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EDUCATION

2003/09 – 2009/08	Ph.D.	Depart. of Environmental Engineering, National Chung Hsing Uni., Taiwan
1998/09 – 2000/08	M.S.	Depart. of Environmental Engineering, National Chung Hsing Uni., Taiwan
1994/09 – 1998/08	B.A.	Depart. of Environmental Engineering, National Chung Hsing Uni., Taiwan

EMPLOYMENT

2019/12 - present	Postdoctoral Researcher	RCEC, Academia Sinica, Taiwan
2019/03 - 2019/11	Associate Technical Specialist	Environmental Protection Bureau of Taichung City Government
2012/08 - 2019/03	Postdoctoral Researcher	RCEC, Academia Sinica, Taiwan
2009/10 - 2012/07	Postdoctoral Researcher	Depart. of Environmental Engineering, National Chung Hsing Uni., Taiwan

RESEARCH INTEREST

My research lies in the field of air-sea interaction in coupled model. When I was a PhD student, my research is air-sea CO_2 flux observations by Eddy Covariance Technique on researcher vessel over the South China Sea. I wrote C++ for evaluation of mobile platforms correction on CO_2 flux with high frequency raw data (10Hz). During I was a postdoc in RCEC, I implemented a one-dimensional ocean model (SIT) into the Taiwanese Earth system model with fortran to overcome/breakthrough the uncertainty of MJO simulation in a CAM5-SIT/TaiCAM-SIT coupled model. It is shown that the coupling model greatly improves the MJO simulation, especially when the wavenumber-frequency occurs in the intra-season period and a lag correlation in zonal wind and precipitation.

RESEARCH HIGHLIGHTS

To Improve and develop the simulation of MJO in CAM5-SIT and TaiCAM-SIT: Accurate simulation of MJO has always been a major uncertainty in the development of climate models. It is shown that the coupling of SIT into TaiCAM or CAM5 greatly improves the original MJO

simulation of TaiCAM or CAM5, especially when the wavenumber-frequency occurs in the intra-season period and a lag correlation in zonal wind (U850) and precipitation anomalies.

The influence of Upper Ocean on MJO: In the previous study, we found that the impact of MJO is not limited to ocean area with MJO propagating (between Indian Ocean and the western Pacific). The upper ocean from the Central Pacific to the Eastern Pacific plays a key role in the trend and amplitude of MJO eastward propagation. In order to realize how did the interaction between the atmosphere and the ocean, TaiESM-SIT would be further used for area sensitivity testing by analysis atmospheric field (OLR, PREC, surface net radiation (NRF), evaporative latent heat (LHF), vertical wind speed (Omega) and humidity field convergence divergence (Divq)) and the ocean (SST and SST profile) spatial distribution. Finally, the study finds the rules of favorable ocean conditions for MJO development.

REPRESENTATIVE PUBLICATIONS (*: corresponding author)

1. Yung-Yao Lan, Ben-Jei Tsuang, Neng-Huei Lin, Huang-Hsiung Hsu, ChungChieh Yu, Yung-Ta Chen (2015, Oct). Distribution of Ozone and Related Compounds in the Marine Boundary Layer of the Northern South China Sea in 2010. Aerosol and Air Quality Research, Volume 15, No 5, Pages 1990-2008, 2015. (SCI). MOST 102-2811-M-001-046.
2. Lin, Y.C.*, Lin, C.Y., Lin, P.H., Engling, G., Lin, Y.-C., Lan, Y.-Y., Chang, C.W. June, Kuo, T.-H., Hsu, W.T., Ting, C.-C. (2013, Jan). Influence of Southeast Asian Biomass Burning on Ozone and Carbon Monoxide over Subtropical Taiwan. Atmospheric Environment. ATMOSPHERIC ENVIRONMENT, Volume 64, Pages 358–365.
3. 藍詠耀、張詠翔、莊秉潔、林煜棋、陳思為、陳勇達、王奕智、杜佳穎 (2012, Jan). 打鳥埤人工溼地 CO_2 通量推估及四季變化趨勢. 濕地學刊, 第一卷第一 期, pp. 21-32.
4. Yu Chi Lin, Chuan Yao Lin, Po Hsiung Lin, Guenter Engling, Yung-Yao Lan, Ten-Ho Kuo, (2011, Sep). Observations of ozone and carbon monoxide at MeiFong mountain site (2269 m a.s.l.) in Central Taiwan: Seasonal variations and influence of Asian continental outflow. Science of the Total Environment. (SCI). NSC 099-2811-M-005-029.
5. Yung-Yao Lan, Ben-Jei Tsuang, Chia-Ying Tu, Ting-Yu Wu, Yuan-Long Chen, and Cheng-I Hsieh (2010, Apr). Observation and Simulation of Meteorology and Surface Energy Components over the South China Sea in Summers of 2004 and 2006. TAO, vol 21 (2): 325-342. (SCI). NSC 97-2811-M-005-006.
6. Yung-Yao Lan, Ben-Jei Tsuang, Noel Keenlyside, Shu-Lun Wang, Chen-Tung Arthur Chen, Bin-Jye Wang, Tsun-Hsien Liu (2010, Apr). Error estimations of dry deposition velocities of air pollutants using bulk sea surface temperature under common assumptions. Atmospheric Environment, vol 44, 2532-2542. (SCI). NSC 98-2621-M-005-001.

7. Yu Chi Lin, Man Ting Cheng, Wei Hsiang Lin, Yung-Yao Lan, Ben-Jei Tsuang (2010, Jan). Causes of the elevated nitrate aerosol levels during episodic days in Taichung urban area, Taiwan. Atmospheric Environment, vol 44, 1632-1640. (SCI).
8. Pei-Hsuan Kuo, Pei-Chen Ni, Andrew Keats, Ben-Jei Tsuang, Yung-Yao Lan, Min-Der Lin, Chien-Lung Chen, Yueh-Yuan Tu, Len-Fu Chang, Ken-Hui Chang (2009). Retrospective assessment of air quality management practices in Taiwan. Atmospheric Environment vol 43, 3925–3934. (SCI).
9. Yu Chi Lin, Yung Yao Lan, Ben-Jei Tsuang, Guenter Engling (2008). Long-term spatial distributions and trends of ambient CO concentrations in the central Taiwan Basin. Atmospheric Environment vol 42, 4320–4331. (SCI)

Others (Invited Talks，Keynote speech et al.)