

Curriculum Vitae

CHIUNG-WEN JUNE CHANG

Associate Professor

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Research Interests

- Asia-Pacific climate
- General circulation of the atmosphere and oceans
- Intraseasonal variability in the atmosphere-ocean climate system and its biological impacts
- Climate variability and global warming

Education

Ph.D., Atmospheric Sciences, National Taiwan University, Taipei, Taiwan (2004-2008)

M.S., Atmospheric and Oceanic Sciences, University of California, Los Angeles, USA (1994-1996)

M.S., Electrical Engineering and Computer Sciences, Northwestern University, Illinois, USA (1991-1993)

B.S., Atmospheric Sciences, National Taiwan University, Taipei, Taiwan (1987-1991)

Professional Experience

- Department of Atmospheric Sciences, Private Chinese Cultural University, Taipei, Taiwan:
 - Associate Professor (2016-present)
 - Assistant Professor (2010-2016)
- Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan :
 - Distinguished Postdoctoral Fellow (2008-2010)
- Institute of Marine Environmental Science and Technology, National Taiwan Normal University, Taipei, Taiwan:
 - Lecturer (2009)
- NASA Jet Propulsion Laboratory, Pasadena, CA, USA:
 - Student Research Fellow, Ocean Science Element (1998-2000)
- Department of Atmospheric and Oceanic Sciences, University of California, Los Angeles, CA, USA:
 - Teaching Assistant/Associate (1996-1998)
 - Research Assistant (1994-1996)

Honor and Award

- MOST Research Achievement Scholarship, Chinese Culture University (2011-2020)
- Excellent Guidance Counselor from Chinese Culture University (2015)
- Distinguished Postdoctoral Fellowship from Academia Sinica (2008-2009)
- University Graduate Division Fellowship from University of California, Los Angeles (1994)

Publications

(*corresponding author)

[Peer-review papers]

Chang, C.-W. June, H.-H. Hsu*, W. Cheah, W.-L., Tseng and L.-C. Jiang (2019): Madden-Julian Oscillation Enhances Phytoplankton Biomass in the Maritime Continent. *Nature Scientific Reports*. <https://www.nature.com/articles/s41598-019-41889-5>. [IF: 4.122] (The paper is the destructive innovative paper nominee for the MOST Atmospheric Unit.)

Wan-Ling Tseng, Huang-Hsiung Hsu*, Noel Keenlyside, **C.-W. June Chang**, Ben-Jei Tsuang, Chia-Ying Tu, and Li-Chiang Jiang (2017): Effects of Surface Orography and Land-Sea Contrast on the Madden-Julian Oscillation in the Maritime Continent: A Numerical Study Using ECHAM5-SIT. *Journal of Climate*. <https://doi.org/10.1175/JCLI-D-17-0051.1>. [IF: 4.161]

Chang, C.-W. June*, S.-Y. Simon Wang, Huang-Hsiung Hsu (2016): Changes in tropical cyclone activity offset the ocean surface warming in northwest Pacific: 1981-2014. *Atmospheric Science Letters*, 17(3). doi:10.1002/asl.651. [IF: 1.57]

Liu, Hsiao-Wei*, Jia-Yuh Yu and **C.W. June Chang** (2016): On the Response of Kuroshio under Global Warming and Its Regional Climate Impact. *Atmospheric Sciences*, 44(3), 197-213.

Chang, C.-W. June*, Wan-Ling Tseng, Huang-Hsiung Hsu, Noel Keenlyside, Ben-Jei Tsuang (2015): The Madden Julian Oscillation in a warmer world. *Geophysical Research Letters*, 42(14). doi:10.1002/2015GL065095. [IF: 4.456]

Kang, Shen and **C.-W. June Chang*** (2015): Thermocline Variation in Western North Pacific Region during Eastern and Central Pacific Ninos. *Atmospheric Sciences*, 43(4), 315-329.

Lin, Yu-Chi*, C.-Y. Lin, P.-H. Lin, G. Engling, Y.-C. Lin, Y.-Y. Lan, **C.-W. June Chang**, T.-H. Kuo, W.-T. Hsu, C.-C. Ting (2013): Influence of Southeast Asian biomass burning on ozone and

carbon monoxide over subtropical Taiwan. *Atmospheric Environment*, 64.
doi:10.1016/j.atmosenv.2012.09.050. [IF: 3.11]

Wu, Chau-Ron*, Yu-Lin Chang, Lie-Yauw Oey, **C.-W. June Chang**, Yi-Chia Hsin (2008): Air-sea interaction between Tropical Cyclone Nari and Kuroshio. *Geophysical Research Letters*, 35(12), L12605. doi:10.1029/2008GL033942. [IF: 3.792]

Chang, C.-W. June, Huang-Hsiung Hsu, Chau-Ron Wu*, Woei-Jen Sheu (2008): Interannual mode of sea level in the South China Sea and the roles of El Niño and El Niño Modoki. *Geophysical Research Letters*, 35(3), L03601. doi:10.1029/2007GL032562. [IF: 3.792]

Wu, Chau-Ron* and **C.-W. June Chang** (2005): Interannual variability of the South China Sea in a data assimilation model. *Geophysical Research Letters*, 32(17), L17611. [IF: 3.792]
doi:10.1029/2005GL023798.

Chang, C.-W. June and Y. Chao* (2000): A Comparison between the World Ocean Atlas and Hydrobase Climatology. *Geophysical Research Letters*, 27(8), 1191-1194. [IF: 3.792]
doi: 10.1029/1999GL002379.

[In preparation]

Chang, C.-W. June, Jia-Yuh Yu, Huang-Hsiung Hsu and Noel Keenlyside: Future changes in MJO projected by multi-SST ensemble experiments: Gross Moisture Budget Analysis.

Chang, C.-W. June, Wan-Ling Tseng, Huang-Hsiung Hsu, and Noel Keenlyside: Impact of the diurnal cycle of SST on the intraseasonal and climate variability.

[others]

C.-W. June Chang *, J.-Y. Liang, L.-C. Lin, Z.-R. Chuang (2018): Impacts of Typhoons on Vegetable Price – Green Onions in Taiwan. *CONSENSUS*. ISSN 2518-0819.

Presentation and Published Abstract

[Invited presentations and seminars]

Institute of Oceanography, National Taiwan University (IONTU), Dec. 2020. *Nutrient-poor Region Benefited from Madden-Julian Oscillation-driven Rainfall Thousand Kilometers Away.*

Graduate Institute of Hydrological and Oceanic Sciences, National Central University, May. 2017. *The biological response to MJO forcing over the Maritime Continent.* (in English)

Department of Atmospheric Sciences, National Taiwan University, Nov. 2016. *The MJO in a*

warmer world.

- Research Center of Environmental Changes, Academia Sinica, Apr. 2015. *The MJO in a warmer world.* . (in English)
- Graduate Institute of Hydrological and Oceanic Sciences, National Central University, Oct. 2014. *The Madden-Julian Oscillation changes upon warming: time-slice experiments with the ECHAM5-SIT coupled model.*
- Graduate Institute of Hydrological and Oceanic Sciences, National Central University, Jun. 2012. *Oceanic dynamics associated with ENSO in affecting the SST variation in the Philippine Sea/Western Pacific sector.*
- Department of Earth and Planetary Science, Graduate School of Science, University of Tokyo, Mar. 2010. *Influence of upper oceanic dynamics on SST variation in the South China Sea and the Philippine Sea: structure and interannual variability.* . (in English)

[Conference talk]

- The Fourth Xiamen Symposium on Marine Environmental Sciences, Xiamen, Jan. 2019. *The Madden-Julian Oscillation Enhances the Phytoplankton Biomass in the Maritime Continent.*
- AOGS 15th Annual Meeting, Hawaii, Jun. 2018. *Nutrient-Poor Region Benefited from Madden-Julian Oscillation-Driven Rainfall Thousand Kilometers Away.*
- AOGS 12th Annual Meeting, Singapore, Aug. 2015. *The Madden-Julian Oscillation in a warmer world.*
- 26th IUGG General Assembly, Prague, Jun. 2015. *The Madden-Julian Oscillation in a warmer world.*
- European Geosciences Union General Assembly, Vienna, Apr. 2015. *The Madden-Julian Oscillation in a warmer world.*

[Poster]

- Joint IAPSO-IAMAS-IAGA Assembly, Cape Town, Aug. 2017. *Effects of surface orography and land-sea contrast on the Madden-Julian Oscillation in the Maritime Continent: A Numerical Study Using ECHAM5-SIT.*
- Fifth Symposium on Prediction of the Madden-Julian Oscillation: Processes, Prediction, and Impact, Seattle, Jan. 2017. *The MJO in a warmer world—Projection Using a MJO-resolving Coupled Model ECHAM5-SIT.*
- AOGS 13th Annual Meeting, Beijing, Aug. 2016. *Investigating the impact of the diurnal cycle of SST on the intraseasonal and climate variability.*
- AOGS 12th Annual Meeting, Singapore, Aug. 2015. *The Maritime Continent and its role on the MJO simulation in ECHAM-SIT.*
- AOGS 11th Annual Meeting, Sapporo, Jul. 2014. *The Madden-Julian Oscillation in a warming world.*

Ocean Sciences Meeting, Salt Lake City, Feb. 2012. *Oceanic Dynamics associated with ENSO in affecting the SST variation in the Western Pacific/Philippine Sea sector.*

AGU Fall Meeting, San Francisco, Dec. 2011. *Oceanic Dynamics associated with ENSO in affecting the SST variation in the Western Pacific/Philippine Sea sector.*

Service

- Journal Reviewer: Nature Climate Change; Journal of Oceanography; Theoretical and Applied Climatology; Journal of Marine Systems; Quaternary International; Atmospheric Science; Geoscience Letters
- EPA, Executive Yuan, Greenhouse Gases Reduction and Management Foundation review committee, 2016~2018
- Question Drafter and Jury of 2014 Taiwan High School Earth Science (Ocean) Contest

Project

Title	Assignment	Project Period	Sponsor
The intensification of tropical cyclone over a warm ocean eddy.	Co-PI	2019/11 ~ 2022/07	MOST
Investigating the land-cover-change-driven climate variability in CAM5-SIT model	PI	2019-08 ~ 2020-07	MOST
Consortium for Climate Change Study and CMIP6 Taiwan--MJO forcing on the ocean biology in the Maritime Contenient	PI	2018-08 ~ 2020-01	MOST
Consortium for Climate Change Study and CMIP6 Taiwan--Understanding upper ocean diurnal cycle and its relevance to Climate (II)	PI	2017-08 ~ 2018-07	MOST
The Impact of Global Warming on Tropical Seasonal Oscillations: An Analysis of Wet Static Energy and Wet Stability	Co-PI	2017/08 ~ 2019/07	MOST
Increasing the resolution of the upper ocean model to improve the simulation of intraseasonal oscillations in the Asian summer monsoon region (II)	Co-PI	2017-08 ~ 2018-07	MOST
Consortium for Climate Change Study-II (WCRP Cross-country international climate estimation model comparison plan) -- Understanding upper ocean diurnal cycle and its relevance to Climate	PI	2016-08 ~ 2017-07	MOST
Increasing the resolution of the upper ocean model to improve the simulation of intraseasonal oscillations in the Asian summer monsoon region	Co-PI	2016-08 ~ 2017-07	MOST

Potential impact of global warming on the MJO - II	PI	2015-08 ~ 2016-07	MOST
The global and regional digital database for atmosphere, ocean and rivers and assessment of the ecological cost in historical and under climate change (I)	Co-PI	2014-08 ~ 2015-10	MOST
Consortium for Climate Change Study – Master Plan : Climate Change Laboratory	Co-PI	2014-08 ~ 2016-07	MOST
Potential impact of global warming on the MJO	PI	2014-08 ~ 2015-07	MOST
Changes in tropical cyclone activity offset the ocean surface warming in northwest Pacific	Co-PI	2013-08 ~ 2014-07	NSC
Impact of the two-fold Ocean Dynamics on Interannual Variation of sea surface temperature change in the WNP	PI	2013-08 ~ 2014-07	NSC
Influence of upper oceanic dynamics on SST in the Philippine Sea/western Pacific Sector: interannual variability	PI	2011-02 ~ 2013-10	NSC