

PROFESSOR JIN-YI YU, Ph.D.

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(Updated on 12/10/2022)

EDUCATION

Ph.D., 1993, Department of Atmospheric Sciences, University of Washington.

B.S., 1984, Department of Atmospheric Sciences, National Taiwan University.

EMPLOYMENT (academic sector 29 years)

2002 - present: Assistant Professor, Associate Professor, Full Professor, UC Irvine

1993 - 2002: Postdoc, Assistant Researcher, Associate Researcher, UC Los Angeles

AWARD AND HONOR

- American Geophysical Union (AGU) 2020 Editors' Citation for Excellence, 2021.
- Thomson Reuters list of the world's top 1000 climate scientists, 2021.
- Fellow, Meteorology Society of ROC (Taiwan), 2019
- Oversea Expert, Chinese Academy of Sciences, 2018.
- Outstanding Contributions Award to Undergraduate Education, School of Physical Science, University of California-Irvine, 2006-07.

SOCIETY AND COMMITTEE SERVICE

- Vice Chair, Department of Earth System Science, UC Irvine, 2018 - 2021.
- Faculty Advisor, Student Chapter of the American Meteorological Society at UCI, 2017 – 2019.
- Member and Vice Chair, Advisory Board, Chinese-American Oceanic and Atmospheric Association-Southern California, 1/2017 – present.
- Vice Chair, Department of Earth System Science, UC Irvine, 2006 - 2007.
- Member, US CLIVAR Working Group on ENSO Diversity, 2011- 2016.
- Panelist, DOE proposal review panels, 2009, 2010.
- Panelist, NOAA proposal review panel, 2013.
- Member, Cicerone Fellowship Committee, UC Irvine, 2010.
- Chair, Chinese-American Oceanic and Atmospheric Association-Southern California, 2009 - 2010.
- Invited Visiting Scientist, Germany National Research Center for Information Technologies, Germany, 1998.

EDITORIAL SERVICE

- International Advisory Board Member, Terrestrial, Atmospheric and Oceanic (TAO) Sciences Journal, Chinese Geoscience Union of Taiwan, 12/2021– present.
- Editorial Board Member, SPJ Ocean-Land-Atmosphere Research (OLAR), American Association for the Advancement of Science (AAAS), 5/2021 – present.
- Deputy Editor-In-Chief, Advances in Atmospheric Sciences (AAS), International Association of Meteorology and Atmospheric Sciences (IAMAS), 1/2021 – present
- Editorial Board Member, Journal of Systems Analysis Modelling Simulation, Gordon and Breach Science Publisher, 2001-2003.
- Guest Editor, Journal of System Analysis Modeling Simulation, Special Issue on “*Environmental Modeling and Simulation*”, Volume 42, Number 2, 2002.
- Co-Editor, *Environmental Modeling and Simulation* (ISBN: 1-56555-181-8), Ed. Achim Sydow and Jin- Yi Yu, published by The Society For Computer Simulation International, 2000, 146pp.
- Co-Editor, *1999 International Conference on Mission Earth* (ISBN: 1-56555-162-1), published by The Society For Computer Simulation International, 1999, 122pp.
- Co-Editor, *1998 Conference on Mission Earth: Modeling and Simulation of the Earth System* (ISBN: 1- 56555-139-7), published by The Society for Computer Simulation International, 1989, 116pp.

RESEARCH EXPERTISE

Dr. Yu's research expertise is in climate modeling, dynamics, and diagnosis. His research work covers a wide range of issues, from global-scale climate changes in the coupled atmosphere-ocean system to regional-scale variations in the Asian and North American monsoons. In recent years, his research has focused on El Niño complexity and inter-basin interactions among the Pacific, Atlantic, and Indian Oceans.

Dr. Yu has made seminal contributions to the advancement of scientific understanding of El Niño diversity. He is among the first to recognize that there are two distinct types of El Niño in the tropical Pacific, which he terms “Central Pacific El Niño” and “Eastern Pacific El Niño” in his pioneer study of Kao and Yu (2009; cited 1572 times as of 12/10/2022). These two terms have now popularly adopted in climate research community to study ENSO diversity. During the past decade, Dr. Yu has also established a “*subtropical ENSO dynamics*” view to explain how the Central Pacific El Niño is produced and prevails in the 21st century. This ENSO dynamics is brand new and is different from the conventional “*tropical ENSO dynamics*” that can only explain the generation of the Eastern Pacific El Niño in the 20th century but not the emerging Central Pacific El Niño in the 21st century.

RESEARCH EXPERIENCE

ENSO complexity dynamics

- Invent the terms and concept of “Central Pacific ENSO” and “Eastern Pacific ENSO” to study the existence of different types of El Niño-Southern Oscillation (ENSO).
- Develop a subtropical ENSO dynamics to explain the generation of Central Pacific ENSO and multi-year ENSO.
- Identify the impacts of ENSO complexity on global climate.
- Evaluate and explain the performance of contemporary climate models in simulating ENSO complexity and its global impacts.

Cross-basin interactions

- Examine the roles of Atlantic and Indian Oceans in modulating ENSO dynamics and activities.
- Identify the atmospheric, oceanic, and coupled processes involved in the cross-basin interactions among the Pacific, Atlantic, and Indian Oceans.
- Discover a strengthening effect of Arctic warming on Pacific-Atlantic climate connectivity.
- Study the linkages between Pacific Decadal Oscillation and Atlantic Multi-decadal Oscillation.
- Examine the cross-basin impacts of Atlantic Multi-decadal Oscillation on Pacific Climate.
- Study the cross-basin interactions during the 1970s and 1990s climate shifts.

Indian Ocean and monsoon variabilities

- Contrast the internal and forced parts of the Indian Ocean dipole mode of SST variability.
- Study the interactions between Indian Ocean and monsoon and their contributions to Tropospheric Biennial Oscillation.
- Study the recent changes of Indian-Australian monsoon interactions.
- Study the roles of Indonesian Through Flow in modulating Pacific-Indian Ocean interactions.

Jet stream and baroclinic wave dynamics

- Study the life cycle of baroclinic waves and its baroclinic and barotropic energy conversion.
- Study the interactions between baroclinic waves and jet stream.
- Propose a wave-mean flow interaction theory to explain the latitudinal oscillation of jet stream.
- Study the interactions among jet stream, baroclinic waves, and orographic-forced stationary waves.

Marine stratocumulus clouds and its climate roles

- Study the impacts marine boundary layer clouds on tropical atmosphere-ocean interactions.
- Propose methodologies to improved climate model simulations of marine stratus clouds.
- Identify the impacts of Peruvian stratocumulus on the eastern Pacific cold tongue climate and variability.

Climate model developments

- Develop from scratch an atmospheric GCM using a full Galerkin method at University of Washington.

- Couple the UCLA AGCM and LANL POP for a new global and parallel coupled atmosphere-ocean GCM.
- Develop a basin coupled/decoupled technique to study cross-basin interactions with coupled CCMs.

PUBLICATIONS

(125 peer-reviewed publications; total citation number=9824 times; annual citation of 1255 so far in 2022; H-index 45; i10-index=93 based on Google Scholar on 12/10/2022) (*Corresponding author)

2022

- **(125)** Hu, Hsun-Ming, Valerie Trouet, Christoph Spotl, Hsien-Chen Tsai, Wei-Yi Chien, Wen-Hui Sung, Veronique Michel, **Jin-Yi Yu**, Patricia Valensi, Xiuyang Jiang, Fucai Duan, Yongjin Wang, Horng-Sheng Mii, Yu-Min Chou, Mahjoor Lone, Chung-Che Wu, Elisabetta Starnini, Marta Zunino, Takaaki Watanabe, Tsuyoshi Watanabe, Huang-Hsiung Hsu, G.W.K. Moore, Giovanni Zanchetta, Carlos Perez-Mejias, Shih-Yu Lee, and Chuan-Chou Shen*, 2022: Tracking westerly wind directions over Europe since the middle Holocene, *Nature Communications*, in press.
- **(124)** Zhu, T. and **J.-Y. Yu***, 2022: A shifting tripolar pattern of Antarctic sea ice concentration anomalies during multi-year La Nina events, *Geophysical Research Letters*, 49, e2022GL101217. DOI:10.1029/2022GL101217.
- **(123)** Kim*, J.-W. and **J.-Y. Yu**, 2022: Single- and multi-year ENSO events controlled by pantropical climate interactions, *npj Climate and Atmospheric Science*, 5, 88. doi:10.1038/s41612-022-00305-y.
- **(122)** Ding*, R., Y.-H. Tseng, E. Di Lorenzo, L. Shi, J. Li, **J.-Y. Yu**, C. Wang, C. Sun, J.-J. Luo, K.-J. Ha, Z.-Z. Hu, and F. Li, 2022: Multi-year El Nino events tied to the North Pacific Oscillation, *Nature Communications*, 13, 3871 (2022). doi: 10.1038/s41467-022-31516-9.
- **(121)** Xiao, H.-M., M.-H. Lo*, and **J.-Y. Yu**, 2022: The Increased Frequency of Combined El Nino and Positive IOD events since 1965s and Its Impacts on Maritime Continent Hydroclimates, *Scientific Reports*, 12, 7532 (2022). doi:10.1038/s41598-022-11663-1.
- **(120)** Chen, J., **J.-Y. Yu**, S. Chen, X. Wang, Z. Xiao, and S.-W. Fang, 2022: Tropical and Subtropical Pacific Sources of the Asymmetric El Nino-La Nina Decay and their Future Changes, *Geophysical Research Letters*, doi:10.1029/2022GL097751.
- **(119)** Chen, N., X. Fang*, and **J.-Y. Yu**, 2022: A Multiscale Model for El Nino Complexity, *npj Climate and Atmospheric Science*, 5 (6). doi:10.1038/s41612-022-00241-x.

2021

- **(118)** Qian, W., A. Yang, J.-Y. Yu, J. Du, 2021: Opposite anomalous synoptic patterns for potential California large wildfire spread and extinguishing in 2018 cases, *Atmospheric Research*, 262, 105804, doi: 10.1016/j.atmosres.2021.105804.
- **(117)** Chen, M., **J.-Y. Yu***, X. Wang*, and S. Chen, 2021: Two types of CP El Niño and their different Linkages to Australian Monsoon and subtropical Pacific. *Geophysical Research Letters*, submitted.
- **(116)** Lin*, I.-I., R. F. Rogers, H.-C. Huang, Y.-C. Liao, D. Herndon, **J.-Y. Yu**, Y.-T. Chang, J. A. Zhang, C. M. Patricola, I.-F. Pun, C.-C. Lien, 2021: A Tale of Two Rapidly-Intensifying Supertyphoons: Hagibis (2019) and Haiyan (2013), *Bulletin of the American Meteorological Society*, in press.
- **(115)** Kim, J.-W., T.-H. Chang, C.-T. Lee, and **J.-Y. Yu***, 2021: On the Varying Responses of East Asian Winter Monsoon to Three Types of El Nino: Observations and Model Hindcasts, *Journal of Climate*, 34, 4089-4101. doi:10.1175/JCLI-D-20-0784.1.
- **(114)** Lin, Y.-F., J.-Y. Yu*, C.-R. Wu, and F. Zheng, 2021: The footprint of the 11-year solar cycle in Northeastern Pacific SSTs and its influence on the Central Pacific El Nino, *Geophysical Research Letters*. 48, e2020GL091369. DOI: 10.1029/2020GL091369.
- **(113)** Kim*, J.-W. and **J.-Y. Yu**, 2021: Evolution of Subtropical Pacific-Onset El Nino: How its Onset Location Controls its Decay Evolution. *Geophysical Research Letters*, 48, e2020GL091345. DOI: 10.1029/2020GL091345.
- **(112)** Mamalakis, A., J. Randerson, **J.-Y. Yu**, M. Pritchard, G. Magnusdottir, P. Smyth, P. A. Levine, S. Yu., and E. Foufoula-Georgiou*, 2021: Zonally contrasting shifts of the tropical rain belt in response to climate change, *Nature Climate Change*, 11, 143–151. DOI: 10.1038/s41558-020-00963-x.
- **(111)** Chen, M., T-H Chang, C-T Lee, S-W Fang, & **J-Y Yu***, 2021: A Study of Climate Model Responses of

the Western Pacific Subtropical High to El Niño Diversity, *Climate Dynamics*, **56**, 581-595. doi: 10.1007/s00382-020-05500-2.

2020

- **(110)** Zhang, L., Y. Du*, W. Cai, Z. Chen, T. Tozuka, **J.-Y. Yu**, 2020: Triggering the Indian Ocean Dipole from the Southern Hemisphere. *Geophysical Research Letters*, **47**, e2020GL088648. DOI: 10.1029/2020GL088648.
- **(109)** Fang, S.-W. and **J.-Y. Yu***, 2020: Contrasting ENSO transition complexity between El Niño and La Niña: In observations and CMIP5/6 models. *Geophysical Research Letters*, **47**, e2020GL088926. DOI: 10.1029/2020GL088926.
- **(108)** He, S., **J.-Y. Yu***, S. Yang*, and S.-W. Fang, 2020: Why does the CP El Niño less frequently evolve into La Niña than the EP El Niño? *Geophysical Research Letters*, **47**, e2020GL087876. DOI: 10.1029/2020GL087876.
- **(107)** Fang, S. W. and **J.-Y. Yu***, 2020: A Control of ENSO Complexity by Tropical Pacific Mean SSTs through Tropical-Subtropical Interactions. *Geophysical Research Letters*, **47**, e2020GL087933. doi:10.1029/2020GL087933.
- **(106)** Kim*, J.-W. and **J.-Y. Yu**, 2020: Understanding Re-intensified Multi-year El Niño Events. *Geophysical Research Letters*, **47**, e2020GL087933. doi:10.1029/2020GL087644.
- **(105)** He, S., **J.-Y. Yu***, S. Yang*, and S.-W. Fang, 2020: ENSO's impacts on the tropical Indian and Atlantic Oceans via tropical Processes: CMIP5 simulations versus observations. *Climate Dynamics*, **54**, 4627-4640. doi: 10.1007/s00382-020-05247-w.
- **(104)** Chen, J., **J.-Y. Yu**, X. Wang*, L. Tao, 2020: Different influences of southeastern Indian Ocean and western Indian Ocean SST anomalies on eastern China rainfall during the decaying summer of 2015/16 extreme El Niño, *Journal of Climate*, **33**, 5427-5443. doi: 10.1175/JCLI-D-19-0777.1.
- **(103)** Wang*, J. K., **J.-Y. Yu**, and K. R. Johnson, 2020: Pacific and Atlantic controls of the relationship between Mainland Southeast Asian and East China interannual precipitation variability, *Climate Dynamics*, **54**, 4279-4292. doi:10.1007/s00382-020-05227-0.
- **(102)** Hu*, Z.-Z., M. J. McPhaden, A. Kumar, **J.-Y. Yu**, and N. C. Johnson, 2020: Uncoupled El Niño Warming, *Geophysical Research Letters*, **47**, e2020GL08762. DOI: 10.1029/2020GL087621.
- **(101)** Hu*, Z.-Z., A. Kumar, B. Huang, J. Zhu, M. L'Heureux, M. J. McPhaden, and **J.-Y. Yu**, 2020: The Interdecadal Shift of ENSO Properties in 1999/2000: A Review, *Journal of Climate*, **33**, 4441-4462. DOI: 10.1175/JCLI-D-19-0316.1.
- **(100)** **Yu***, **J.-Y.**, E. Campos, Y. Du, T. Eldevik, S. T. Gille, T. Losada, M. J. McPhaden, L. H. Smedsrud: Variability of the Oceans, Book Chapter in *Interacting Climates of Ocean Basins*, C. R. Mechoso (Ed.), Cambridge University Press, page 1-36. DOI: 10.1017/9781108610995.
- **(99)** Kug*, J.-S., J. Vialard, Y.-G. Ham, **J.-Y. Yu**, and M. Lengaigne: Remote forcing: Influence of climate variability outside the tropical Pacific, Book Chapter in *El Niño Southern Oscillation in a Changing Climate*, M. J. McPhaden, A. Santoso, and W. Cai (Ed.), AGU Books, Geophysical Monograph 253, page 247-265. doi:10.1002/9781119548164.ch11.

2019

- **(98)** Song*, W. and **J.-Y. Yu***, 2019: Identifying the complex types of atmosphere-ocean interactions in El Niño, *Environmental Research Letters*, **14**, 114030, doi:10.1088/1748-9326/ab4968.
- **(97)** Wu*, C.-R., Y.-F. Lin, Y.-L. Wang, N. Keenlyside, and **J.-Y. Yu**, 2019: An Atlantic-driven rapid circulation change in the North Pacific Ocean during the late 1990s, *Scientific Reports*, **9**, 1-8, doi: 10.1038/s41598-019-51076-1.
- **(96)** Mamalakis, A., **J.-Y. Yu**, J. Randerson, A. AghaKouchak, and E. Foufoula-Georgiou*, 2019: Correspondence: The New Zealand Index and its interhemispheric influence on the northwestern Pacific climate, *Nature Communications*, **10**, DOI: 10.1038/s41467-019-10531-3.
- **(95)** Chen, C.-C., M.-H. Lo*, E.-S. Im, **J.-Y. Yu**, Y.-C. Liang, W.-T. Chen, I. Tang, C.-W. Lan, R.-J. Wu, R.-Y. Chien, 2019: Thermodynamic and dynamic responses to deforestation in the Maritime Continent: A modeling study, *Journal of Climate*, **32**, 3505-3527, doi:10.1175/JCLI-D-18-0310.1.
- **(94)** Cai*, W., L. Wu, M. Lengaigne, T. Li, S. McGregor, J. Kug, **J.-Y. Yu**, and co-authors. 2019: Pan-tropical climate interactions, *Science*, **363** (6430), eaav4236, DOI: 10.1126/science.aav4236.

- (93) Chen, M., **J.-Y. Yu**, X. Wang*, and W. Jiang, 2019: The changing impact mechanisms of a diverse El Nino on the Western Pacific Subtropical High, *Geophysical Research Letters*, DOI: 10.1029/2018GL, In Press.
- (92) Tuo, P., **J.-Y. Yu***, and J. Hu, 2019: The changing influences of ENSO and the Pacific Meridional Mode on mesoscale eddies in the South China Sea, *Journal of Climate*, **32**, 685-700.
- (91) Xu*, L. and **J.-Y. Yu**: An ENSO-induced aerosol dipole in the west-central Pacific and its potential feedback to ENSO evolution, *Climate Dynamics*, DOI: 10.1007/s00382-018-4435-5.

2018

- (90) **Yu***, **J.-Y.** and S.-W. Fang: The distinct contributions of the seasonal footprinting and charged-discharged mechanisms to ENSO complexity, *Geophysical Research Letters*, **45**, 6611-6618.
- (89) Liang*, Y.-C., M. Mazloff, I. Rosso, S.-W. Fang, and **J.-Y. Yu**: A Multi-variate Empirical Orthogonal Function Method to Construct Nitrate Maps in the Southern Ocean, *Journal of Atmospheric and Oceanic Technology*, **35**, 1505-1519.
- (88) Yang*, S., Z. Li, **J.-Y. Yu**, X. Hu, W. Dong, and S. He: El Nino-Southern Oscillation and Its Impact in the Changing Climate, *National Science Review*, nwy046, doi: 10.1093/nsr/nwy046.
- (87) Mamalakis, A., **J.-Y. Yu**, J.T. Randerson, A. AghaKouchak, and E. Foufoula-Georgiou*: Beyond ENSO: A new teleconnection increases predictability of winter precipitation in southwestern US, *Nature Communications*, **9**, doi: 10.1038/s41467-018-04722-7.
- (86) Wang*, L. and **J.-Y. Yu**: A recent shift in the monsoon centers associated with the Tropospheric Biennial Oscillation, *Journal of Climate*, **31**, 325-340.

2017

- (85) Liang, Y.-C., **J.-Y. Yu***, E. Saltzman, and F. Wang: Linking the Tropical Northern Hemisphere Pattern to the Generation of the Pacific Warm Blob and Atlantic Variability, *Journal of Climate*, **30**, 9041-9057.
- (84) Lyu*, K. and **J.-Y. Yu**: Climate impacts of the Atlantic Multidecadal Oscillation simulated in the CMIP5 models: a re-evaluation based on a revised index, *Geophysical Research Letters*, **44**, DOI: 10.1002/2017GL072681.
- (83) Wang*, L., **J.-Y. Yu**, and H. Paek: Enhanced biennial variability in the Pacific due to Atlantic capacitor effect, *Nature Communications*, **8**, 14887, doi:10.1038/ncomms14887.
- (82) Paek*, H., **J.-Y. Yu**, and C. Qian: Why were the 2015/16 and 1997/98 Extreme El Niños different? *Geophysical Research Letters*, **44**, 1848-1856, DOI: 10.1002/2016GL071515.
- (81) Xu*, L., **J.-Y. Yu**, S. Jordan, and M. Prather: The Seasonality and Geographic Dependence of ENSO Impacts on US Surface Ozone Variability, *Geophysical Research Letters*, **44**, 3420-3428, doi: 10.1002/2017GL073044.
- (80) Lyu*, K., **J.-Y. Yu**, and H. Paek: The influences of the Atlantic Multidecadal Oscillation on the Mean Strength of the North Pacific Subtropical High during Boreal Winter, doi:10.1175/JCLI-D-16-0525.1, *Journal of Climate*, **30**, 411-426. doi: http://dx.doi.org/10.1175/JCLI-D-16-0525.1.
- (79) **Yu***, **J.-Y.**, X. Wang, S. Yang, H. Paek, and M. Chen: Changing El Nino-Southern Oscillation and Associated Climate Extremes, *Climate Extremes: Mechanisms and Potential Prediction*, S. Wang et al. (Eds.), AGU Monograph, AGU Geophysical Monograph Series, Vol. 226, Pages 3-38.
- (78) Lyu*, K., X. Zhang, J. Church, J. Hu, and **J.-Y. Yu**, 2017: Distinguishing the Quasi-decadal and Multi-decadal Sea Level and Climate Variations in the Pacific: Implications for the ENSO-like Low-frequency Variability, *Journal of Climate*, **30**, 5097-5117.
- (77) Zheng* F., **J.-Y. Yu**, and J. Zhu, 2017: Contrasting the skills and biases of deterministic predictions for the two types of El Nino, *Advances in Atmospheric Sciences*, **34**, 1395-1403, doi: 10.1007/s00376-017-6324-y.

2016

- (76) Zheng, Fei, X.-H. Fang, J. Zhu, **J.-Y. Yu**, and X. Li, 2016: Modulation of Bjerknes feedback on the decadal variations in ENSO predictability, *Geophysical Research Letters*, **43**, 12,560-12,568, doi:10.1002/2016GL071636.
- (75) Wang*, C., C. Deser, **J.-Y. Yu**, P. DiNezio, and A. Clement, 2016: El Nino and Southern Oscillation (ENSO): A Review. In *Coral Reefs of the Eastern Tropical Pacific: Persistence and Loss in a Dynamic Environment*, P.W. Glynn, D.P. Manzello, and I.C. Enochs (eds.). Springer Netherlands, 85-106,

doi:10.1007/978-94-017-7499-4_4.

- (74) Chen, C., H. Lin, **Yu, J.-Y.**; and M.-H. Lo*, 2016: The 2015 Borneo fires: what have we learned from the 1997 and 2006 El Ninos? *Environmental Research Letters*, 11, doi:10.1088/1748-9326/11/10/104003.
- (73) Paek, H., **J.-Y. Yu** *, F. Zheng, and M.-M. Lu, 2016: Impacts of ENSO Diversity on the Western Pacific and North Pacific Subtropical Highs during Boreal Summer, *Climate Dynamics*, DOI: 10.1007/s00382-016-3288-z.
- (72) McCabe-Glynn*, S., K. Johnson , C. Strong , Y. Zou, **J.-Y. Yu**, J. Welker, S. Sellars, 2016: Isotopic signature of extreme precipitation events in the Western US and associated phases of Arctic and tropical climate modes, *Journal of Geophysical Research - Atmospheres*, 121, 8913-8924, DOI: 10.1002/2016JD025524
- (71) Li*, A. K., H. Paek, and **J.-Y. Yu**, 2016: The changing influences of the AMO and PDO on the decadal variation of the Santa Ana winds, *Environmental Research Letters*, 11, doi:10.1088/1748-9326/11/6/064019.
- (70) Pani*, S., S.-H. Wang , S.-C. Tsay , S. Lolli , M.-T. Chuang , C.-T. Lee , S. Chantara , **J.-Y. Yu**, 2016: Assessment of aerosol optical property and radiative effect for the layer decoupling cases over the northern South China Sea during the 7-SEAS/Dongsha Experiment, *Journal of Geophysical Research - Atmospheres*, 121, 4894-4906, DOI: 10.1002/2015JD024601.
- (69) Gao*, Tao, **J.-Y. Yu**, and H. Paek, 2016: Impacts of Four Northern-Hemisphere Teleconnection Patterns on Atmospheric Circulations over Eurasia and the Pacific, *Theoretical and Applied Climatology*, DOI 10.1007/s00704-016-1801-2.
- (68) Liang, Y-C, C-C Chou, **J.-Y. Yu***, and M-H Lo, 2016: Mapping the Locations of Asymmetric and Symmetric Discharge Responses in Global Rivers to the Two Types of El Nino, *Environmental Research Letters*, 11, doi:10.1088/1748-9326/11/4/044012.

2015

- (67) Zheng*, F., W. Zhang, **J.-Y. Yu**, and Q.-L. Chen, 2015: A Possible Bias of Simulating the Post-2000 Changing ENSO, *Science Bulletin*, **60**, 1850-1857.
- (66) Wey, H-W, M-H Lo*, S-Y Lee, **J.-Y. Yu**, and H-H Hsu, 2015: Potential impacts of wintertime soil-moisture anomalies from agricultural irrigation at low latitudes on regional and global climates, *Geophysical Research Letters*, DOI: 10.1002/2015GL065883.
- (65) **Yu***, **J.-Y.**, H. Paek, E. S. Saltzman, and T. Lee, 2015: The early-1990s change in ENSO-PSA-SAM relationships and its impact on Southern Hemisphere climate, *Journal of Climate* (Special Collection on Tropical-Polar Connections), DOI: 10.1175/JCLI-D-15-0335.1.
- (64) **Yu***, B., X. Zhang, H. Lin, and **J.-Y. Yu**, **2015**: Comparison of wintertime North American climate impacts associated with multiple ENSO indices, *Atmosphere-Ocean*, DOI:10.1080/07055900.2015.1079697.
- (63) Liang, Y-C, **J.-Y. Yu***, M-H Lo, and C. Wang, 2015: The Changing Influence of El Niño on the Great Plains Low-Level Jet, *Atmospheric Science Letters*, DOI: 10.1002/asl.590.
- (62) Paek, H., **J.-Y., Yu***, J.-W. Hwu, M.-M. Lu, and T. Gao, 2015: A Source of AGCM Bias in Simulating the Western Pacific Subtropical High: Different Sensitivities to the Two Types of ENSO, *Monthly Weather Review*, **143**, 2348-2362.
- (61) Capotondi*, A., A. T. Wittenberg, M. Newman, E. Di Lorenzo, **J.-Y. Yu**, P. Braconnot, J. Cole, B. Dewitte, B. Giese, E. Guilyardi, F.-F. Jin, K. Karnauskas, B. Kirtman, T. Lee, N. Schneider, Y. Xue, S.-W. Yeh, 2015: Understanding ENSO diversity, *Bulletin of the American Meteorological Society*, **96**, 921-938.
- (60) **Yu***, **J.-Y.** and H. Paek, 2015: Precursors of ENSO beyond the tropical Pacific, *US CLIVAR Variations*, Winter 2015 Issue, **13**, No. 1, 15-20. **(Invited Article; reviewed by the editor)**
- (59) **Yu***, **J.-Y.**, P-K Kao, H Paek, H-H Hsu, C-W Hung, M-M Lu, S-I An, 2015: Linking Emergence of the Central-Pacific El Niño to the Atlantic Multi-decadal Oscillation, *Journal of Climate*, **28**, No. 2, 651-662, doi: 10.1175/JCLI-D-14-00347.1.
- (58) Lin*, C.-Y., **J.-Y. Yu**, and H.-H. Hsu, 2015: CMIP5 model simulations of the Pacific meridional mode and its connection to the two types of ENSO, *International journal of climatology*, DOI: 10.1002/joc.4130.

2014

- (57) Sheffield*, J., A. Barrett, D. Barrie, S. J. Camargo, E. K. M. Chang, B. Colle, D. N. Fernando, R. Fu, K. L. Geil, Q. Hu, X. Jiang, N. Johnson, K. B. Karnauskas, S. T. Kim, J. Kinter, S. Kumar, B. Langenbrunner, K. Lombardo, L. N. Long, E. Maloney, A. Mariotti, J. E. Meyerson, K. C. Mo, J. D. Neelin, S. Nigam, Z. Pan, T. Ren, A. Ruiz-Barradas, R. Seager, Y. L. Serra, A. Seth, D.-Z. Sun, J. M. Thibeault, J. C. Stroeve, C. Wang, S.-P. Xie, Z. Yang, L. Yin, **J.-Y. Yu**, T. Zhang, and M. Zhao, 2014: Regional climate processes and projections for North America: CMIP3/CMIP5 differences, attribution and outstanding issues. *NOAA Technical Report OAR CPO-2*, 47 pp. (Peer reviewed)
- (56) Qian, C., **J.-Y. Yu***, G. Chen, 2014: Decadal Summer Drought Frequency in China: The increasing influence of the Atlantic Multi-decadal Oscillation, *Environmental Research Letters*, **9**, No. 12. (01 December 2014), 124004, doi:10.1088/1748-9326/9/12/124004.
- (55) Zheng*, Fei, X.-H. Fang, **J.-Y. Yu**, and J. Zhu, 2014: Asymmetry of the Bjerknes Positive Feedback between the Two Types of El Niño, *Geophysical Research Letters*, **41**, 7651-7657, doi:10.1002/2014GL062125.
- (54) Ma*, T. and **J.-Y. Yu**, 2014: Paradox in South Asian summer monsoon circulation change: Lower tropospheric strengthening and upper tropospheric weakening, *Geophysical Research Letters*, DOI: 10.1002/2014GL059891.
- (53) Ma*, T. and **J.-Y. Yu**, 2014: Linking centennial surface warming patterns in the equatorial Pacific to the relative strengths of the Walker and Hadley circulations, *Journal of Atmospheric Sciences*, **71**, 3454-3464, DOI: 10.1175/JAS-D-14-0028.1.
- (52) Qu*, T. and **J.-Y. Yu**, 2014: Sea Surface Salinity Indices of El Niño Detected by Aquarius and Argo, *Journal of Oceanography*, **70**, 367-375, DOI 10.1007/s10872-014-0238-4.
- (51) Zou, Y., **J.-Y. Yu***, T. Lee, M.-M. Lu, S. T. Kim, 2014: CMIP5 Model Simulations of the Impacts of the Two Types of El Niño on US Winter Temperature, *Journal of Geophysical Research*, DOI: 10.1002/2013JD021064.
- (50) Liang*, Y.-C., M.-H. Lo, and **J.-Y. Yu**, 2014: Asymmetric Responses of Land Hydroclimatology to Two Types of El Niño in the Mississippi River Basin, *Geophysical Research Letters*, DOI: 10.1002/2013GL058828.
- (49) Kim*, S. T., W. Cai, F.-F. Jin, and **J.-Y. Yu**, 2014: ENSO Stability in Coupled Climate Models and its Association with Mean State, *Climate Dynamics*, doi: 10.1007/s00382-013-1833-6.

2013

- (48) **Yu***, **J.-Y.** and B. S. Giese, 2013: ENSO diversity in observations, U.S. *CLIVAR Variations*, **Vol. 11**, No. 2, 1-5.
- (47) de Linage*, C., H. Kim, J. Famiglietti and **J.-Y. Yu**, 2013: Impact of Pacific and Atlantic sea surface temperatures on interannual and decadal variations of GRACE land water storage in Tropical South America, *Journal of Geophysical Research*, **118**, 10,811-10,829, doi: 10.1002/jgrd.50820..
- (46) Capotondi*, A., B. Kirtman, A. Wittenberg, M. Newman, N. Schneider, Y. Xue, B. Giese, P. Braconnot, J. Cole, B. Dewitte, E. Guilyardi, F.-F. Jin, T. Lee, K. Karnauskas, S.-W. Yeh, **J.-Y. Yu**, 2013: U.S. CLIVAR ENSO Diversity Workshop Report, U.S. CLIVAR: Climate Variability and Predictability, Report No. 2013-1, 23pp.
- (45) Sheffield*, J. and co-authors (**J.-Y. Yu**), 2013: North American Climate in CMIP5 Experiments. Part II: Evaluation of 20th Century Intra-Seasonal to Decadal Variability, *Journal of Climate*, **23**, 9247-9290.
- (44) **Yu, J.-Y.** and Y. Zou, 2013: The Enhanced Drying Effect of Central-Pacific El Niño on US Winter, *Environmental Research Letters*, **8**, doi:10.1088/1748-9326/8/1/014019.
- (43) Choi, J., S.-I. An*, S.-W. Yeh, and **J.-Y. Yu**, 2013: ENSO-like and ENSO-induced Tropical Pacific Decadal Variability in CGCMs, *Journal of Climate*, **26**, 1485-1501. DOI: 10.1175/JCLI-D-12-00118.1.
- (42) **Yu***, **J.-Y.** and S. T. Kim, 2013: Identifying the Types of Major El Niño Events since 1870, *International Journal of Climatology*, **33**, 2105-2112. DOI: 10.1002/joc.3575.

2012

- (41) **Yu***, **J.-Y.**, Y. Zou, S. T. Kim, and T. Lee, 2012: The Changing Impact of El Niño on US Winter Temperatures, *Geophysical Research Letters*, doi:10.1029/2012GL052483.
- (40) Kim*, S. T. and **J.-Y. Yu**, 2012: The Two Types of ENSO in CMIP5 Models, *Geophysical Research*

Letters, **39**, L11704, doi:10.1029/2012GL052006.

- (39) Kim, S. T., **J.-Y. Yu***, A. Kumar, and H. Wang, 2012: Examination of the Two Types of ENSO in the NCEP CFS Model and Its Extratropical Associations, *Monthly Weather Review*, **140**, 1908-1923.
- (38) Kim*, S. T., **J.-Y. Yu**, and M.-M. Lu, 2012: Distinct Behaviors of Pacific and Indian Ocean Warm Pool Properties on Seasonal and Interannual Timescales, *Journal of Geophysical Research*, **117**, D05128, doi:10.1029/2011JD016557.
- (37) **Yu***, **J.-Y.**, M.-M. Lu, and S. T. Kim, 2012: A change in the relationship between tropical central Pacific SST variability and the extratropical atmosphere around 1990, *Environmental Research Letters*, **7**, doi:10.1088/1748-9326/7/3/034025.

2011

- (36) **Yu***, **J.-Y.** and S. T. Kim, 2011: "Reversed spatial asymmetries between El Niño and La Niña and their linkage to decadal ENSO modulation in CMIP3 Models", *Journal of Climate*, **24**, 5423-5434.
- (35) **Yu***, **J.-Y.** and S. T. Kim, 2011: Relationships between Extratropical Sea Level Pressure Variations and the Central-Pacific and Eastern-Pacific Types of ENSO. *Journal of Climate*, **24**, 708-720.
- (34) **Yu***, **J.-Y.**, H.-Y. Kao, T. Lee, and S. T. Kim, 2011: Subsurface Ocean Temperature Indices for Central-Pacific and Eastern-Pacific Types of El Niño and La Niña Events. *Theoretical and Applied Climatology*, **103**, 337-344, DOI: 10.1007/s00704-010-0307-6.

2010

- (33) **Yu***, **J.-Y.**, Kao, H.-Y., and T. Lee, 2010: Subtropics-Related Interannual Sea Surface Temperature Variability in the Equatorial Central Pacific. *Journal of Climate*, **23**, 2869-2884.
- (32) **Yu***, **J.-Y.** and S. T. Kim, 2010: Identification of Central-Pacific and Eastern-Pacific Types of ENSO in CMIP3 Models, *Geophysical Research Letters*, L15705, doi:10.1029/2010GL044082.
- (31) **Yu***, **J.-Y.** and S. T. Kim, 2010: Three Evolution Patterns of Central-Pacific El Niño. *Geophysical Research Letters*, **37**, L08706, doi:10.1029/2010GL042810.
- (30) Weng*, S.-P. and **J.-Y. Yu**, 2010: A CGCM study on the northward propagation of tropical intraseasonal oscillation over the Asian summer monsoon regions. *Journal of Terrestrial, Atmospheric and Oceanic Sciences*, **21**, 299-312.
- (29) Weng*, S.-P. and **J.-Y. Yu**, 2010: Impacts of Pacific and Indian Ocean Coupling on Wintertime Tropical Intraseasonal Oscillation: A Basin-Coupling CGCM Study. *International Journal of Climatology*, **30**, 359-371.

2009

- (28) **Yu***, **J.-Y.**, F. Sun, and H.-Y. Kao, 2009: Contributions of Indian Ocean and Monsoon Biases to the Excessive Biennial ENSO in CCSM3. *Journal of Climate*, **22**, 1850-1858
- (27) Kao, H.-Y. and **J.-Y. Yu***, 2009: Contrasting Eastern-Pacific and Central-Pacific types of ENSO, *Journal of Climate*, **22**, 615-632.
- (26) Sun, F. and **J.-Y. Yu***, 2009: A 10-15year Modulation Cycle of ENSO Intensity. *Journal of Climate*, **22**, 1718-1735.

Before 2008

- (25) **Yu***, **J.-Y.**, 2008: Understanding El Niño Southern Oscillation and its interactions with the Indian Ocean and monsoon. Book chapter in *Recent Progress in Atmospheric Sciences with Applications to the Asia-Pacific Region*, Liou, K N and Chou, M D (Ed.), World Scientific Publishing, Singapore, 3-22.
- (24) **Yu***, **J.-Y.** and Matthew A. Janiga, 2007: Changes in the In-Phase Relationship Between the Indian and Subsequent Australian Summer Monsoons During the Past Five Decades. *Annales Geophysicae*, **25**, 1929-1933.
- (23) **Yu***, **J.-Y.** and H.-Y. Kao, 2007: Decadal Changes of ENSO Persistence Barrier in SST and Ocean Heat Content Indices: 1958-2001. *Journal of Geophysical Research*, **112**, D13106, doi:10.1029/2006JD007654.
- (22) Sun, F and **J.-Y. Yu***, 2006: Impacts of Central America gap winds on the SST annual cycle in the Eastern Pacific warm pool. *Geophysical Research Letters*, **33**, L06710, doi:10.1029/2005GL024700.

- (21) Yu*, J.-Y., 2005: Enhancement of ENSO's persistence barrier by biennial variability in a coupled atmosphere-ocean general circulation model. *Geophysical Research Letters*, **32**, L13707, doi:10.1029/2005GL023406.
- (20) Yu*, J.-Y. and K. M. Lau, 2004: Contrasting Indian Ocean SST variability with and without ENSO influence: A coupled ocean-atmosphere model study. *Meteorology and Atmospheric Physics*, DOI: 10.1007/s00703-004-0094-7.
- (19) Yu, J.-Y., S.-P. Weng, and J. D. Farrara, 2003: Ocean roles in the TBO transitions of the Indian-Australian monsoon system. *Journal of Climate*, **16**, 3072-3080.
- (18) Yu*, J.-Y. and W. T. Liu, 2003: A linear relationship between ENSO intensity and tropical instability wave activity in the eastern Pacific Ocean. *Geophysical Research Letters*, **30**(14), 1735, doi:10.1029/2003GL017176.
- (17) Farrara*, J. D. and J.-Y. Yu, 2003: Interannual variations in the North American monsoon and SST anomalies: A general circulation model study. *Journal of Climate*, **16**, 1703-1720.
- (16) Yu*, J.-Y., 2003: Identifications and applications of coupled climate models. Invited article in *The Encyclopedia of Life Support Systems*, EOLSS Publisher, Oxford, UK. 15pp.
- (15) C. R. Mechoso, J. D. Neelin, and J.-Y. Yu, 2003: Testing simple model of ENSO, *Journal of Atmospheric Sciences*, **60**, 305-318.
- (14) Yu*, J.-Y., C. R. Mechoso, J. C. McWilliams, and A. Arakawa, 2002: Impacts of the Indian Ocean on the ENSO cycle. *Geophysical Research Letters*, **29**, 461-464.
- (13) Davey*, M. K., M. Huddleston, K.R. Sperber, S.B. Power, R.A. Colman, G. Flato, M. Kimoto, L. Terray, D. DeWitt, E. Roeckner, J. Oberhuber, R. Voss, U. Cubasch, T.R. Knutson, S. Manabe, B. Wang, L. Fairhead, H. Le Treut, A. Vintzileos, P. Delecluse, P. Braconnot, I. Yoshikawa, D. Chen, S.E. Zebiak, C. Gordon, C. Cooper, M. Latif, S. Yukimoto, A. Kitoh, F. Bryan, G.A. Meehl, W.M. Washington, M. Ji, T. Hogan, T. Li, J.-Y. Yu, C. R. Mechoso, 2002: STOIC: A study of coupled GCM climatology and variability in tropical ocean regions. *Climate Dynamics*, **18**, 403-420.
- (12) Yu*, J.-Y. and C.R. Mechoso, 2000: A coupled atmosphere-ocean GCM study of the ENSO cycle. *Journal of Climate*, **14**, 2329-2350.
- (11) Latif*, M. K. Sperber, A. Arblaster, P. Braccanot, D. Chen, A. Colman, U. Cubasch, M. Davey, P. Delecluse, D. De Witt, L. Fairhead, G. Flato, M. Ji, M. Kimoto, A. Kitoh, T. Knutson, H. Le Treut, S. Manabe, O. Marti, C. Mechoso, G. Meehl, J. Oberhuber, S. Power, E. Roeckner, L. Terray, A. Vintzileos, R. Vob, B. Wang, W. Washington, I. Yoshikawa, J.-Y. Yu, S. Zebiak, 2001: ENSIP: The El Niño Simulation Intercomparison Project. *Climate Dynamics*, **18**, 255-276.
- (10) Yu*, J.-Y., W. T. Liu, and C.R. Mechoso, 2000: The SST anomaly dipole in the Northern Subtropical Pacific and its relationship with ENSO. *Geophysical Research Letters*, **27**, 1931-1934.
- (9) Yu*, J.-Y., 2000: A general circulation model of the atmosphere using the full-Galerkin method. *Journal of Mathematics and Computers in Simulation*, **52**, 427-443.
- (8) Mechoso*, C. R., J.-Y. Yu, and A. Arakawa, 2000: A coupled GCM pilgrimage: From climate catastrophe to ENSO simulations. Book Chapter in *General Circulation Model Development: Past, Present, and Future.*, D. A. Randall, Eds., Academic Press, 539-575.
- (7) Mechoso*, C. R., J. D. Farrara, L.A. Drummond, J. Spahr and J.-Y. Yu, 2000: An atmosphere- ocean model: Code optimization and application to El Niño. Book Chapter in *Development and Application of Computer Techniques to Environmental Studies VIII.* D. A. Gabriel Ibarra-Berastegi, C. A. Brebbia and P. Zanetti, Eds, WIT Press, 544pp.
- (6) Yu*, J.-Y., and C.R. Mechoso, 1999: Links between annual variations of Peruvian stratocumulus clouds and of SSTs in the eastern equatorial Pacific. *Journal of Climate*, **12**, 3305-3318.
- (5) Yu*, J.-Y., and C.R. Mechoso, 1999: A discussion on the errors in the surface heat fluxes simulated by a coupled GCM. *Journal of Climate*, **12**, 416-426.
- (4) Yu*, J.-Y., C. R. Mechoso, J. D. Farrara, Y.-J. Kim, J.-L. Li, M. Köhler, and A. Arakawa, 1997: Recent development of the UCLA coupled atmosphere-ocean GCM. *Research Activities in Atmospheric and Oceanic Modelling.* A. Staniforth, ed., WMO/TD-No. 792, 9.24-9.25.

- **(3) Yu*, J.-Y.**, and C. R. Mechoso, 1997: Impact of cloud radiative effects on the simulation of Tropical Pacific. *Research Activities in Atmospheric and Oceanic Modelling*. A. Staniforth, ed., WMO/TD-No. 792, 7.81-7.82.
- **(2) Yu*, J.-Y.**, and D.L. Hartmann, 1995: Orographic influences on the distribution and generation of atmospheric variability in a GCM. *J. Atmos. Sci.*, **52**, 2428-2443.
- **(1) Yu*, J.-Y.**, and D.L. Hartmann, 1993: Zonal flow vacillation and eddy forcing in a simple GCM of the atmosphere. *J. Atmos. Sci.*, **50**, 3244-3259.

SCIENTIFIC MEETING ORGANISED

- 2019 Member, Scientific Steering Committee, "Ocean-atmosphere interactions and climate", 10th International Workshop on Tropical Marine Environmental Changes (MEC 2019): The Oceans and Climate, Guangzhou, China.
- 2019 Session Chair, "Ocean-atmosphere interactions and climate", The Fourth Xiamen Symposium on Marine Environmental Sciences (XMAS), Xiamen, China.
- 2018 Session Co-Chair, "Intraseasonal variability and predictability", Workshop on Intraseasonal oscillations and extended-range prediction of persistent weather events, Taipei, Taiwan.
- 2018 Session Co-Chair, "Influences of WPO on regional and global climate and their predictability", The Third Open Science Symposium (OSS) on Western Pacific Ocean Circulation and Climate (WPOC), Qingdao, China.
- 2018 Session Co-Chair, "Western Pacific and Indonesian seas circulation and its environmental and climatic impacts", The 2018 Ocean Sciences Meeting, Portland, Oregon, USA.
- 2018 Session Co-Chair, "ENSO Dynamics, Diversity, Prediction, and Impacts", American Meteorological Society 98th Annual Meeting, Austin, Texas, USA.
- 2017 Session Chair, "Monsoonal and climatic effects", The 2nd International Symposium on Western Pacific Ocean Circulation -Indonesian Throughflow (WPOC-ITF) studies, Lombok, Indonesia.
- 2017 Scientific Organizing Committee, The 2nd International Symposium on Western Pacific Ocean Circulation -Indonesian Throughflow (WPOC-ITF) studies, Lombok, Indonesia.
- 2016 Session Chair, "Climate", Conference on Hurricanes and Tropical Meteorology, San Juan, Puerto Rico.
- 2016 Session Co-Chair, "Advances In Data Assimilation And Ensemble Forecast: Applications To Studies And Predictability Of Atmosphere-ocean Variability", The 13th Annual Meeting for Asia Oceania Geosciences Society, Beijing, China.
- 2016 Session Chair, "Climate", Conference on Hurricanes and Tropical Meteorology, San Juan, Puerto Rico,
- 2016 Session Co-Chair, "Advances In Data Assimilation And Ensemble Forecast: Applications To Studies And Predictability Of Atmosphere-ocean Variability", The 13th Annual Meeting for Asia Oceania Geosciences Society, Beijing, China,
- 2015 Session Co-Chair, "Monitoring, Understanding and Forecasting of the 2014/15 and 2015 El Niño and the Record warming of the North Pacific Ocean", AGU Annual Fall Meeting, San Francisco, California.
- 2015 Session Co-Chair, "Toward a better understanding of moist process feedbacks and their role in the climate system", AGU Annual Fall Meeting, San Francisco, California.
- 2015 Session Co-Chair, "Climate Variability and Predictability", International Geographic Union (IGU) Regional Conference, Moscow, Russia.
- 2014 Session Co-Chair, "Toward a better understanding of moist process feedbacks and their role in the climate system", AGU Annual Fall Meeting, San Francisco, California.
- 2014 Session Co-Chair, "Advances in Data Assimilation and Forecast Systems for ocean-atmosphere variability", AOGS 11th Annual Meeting, Sapporo, Japan.
- 2013 Session Co-Chair, "Grand challenges in moist process feedback in the climate system", AGU Annual Fall Meeting, San Francisco, California.
- 2012 Session Co-Chair, "El Niño in a Changing Climate System: Observations, Theory, and Modeling", AOGS – AGU (WPGM) Joint Assembly, Singapore.

- 2010 Session Chair, “El Niño: Recent Advances in Theory, Impact, Prediction, and Modeling”, AGU Western Pacific Geophysics Meeting, Taipei, Taiwan.
- 2010 Session Co-Chair, “Atmosphere-Land Interaction”, AGU Western Pacific Geophysics Meeting, Taipei, Taiwan.
- 2010 Session Co-Chair, “Climate Monitoring and Prediction”, COAA 5th International Conference on Atmosphere-Ocean Interaction, Taipei, Taiwan.
- 2009 Program Chair, COAA-SC Summer Workshop, California Institute of Technology, Pasadena, California.
- 2008 Program Chair, COAA-SC Summer Workshop, Irvine, California.
- 2008 Session Co-Chair, “ENSO and Global Change: Past, Present, and Future”, AGU Annual Fall Meeting, San Francisco, California.
- 2004 Session Chair, International Conference on Tropical Weather and Climate, Guangzhou, China.
- 2004 Session Chair, UCI Undergraduate Research Symposium, Session of Physical Science.
- 2000 Program Chair, International Conference on Environmental Modeling and Simulation, San Diego, California.
- 1999 Program Chair, The International Conference on Mission Earth, San Francisco, California.
- 1998 Program Chair, The 1998 Conference on Mission Earth: Modeling and Simulation of the Earth System, San Diego, California.

INVITED SEMINARS AND PRESENTATIONS

- (2022) "Subtropical ENSO Dynamics", The 14th Workshop on Ocean, Climate, and Environmental Change, (virtual), November 7, 2022.
- (2022) "The 11-year solar cycle and its amplification through subtropical air-sea coupling", The 14th Workshop on Ocean, Climate, and Environmental Change, (virtual), November 17, 2022.
- (2022) "North Pacific marine heatwave and its associated Pacific-Atlantic interactions", The 14th Workshop on Ocean, Climate, and Environmental Change, (virtual), November 17, 2022.
- (2022) "The 21st-Century ENSO: Its Changing Properties, Dynamics, and Impacts", The 4th Open Science Symposium on Western Pacific Ocean Circulation and Climate, (virtual), October 24-27, 2022.
- (2022) "An overlooked source of decadal variability in Western Pacific typhoon and ENSO activities: The 11-year solar cycle", The 4th NPOCE webinar on Influences of western Pacific Ocean on regional/global climate, (virtual), September 30, 2022.
- (2021) "Roles of subtropical Pacific processes and inter-basin interactions in ENSO complexity dynamics", The 1st IAMES (International Association of Meteorology and Atmospheric Sciences) Conference 2021, Nanjing, China (virtual), September 26-28, 2021.
- (2021) "The 21st-century El Nino: Its changing properties, dynamics, and impacts", Luncheon Seminar, State Key Laboratory of Tropical Ocean, Institute of South China Sea, Xiamen University, Xiamen, China (virtual), April 12, 2021.
- (2021) "A new view on ENSO dynamics", Department of Earth Sciences, National Taiwan Normal University, Taipei, Taiwan, March 23, 2021.
- (2020) "CWB Model Performance on Hindcasting Tropical Intraseasonal Oscillations during Boreal Winter and Summer: the MJO and BSISO", Central Weather Bureau of Taiwan, Taipei, Taiwan, December 9, 2020.
- (2020) “Reversal summer and winter trends in Taiwan Strait Sea Surface Temperature”, Central Weather Bureau of Taiwan, Taipei, Taiwan, December 9, 2020.
- (2020) "Multi-year ENSOs: Their unique dynamics, climate impacts, and El Nino-La Nina asymmetries", Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan, December 2, 2020.
- (2020) "Multi-year ENSOs: Their unique dynamics, climate impacts, and El Nino-La Nina asymmetries", National Central University, Chung-Li, Taiwan, December 1, 2020.
- (2020) "Multi-year ENSOs: Their unique dynamics, climate impacts, and El Nino-La Nina asymmetries", National Taiwan University, Taipei, Taiwan, November 26, 2020.

- **(2020)** "ENSO diversity dynamics", Winter School on Wind-driven Circulation in the World's Oceans and Global Marine Environmental Changes, Guangzhou, China, November 9-20, 2020.
- **(2020)** "ENSO transition dynamics", Winter School on Wind-driven Circulation in the World's Oceans and Global Marine Environmental Changes, Guangzhou, China, November 9-20, 2020.
- **(2020)** "ENSO teleconnections", Winter School on Wind-driven Circulation in the World's Oceans and Global Marine Environmental Changes, Guangzhou, China, November 9-20, 2020.
- **(2020)** "Inter-basin interactions", Winter School on Wind-driven Circulation in the World's Oceans and Global Marine Environmental Changes, Guangzhou, China, November 9-20, 2020.
- **(2019)** "ENSO transition complexity dynamics", The 10th International Workshop on Tropical Marine Environmental Changes (MEC 2019): The Oceans and Climate, Guangzhou, China, November 24-25, 2019.
- **(2019)** "The Changing El Niño in the 21st Century: Properties, Dynamics, and Impact", APEC Climate Symposium 2019, Punta Arenas, Chile, August 20-22, 2019.
- **(2018)** "ENSO Complexity and Its Impacts on Pacific and Indian Oceans", The 3rd WPOC-ITF International Symposium on Western Boundary Currents and ENSO, Climate dynamics", Qingdao, China, October 30-31, 2018.
- **(2018)** "The Changing Influences of ENSO and PMM on South China Sea", Workshop on Intraseasonal oscillations and extended-range prediction of persistent weather events, Taipei, Taiwan, October 18-19, 2018.
- **(2018)** "A simple view of ENSO complexity dynamics", South China Sea Institute of Oceanology, Guangzhou, China, August 30, 2018.
- **(2018)** "A simple view of ENSO complexity dynamics", Sun Yat-sen University, Guangzhou, China, August 31, 2018.
- **(2018)** "The ENSO Complexity: Its Underlying Dynamics and Impacts on Western Pacific Climate", Invited Speaker for The Third Open Science Symposium on Western Pacific Ocean Circulation and Climate, Qingdao, China, May 8-10, 2018.
- **(2018)** "Contributions of inter-basin interaction to ENSO complexity", Invited Speaker for Workshop on Tropical Inter-basin Interactions, Xiamen, Fujian, China, January 21-23, 2018.
- **(2017)** "The Changing El Niño and Its Impacts on Indo-Pacific Climate", Invited Speaker for The 2nd International Symposium on Western Pacific Ocean Circulation -Indonesian Through flow (WPOC-ITF) studies, Lombok, Indonesia, November 27-28, 2017.
- **(2017)** "The increased influences of the Atlantic Ocean on tropical Pacific climate and variability", Invited Speaker for International Workshop on Tropical-subtropical Weather, Climate and Oceans, Guangzhou, China. November 18-20, 2017.
- **(2017)** "A new view on the ENSO onset dynamics", Invited Speaker for International Conference on Climate Variability and Air-Sea Interaction, Taipei, Taiwan. October 12-13, 2017.
- **(2017)** "The recent intensification of the Pacific-Atlantic climate connectivity", Invited Speaker for International Symposium on Advances in Seasonal to Decadal Prediction, Beijing, China. September 18-20, 2017.
- **(2017)** "Inter-Basin Interactions: Evidence and cause for the recent intensification", Invited Speaker for the Annual Institute Seminar Series, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, China. July 12, 2017.
- **(2017)** "Central Pacific El Niño: Its underlying dynamics and global impacts", Invited Speaker for the Key Laboratory of Ocean Circulation and Waves, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, China. July 13, 2017.
- **(2017)** "Pacific-Atlantic interactions heat up: Evidence from El Niño and Mid-latitude Blobs", Invited Speaker for Session on "Climate Variability and Predictability", *The 51st CMOS (Canadian Meteorological and Oceanographic Society) Congress*, Toronto, Canada, June 4-8, 2017.
- **(2017)** "Inter-Basin Interactions: Evidence and reason for the recent intensification", Invited Speaker for *Symposium on Ocean Circulations*, Guangzhou, China. April 21-22, 2017.

- **(2016)** "The increased Influence of Atlantic Ocean on Pacific Climate after Early 1990s", Central Weather Bureau, Taipei, Taiwan. December 26, 2016.
- **(2016)** "Inter-Basin Interactions", *Winter School on "Oceanic circulation and climate change"*, South China Sea Institute of Oceanography, Chinese Academy of Sciences, Guangzhou, Guangdong, China. November 14-25, 2016.
- **(2016)** "AMO and Pacific Climate Shifts", *Winter School on "Oceanic circulation and climate change"*, South China Sea Institute of Oceanography, Chinese Academy of Sciences, Guangzhou, Guangdong, China. November 14-25, 2016.
- **(2016)** "The Central-Pacific El Niño: Dynamics, Impacts, and the Cause of Its Recent Emergence", Institute of Tropical and Marine Meteorology, Guangzhou, Guangdong, China. November 17, 2016.
- **(2016)** "El Niño and Its Changing Impacts on Climate ", *Winter School on "The Impacts of Climate Change: Oceans"*, Osher Lifelong Learning Institute, Irvine, California. October 14, 2016.
- **(2016)** "The increased influence of Atlantic Ocean on Pacific climate after early 1990s", CLIVAR Pacific Regional Panel Meeting, Qingdao, Shandong, China. September 17-18, 2016.
- **(2016)** "El Niño Diversity and Its Climate Impacts on Tibetan and Surrounding Areas", *International Workshop on Land Surface Multi-spheres Processes of Tibetan Plateau and their Environmental and Climate Effects Assessment*, Xining, Qinghai, China. September 9-11, 2016.
- **(2016)** "The Early-1990s Climate Shift in the Pacific and the ENSO Diversity", Invited Speaker for the session on "Ocean-Atmosphere Interaction in the Tropics", *Japan Geoscience Union (JpGU) Meeting 2016*, Chiba, Japan. May 22-26, 2016.
- **(2016)** "The journey from the Traditional El Niño to the Central-Pacific El Niño: An Overview", National Central University, Chun-Li, Taiwan. March 16, 2016.
- **(2016)** "The Early-1990s Climate Shift in the Pacific and the ENSO diversity", Dynamic Seminar at UCLA Department of Atmospheric and Oceanic Sciences, Los Angeles, California. February 12, 2016.
- **(2016)** "How Global Warming is Changing El Niño Behavior, and its Impacts on US Climate", Newport Bay Conservancy *Symposium on "Climate Change, a Godzilla El Niño, and Their Impacts on Oceans and Estuaries"*, Newport, California. January 30, 2016.
- **(2015)** "The Early-1990s Climate Shift in the Pacific", *2015 Weather and Climate Diagnostic Workshop*, Taipei, Taiwan. September 15-17, 2015.
- **(2015)** "Central-Pacific El Niño and the Early-1990s Climate Shift", *International Geographical Union (IGU) Regional Conference*, Moscow, Russia. August 16-21, 2015.
- **(2015)** "The Changing El Niño and Its Impacts on Western Pacific Extreme Weather", *2015 International Workshop on Typhoon and Flood (IWTF) - APEC Experience Sharing on Hazardous Weather Events and Risk Management*, Taipei, Taiwan. May 27-29, 2015.
- **(2015)** "Central Pacific El Niño and Early-1990s Climate Shift", Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, Wisconsin, March 2.
- **(2014)** "El Niño since the Early-1990s Climate Shift in the Pacific", in the session of *ENSO, its precursor, and their change under global warming*, *AGU Annual Fall Meeting*, San Francisco, California. December 15-19.
- **(2014)** "El Niño-Southern Oscillation and Its Teleconnection", Invited lecture in the *Workshop and School on Tropical ocean and Air-Sea Interaction*, organized by South China Sea Institute of Oceanography, Chinese Academy of Sciences, Guangzhou, China, November 10-21.
- **(2014)** "Understanding Madden-Julian Oscillation", Invited lecture in the *Workshop and School on Tropical ocean and Air-Sea Interaction*, organized by South China Sea Institute of Oceanography, Chinese Academy of Sciences, Guangzhou, China, November 10-21.
- **(2014)** "Linking the Emergence of Central-Pacific El Niño to the Phase Change of the Atlantic Multi-decadal Oscillation", in the session of *Dynamics of ENSO and Tropical Climate Variability*, *AOGS 11th Annual Meeting*, Sapporo, Japan. July 28-August 1.
- **(2014)** "Linking Emergence of the Central-Pacific El Niño to the Atlantic Multi-decadal Oscillation", *National Taiwan University*, Taipei, Taiwan. June 11.
- **(2014)** "Central-Pacific El Niño, Pacific Subtropical highs, and Decadal Droughts in China", *National Taiwan*

Normal University, Taipei, Taiwan. June 9.

- (2014) "Relationships between Subtropical Highs and the Two Types of El Niño in the CWB AGCM", *Central Weather Bureau*, Taipei, Taiwan. June 9.
- (2013) "The Central-Pacific El Niño: Its Generation Mechanism and Interactions with the Asian Monsoon", *Asian Monsoon Years (2007-2012) Open Science Conference (AMY-OSC)*, Zhuhai, China. October 26-27.
- (2013) "CMIP5 Models and ENSO Diversity", Department of Atmospheric Sciences, University of Sun Yat-Sen University, Guangzhou, China, October 24, 2013.
- (2013) "The Central-Pacific El Niño: Dynamics, Impacts, and Causes of Its Recent Increase in Frequency", Department of Atmospheric Sciences, University of Sun Yat-Sen University, Guangzhou, China, October 24, 2013.
- (2013) "The Central-Pacific El Niño: Dynamics, Impacts, and Causes of Its Recent Increase in Frequency", by South China Sea Institute of Oceanography, Guangzhou, China, October 23, 2013.
- (2013) "Central Pacific El Niño: Dynamics and Climate Impacts", *CLIVAR International Symposium on Boundary Current Dynamics*, Lijian, China. July 8-10.
- (2013) "Extratropical Forcing and the Emergence of Central-pacific El Niño in Recent Decades", *The 10th Asian Oceania Geosciences Annual Meeting*, Brisbane, Australia. June 24-28.
- (2013) "Central-Pacific El Niño: Dynamics, Climate Impacts, and the Cause of Its Recent Emergence", *Workshop on the two-types of the El Niño: the aspect, coupling process, formation mechanism, and climate effects*, Nanjing, China. June 14-15.
- (2013) "Central-Pacific El Niño: Dynamics, Climate Impacts, and the Cause of Its Recent Emergence" Institute of Atmospheric Physics, Chinese Academy of Science, Beijing, China. June 14.
- (2013) "Central-Pacific El Niño: Dynamics, Climate Impacts, and the Cause of Its Recent Emergence", International Center for Climate and Environmental Sciences, Beijing, China. June 9.
- (2013) "Changing Impact of El Niño on US Climate: Observation and CMIP5 Simulations", *The Second CCliCS Workshop on Climate System Modeling*, Taipei, Taiwan, April 1-3, 2013.
- (2013) "North Pacific Subtropical High: An Overview", *Central Weather Bureau*, Taipei, Taiwan, March 28, 2013.
- (2013) "A Journey from Traditional El Niño to the New Type of Central-Pacific El Niño: A Historical Overview", Fisheries Research Institute of Taiwan, Keelung, Taiwan, March 27, 2013.
- (2013) "Central-Pacific El Niño: Dynamics, Climate Impacts, and the Cause of Its Recent Emergence", *The Twenty-Sixth Pacific Climate Workshop*, Pacific Grove, California. March 3-6.
- (2013) "Central-Pacific El Niño: Dynamics, climate impacts, and the cause of its recent emergence", *ENSO Diversity Workshop*, Boulder, CO, February 6-8, 2013.
- (2012) "Emergence of the Central-Pacific El Niño and Its Impacts on Climate Research", National Sun-Yat-Sen University, Kaoshiung, Taiwan, December 7, 2012.
- (2012) "The Emerging Central-Pacific El Niño", The 2012 Summer Workshop on ENSO, Honolulu, Hawaii, June 20-22.
- (2012) "Identification of the Two Types of ENSO", US CLIVAR - ENSO Diversity Working Group Teleconference, May 16.
- (2012) "The Two Types of ENSO in CMIP5 Models and Their Different Impacts on North America Winter Temperature", NOAA MAPP Program Webminar Series, NOAA, May 2.
- (2012), "The Emerging Central-Pacific El Niño", The 2012 Summer Workshop on ENSO, Honolulu, Hawaii, June 20-22, 2012.
- (2012) "Identification of the Two Types of ENSO", US CLIVAR - ENSO Diversity Working Group Teleconference, May 16, 2012.
- (2012) "The Two Types of ENSO in CMIP5 Models and Their Different Impacts on North America Winter Temperature", NOAA MAPP Program Webminar Series, NOAA, May 2, 2012.
- (2012) "Central-Pacific El Niño: Dynamics, Impacts, and Modeling", National Central University, Chung-Li, Taiwan, March 22, 2012.

- **(2012)** "Central-Pacific El Niño: Dynamics, Impacts, and Modeling", National Taiwan University, Taipei, Taiwan, March 21, 2012.
- **(2012)** "Impacts of the two types of ENSO on North America climate", Central Weather Bureau of Taiwan, Taipei, Taiwan, March 20, 2012.
- **(2011)** "El Niño-Southern Oscillation: A Diagnostics of the Performance of the New Coupled Model", CCLiCS Workshop on Climate System Modeling, Taipei, Taiwan, November 17-18, 2011.
- **(2011)** "The emergence of a new type of El Niño in recent decades", Department of Land, Air, and Water Resources, University of California, Davis, CA, October 18, 2011.
- **(2010)** "Understanding and Modeling the Emerging Central-Pacific ENSO", Workshop on New strategies for evaluating ENSO processes in climate models, Paris, France, November 17-19, 2010.
- **(2010)** "Central-Pacific El Niño: Evolution, Generation, and Prediction", COAA 5th International Conference on Atmosphere-Ocean Interaction, Taipei, Taiwan, June 28-30, 2010.
- **(2010)** "Transitions between Central-Pacific El Niño and Eastern-Pacific El Niño: Roles of thermocline and sea level pressure", National Taiwan Normal University, June 21, 2010.
- **(2009)** "El Niño without Southern Oscillation: A New View of Tropical Pacific Warming", National Central University, Chung-Li, Taiwan, November 23, 2009.
- **(2009)** "El Niño without Southern Oscillation: A New View of Tropical Pacific Warming", Central Weather Bureau, Taipei, Taiwan, November 19, 2009.
- **(2009)** "El Niño without Southern Oscillation: A New View of Tropical Pacific Warming", Yonsei University, Seoul, Korea, November 17, 2009.
- **(2009)** "El Niño without Southern Oscillation: A New View of Tropical Pacific Warming", Seoul National University, Seoul, Korea, November 16, 2009.
- **(2009)** "A Two-Oscillator View of ENSO", Purdue University, September 10, 2009.
- **(2009)** "Contrasting Central-Pacific and Eastern-Pacific Types of ENSO", California Institute of Technology, February 10, 2009.
- **(2008)** "Verifying ENSO modulation mechanisms with IPCC/AR4 coupled models", National Taiwan University, November 27, 2008.
- **(2008)** "Verifying ENSO modulation mechanisms with IPCC/AR4 coupled models", Central Weather Bureau, November 26, 2008.
- **(2008)** "Verifying ENSO modulation mechanisms with IPCC/AR4 coupled models", National Central University, November 24, 2008.
- **(2007)** "Contrasting Eastern-Pacific and Central-Pacific types of ENSO", Research Center for Environmental Changes, Taiwan, December 3, 2007
- **(2007)** "Is ENSO one oscillator or two?", National Taiwan Normal University, 12/ 4/2007.
- **(2007)** "ENSO-basic state interactions", National Central University, 12/5/2007.
- **(2007)** "Why is the model ENSO too biennial?", Central Weather Bureau, 12/6/ 2007.
- **(2007)** "A 10-15year modulation cycle of ENSO intensity", National Taiwan University, 12/6/2007.
- **(2006)** "Air-sea interactions over warm oceans", Presented at National Taiwan Normal University, Department of Earth Science, Taipei, Taiwan, May 11, 2006.
- **(2006)** "A centennial journey toward understanding and predicting the El Niño", Presented at National Taiwan Normal University, Department of Geography, Taipei, Taiwan, May 10, 2006.
- **(2005)** "Monsoon-ocean interactions during tropospheric biennial oscillation", Scripps Institute of Oceanography, February 23, 2005, San Diego, California.
- **(2004)** "Monsoon-ocean interactions during TBO", Central Weather Bureau, December 12, 2004, Taipei, Taiwan.
- **(2004)** "Roles of Indian Ocean in tropical climate variability", National Central University, December 13, 2004, Chungli, Taiwan.
- **(2004)** "Multi-scale interactions among tropical instability wave, the ITCZ in the eastern Pacific Ocean", Remote Sensing and radiation Symposium, December 17, 2004, Taipei, Taiwan.