipole on atmospheric subseasonal variability" Nova Southeastern University, April 2005

"Surface and subsurface dipole variability in the tropical Indian Ocean" Woods Hole Oceanographic Institution, March 2004.

"Influence of ENSO on the Indian Ocean dipole" NASA Goddard Space Flight Center, January 2003.

"Variation of the upper ocean thermohaline structure in the western equatorial Pacific" Jet Propulsion Laboratory, May 1994

"Variation of the thermohaline structure in the western equatorial Pacific upper ocean" Naval Research Laboratory, March 1994

## External Funding

### Funded

Shinoda, T. (Principal), Seo, H., Wang, W., "Upper ocean processes in the Maritime Continent and their impact on the air-sea interaction and MJO predictability," Sponsored by NOAA, Federal, Project total \$687,591.00. (\$279,794 to TAMUCC), (September 2017 – August 2020).

Shinoda, T. (Principal), Han, W., "Investigation of Leeuwin Current and Southern Indian Ocean Variability," Sponsored by NASA, Project total \$481,098.00 (\$253,753 to TAMUCC), (March 2017 - February 2020).

Shinoda, T. (Principal), Han, W., "Collaborative Research: Investigation of Ningaloo Niño: the role of Madden-Julian Oscillation and Leeuwin current variability," Sponsored by NSF, Project total \$619,022 (\$331,585.00 to TAMUCC). (February 2017 - January 2020).

Shinoda, T. (Principal), Soloviev, A., Wang, W., Fu, J., Seo, H., Lien, R.-C, "Improvement of MJO simulation in NCEP Climate Forecast System: Upper ocean and air-sea coupled processes," Sponsored by NOAA, Federal, Project total: \$ 1,496,718.00 (\$426,317.00 to TAMUCC). (August 1, 2015 - July 31, 2019).

Shinoda, T. (Principal), Lin, J.-L., "Moisture budget and air-sea interaction associated with Atmospheric Rivers in the northeast Pacific: Observations and climate model simulations," Sponsored by NSF, Federal, Project total \$513,479.00 (\$282,524 to TAMUCC). (May 1, 2014 - April 30, 2018).

Shinoda, T., "ONR Summer Faculty Visiting Program," Sponsored by ONR, Federal, \$18,500.00. (May 2015 - July 2015).

Shinoda, T. (Principal), Han, W., Wang, C. "Upper ocean processes associated with the Madden-Julian oscillation in the Indian Ocean," Sponsored by NOAA, Federal, \$490,958.00. (2011 - 2014).

Shinoda, T.(Principal), Flatau, M. (Principal), Jensen, T., Chen, S., "The influence of atmosphere-ocean interaction on MJO development and propagation," Sponsored by ONR, Federal, \$780,000.00. (2010 - 2014).

Shinoda, T., "ONR Summer Faculty Visiting Program," Sponsored by ONR, Federal, \$18,500.00. (May 2014 - August 2014).

Shinoda, T.,(Principal), Lin, J.-L., "Understanding atmosphere-ocean coupled processes in the southeast Pacific," Sponsored by NOAA, Federal, \$365,389.00. (2009 - 2013).

Shinoda, T. (Principal), Lin, J.-L. (Principal), "Collaborative Research: Structure and Mechanisms of CGCMs: Systematic Biases in Southeast Pacific," Sponsored by NSF, Federal, \$129,015.00. (2008 - 2011).

Shinoda, T. (Principal), "Upper ocean processes under the stratocumulus cloud deck in the southeast Pacific," Sponsored by NSF, Federal, \$261,780.00. (2005 - 2009).

Shinoda, T. (Principal), Han, W., "Can phytoplankton change SST and ocean circulation?," Sponsored by Univ. of Colorado, Local, \$17,000.00. (2006 - 2007).

Shinoda, T.,(Principal), Weickmann, K., "Roles of oceanic intraseasonal variability in the El Nino Southern Oscillation and its prediction," Sponsored by NOAA, Federal, \$231,428.00. (2004 - 2007).

Shinoda, T.,i (Principal), Hendon, H., "Oceanic response to Madden-Julian Oscillation and its relation to El Nino Southern Oscillation," Sponsored by NOAA, Federal, \$160,086.00. (2001 - 2003).

Shinoda, T., (Co-Principal), Hendon, H. (Principal), "Coupling of Convection, Surface Fluxes and Warm Pool Mixed Layer," Sponsored by NOAA, Federal, \$267,759.00. (1997 - 1999).

## **SERVICE**

### **Department**

Program Coordinator, Atmospheric Science program coordinator. (September 2017 - Present).

Committee Chair, Search Committee of Atmospheric Science Faculty, (September 2018 - Present)

Committee Member, CMSS Recruitment Committee. (September 2016 - Present).

Committee Member, Library Committee/Liaison. (December 2015 - Present).

Student Recruitment, Presentation of new Atmospheric Science program at Island Day events (February 2016 and others).

Meeting Organizer, Atmospheric Science seminar. (September 2015 - August 2017).

## College

Committee Member, Steering Committee. (2016 - Present).

## University

Committee Member, Academic Integrity Committee. (September 2016 - Present).

Member of the Texas OneGulf Network of Experts (TONE). (October 2015 - Present).

## Professional

### Panel/Editor/Working group

Member, WCRP/CLIVAR/GOOS Indian Ocean Region Panel. (March 2012 – December 2017).

Associate Editor, Journal of Geophysical Research. (March 2012 - January 2015).

Member, Modeling Working Group for the DYNAMO (Dynamics of the Madden Julian Oscillation) program.

Guest Editor, Journal Editor, Ocean Science Journal (Springer). (2013 - 2014).

NASA Proposal Review Panel.

### Reviewer

*33 Journals (6-10 papers per year):* Journal of Climate, Journal of Atmospheric Science, Journal of Physical Oceanography, Monthly Weather Review, Journal of Geophysical Research-Oceans, Journal of Geophysical Research-Atmospheres, Quarterly Journal of the Royal Meteorological Society, Geophysical Research Letter, Nature-Scientific Report, Climate Dynamics, Dynamics of Atmospheres and Oceans, Deep Sea Research, Journal of Marine Research, Ocean Modeling, Oceanography, International Journal of Climatology, Atmospheric Research, Journal of Marine Systems, Journal of Oceanography, Theoretical and Applied Climatology, Biogeosciences, SpringerPlus, Atmospheric Science Letters, Ocean Sciences, Scientific Online Letters on the Atmosphere, Remote Sensing, Symmetry, Ocean Dynamics, Global and Planetary Change, Journal of Meteorological Society of Japan, Journal of Terrestrial Atmospheric and Oceanic Sciences, Western Indian Ocean Journal of Marine Science, Chinese Journal of Oceanology and Limnology

*Books:* AGU monograph, The Global Monsoon System III (WMO; World Meteorological Organization), The Multi-Scale Global Monsoon System (WMO)

*Proposals:* NSF (Ocean Sciences, Climate Dynamics, Atmospheric Sciences), NOAA, NASA, NERC (UK), MNF (Australia), National Monsoon Mission (India)

**Convener, Session chair in conferences**

AGU Western Pacific Geophysics Meeting, AGU Ocean Sciences Meeting, AMS Meeting (e.g., Convener and session chair, AGU Ocean Sciences Meeting, Honolulu, Hawaii February 2014).