Sheng-Hsiang (Carlo) Wang

Date of birth: October 3, 1977
Gender: Male
Address: No.300, Jhongda Rd., Jhongli City, Taoyuan County 32001, Taiwan
Department of Atmospheric Sciences, National Central University
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Education

Ph.D., Atmospheric Physics, National Central University, Taiwan, 2007

M.S., Atmospheric Physics, National Central University, Taiwan, 2001

B.S., Atmospheric Sciences, National Central University, Taiwan, 1999

B.S., Environmental Program, National Central University, Taiwan, 1999

Employment

08/2016-Present Associate Professor, Atmospheric Sciences, National Central University, Taiwan

02/2012-07/2016 Assistant Professor, Atmospheric Sciences, National Central University, Taiwan

03/2011-01/2012 NASA Postdoctoral Program Fellow, Goddard Space Flight Center, NASA, Greenbelt, Maryland, USA

03/2008-02/2011 Visiting Scientist, Goddard Space Flight Center/NASA, Greenbelt, MD, USA.
As an exchange scholar, Dr. Sheng-Hsiang Wang works at NASA/GSFC for international collaborative project. Such tasks include doing research on data obtained from both Taiwan and NASA field campaigns; improving aerosol retrieval methods for ground-based remote sensing; and participating field deployments in Asian region.
University of Maryland, College Park, MD, USA.

04/2007-02/2011 Postdoctoral Fellow, Department of Atmospheric Sciences, National Central University, Taiwan.

Professional Experience(行政職、合聘)

08/2016-Present Associate Professor, Atmospheric Sciences, National Central University, Taiwan

08/2016-Present Associate Professor, Atmospheric Sciences, National Central University, Taiwan

02/2023-07/2023 Section Chief, NCUx Sustainable Development and University Social Responsibility

09/2024-Present Chairman of the Finance Committee, Taiwan Association for Aerosol Research

09/2024-Present Chief Financial Officer, Taiwan Association for Aerosol Research

02/2025-Present Director, Alumni Association of National Central University, Taiwan

02/2025-Present (規劃小組委員), National Intercollegiate Athletic Games

Awards and Honors

Personal

2024 **加入專利獎項**

2024 Award on NCU Outstanding Research

2024 Award on NCU Outstanding Career Mentoring

2024 Silver Medal Award, Taiwan Innotech Expo Invention Competition

2023 Award on NCU Outstanding Research

2023 Award on NCU Outstanding Career Mentoring

2022 Chiu-sen Award, Taiwan Association for Aerosol Research

2021 Award on NCU Outstanding Research

2021 Award on Taiwan Association of Aerosol Research

2020 Award on NCU Outstanding Career Mentoring

2019 Award on NCU Outstanding Teaching

2019 Award on NCU Earth College Outstanding Teaching

2019 Award on NCU Outstanding Career Mentoring

2018 Award on NCU Outstanding Career Mentoring

2017 Award on NCU Outstanding Research

2016 Award on NCU Outstanding Career Mentoring

2016 Award on NCU Outstanding Research

2016 Award on the Best Paper in AAQR Journal

2015 Award on NCU Outstanding Career Mentoring

2015 Award on NCU Earth College Outstanding Tutoring

2015 Award on NCU Earth College Outstanding Teaching

2012 Award on NCU Outstanding Research for New Employee

2010 NASA Climate and Radiation Branch, Award for an act of exceptional merit

2010-2011 NASA Postdoctoral Program Fellowship

2007 The Phi Tao Phi Scholastic honor, Society of the Republic of China

2006-2007 Presidential Fellowship, National Central University

2001 Award, Atmospheric Graduate Students Conference

1996 Scholarship of Professor Hsueh-Yi Liao

Invited Talk

1. Wang S.-H. (2024)，三維空品觀測及斗六地區高污染特徵解析，雲嘉嘉南高屏空氣品質防制區交流協商會，雲林。(Dec. 5, 2024)
2. Wang S.-H. (2024), PBL Meteorology and Diurnal Variation of Smoke in Foothill Regions Based on UAV, AERONET, and Aerosol Lidar Observations, 2024 Asia Aerosol Conference 亞洲氣膠研討會, Kuching, Malaysia. (Nov. 5, 2024)
3. Wang S.-H. (2024), Solar radiation network in Taiwan, Silpakorn University, Thailand. (Jun. 21, 2024)
4. Wang S.-H. (2023)，無人機在空污監測之應用，環境遙測與健康效應科技論壇，國科會，台北。(Mar. 23, 2023)
5. Wang S.-H. (2022)，利用無人機與光達技術研析斗六高空污染事件成因，雲林縣環保局。(July 26, 2022)
6. Wang S.-H. (2022)，大氣無人機觀測與應用，彰化師範大學地理系，彰化。(March 17, 2022)
7. Wang S.-H. (2022)，空氣污染與天氣系統之關係與其觀測技術，苗栗縣環保局，苗栗。(January 13, 2022)
8. Wang S.-H. (2021)，認識無人機及實務操作訓練，氣象局，嘉義。(October 22, 2021)
9. Wang S.-H. (2021)，2021秋冬空污季空品預測與近年空品差異分析，中區空品應變會議，台中。(October 18, 2021)
10. Wang S.-H. (2021)，2021秋冬空污季空品預測與近年空品差異分析，南區空品應變會議，高雄。(October 4, 2021)
11. Wang S.-H. (2021)，垂直觀測在空氣品質的應用，中區及南區之空氣品質不良季節空氣污染跨區合作預防應變小組，台中。(March 17, 2021)
12. Wang S.-H. (2020)，高解析近地面大氣垂直剖面觀測，臺灣大學大氣科學系，台北。(December 21, 2020)
13. Wang S.-H. (2020)，無人機應用於大氣科學觀測之發展，氣象局南區氣象中心，台南。(November 18, 2020)
14. Wang S.-H. (2018), Aerosol Vertical Distribution and Air Quality over Southern Taiwan, 成功大學, 台南。(23 Nov 2018)
15. Wang S.-H. (2018), Influence of ENSO on the long-range transported PM2.5 to Taiwan, 中研院, 台北。(29 Aug 2018)
16. Wang S.-H. (2018), 無人機應用於大氣科學觀測之發展,中央氣象局, 台北。(26 Feb 2018)
17. Wang S.-H. (2017), Influence of ENSO on the long-range transported PM2.5 to Taiwan, NCU-IHS, Taiwan. (05 Dec 2017)
18. Wang S.-H. (2017), 中央大學宿舍演講: 搞懂天氣再出門。中央大學，桃園。(18 May 2017)
19. Wang S.-H. (2017), 氣象局106年度氣象測報機構在職人員訓練:自動氣象站觀測。新竹氣象站，新竹。(04 May 2017)
20. Wang S.-H. (2016), 應用光達解析細懸浮微粒垂直分布特徵與種類。國防大學中正理工學院，龍潭。(22 Jan 2016)

21. Wang S.-H. (2015), Transport of Chinese haze and clouds over Northern Taiwan, CCU, Taiwan. (28 May 2015)
22. Wang S.-H. (2014), Multiyear measurements of atmospheric radiation and aerosol optical properties at Mt. Lulin (鹿林山 2862m), Taiwan, NTNU, Taiwan. (25 March 2014)
23. Wang S.-H. (2013), Uncertainties in estimating direct aerosol radiative forcing, NTU, Taiwan. (18 Dec 2013)
24. Wang S.-H. (2013), Characterization of aerosol particles over the South China Sea and its biogeochemical impact. NTU-AS, Taiwan. (14 May 2013)
25. Wang S.-H. (2012), First detailed observations of long-range transported dust over the South China Sea and its biogeochemical impact. NCU-IHS, Taiwan. (11 December 2012)
26. Wang S.-H. (2012), Observations of Asian Dust Storm over Taiwan and the South China Sea. The Regional Conference on Dust and Dust Storms (November 20-24, 2012), Kuwait.
27. Wang, S.-H. (2011), Remote Sensing, In-situ Measurement, and Model Simulation of Atmospheric Aerosols over Asian Region: Toward a Better Understanding of Aerosol-Radiation-Climate Interactions, NCU, Taiwan. (4 January 2011)

Invited Article

Invited Visit

1. 日本早稻田大學受邀講學。(2019年7月24-30日)

2. 日本東京農工大學短期研究訪問。(2016年8月23-30日)

3. Invited to Attend the Regional Conference on Dust and Dust Storm by Environment Public Authority of State of Kuwait. (Nov. 20-22, 2012)

Professional Service(期刊編輯、審稿、學會委員)

2024–Present 氣膠學會財務長

Professional Societies

2007–Present American Geophysical Union
2007–Present 氣膠學會
2007–Present 氣象學會
2007–Present 環保學會

Research Interests

舊版/關鍵字

Atmospheric Observation, Remote Sensing, Radiative Transfer, Aerosol and Radiation, Regional Climate Change

新版/條列

- Atmospheric pollution and its impact on climate and health.
- Air quality monitoring and modeling.
- International observational experiments and field campaigns.
- Remote sensing applications in atmospheric studies.

Research Experiences

Projects

Participated local/national/international projects:

許桂榮等 (Feb-Dec, 2013)，南海空氣品質國際監測合作計畫，EPA-102-FA11-03-A217，環保署。(協同主持人)

林能暉等 (Jan-Dec, 2013)， 鹿林山背景測站科技研究及操作維護，EPA-102-U1L1-02-101，環保署。(協同研究)

王聖翔 (May 2012 – July 2013)，大氣污染物之光學特性與輻射效應評估-地面遙測技術與輻射傳遞模式之整合應用，NSC 101-2111-M-008 -003，國科會。(計畫主持人)

林能暉等 (Jan-Dec, 2012)， 鹿林山背景測站科技研究及操作維護，EPA-101-U1L1-02-101，環保署。(協同研究)

Long-term observation on acid deposition in Tao-Yuan County, 1999-2005.

Taiwan Acid Rain Program, Taiwan EPA, 2003-Present.

Lulin Atmospheric Background Station (LABS), Taiwan EPA/NSC/NCU, 2006–Present.

Long-term monitoring of regional atmospheric pollutants, NSC, 2007-Present.

Field campaign

Participated international field campaigns:

7-SEAS/BASELInE (7-South East Asian Studies/Doi Ang Khang), Doi Ang Khang, Thailand, February-April 2015.

7-SEAS/ BASELInE (7-South East Asian Studies/Doi Ang Khang), Doi Ang Khang, Thailand, February-April 2014.

7-SEAS/BASELInE (7-South East Asian Studies/Doi Ang Khang), Doi Ang Khang, Thailand, February-April 2013.

7-SEAS/Son La (7-South East Asian Studies/Son La), Son La, Vietnam, Mar-April 2012.

7-SEAS/Dongsha (7-South East Asian Studies/Dongsha), Dongsha Island, Taiwan, Mar-Jun 2010.

RAJO-MEGHA (Radiation, Aerosol Joint Observations – Monsoon Experiment in Gangetic-Himalayas Area), Nepal and India, April-June 2009.

TIGERZ, India, May-June 2008.

CHINA^2-AMY08 (Cloud, Humidity Interacting Natural/Anthropogenic Aerosols in Asian Monsoon Year-2008), China, Apr-Oct 2008.

BASE-ASIA (Biomass-burning Aerosols in South East-Asia: Smoke Impact Assessment), Thailand, Feb-May 2006.

ABC-EAREX (Atmospheric Brown Cloud – Gosan Campaign East Asian Regional Experiment), Mar-Apr 2005.

ACE-Asia (Aerosol Characterization Experiments – Asia), East Asia, Jan-May 2001.

Publications

Journals

(IF: impact factor; IF Rank 排名; ▲：被引用次數; *：Corresponding author)

1. Chang, C.-Y., J.-L. Wang, Y.-C. Chen, W.-N. Chen, S.-H. Wang, M.-T. Chuang, N.-H. Lin, C. C.-K. Chou, W.-S. Huang, L.-J. Ke, X.-X. Pan, Y.-J. Ho, Y.-Y. Chen, and C.-C. Chang* (2024), Spatiotemporal characterization of $PM_{2.5}$, O_3, and trace gases associated with east Asian continental outflows via drone sounding, *Science of The Total Environment*, Volume 930, 2024, 172732.
2. Kong, S. S.-K., S. R. Babu, S.-H. Wang, S. M. Griffith, J. H.-W. Chang, M.-T. Chuang, G.-R. Sheu, and N.-H. Lin* (2023), Expanding the simulation of East Asian Super Dust Storm: Physical transport mechanisms impacting the Western Pacific, *Atmos. Chem. Phys.*, https://doi.org/10.5194/egusphere-2023-1245.
3. Huang, H.-Y., S.-H. Wang*, W. K.M. Lau, S.-Y. Simon Wang, and A. M. da Silva (2024), Impact of regional climate patterns on the biomass burning emissions and transport over Peninsular Southeast Asia, 2000-2019, *Atmospheric Research*, 297, 107067, https://doi.org/10.1016/j.atmosres.2023.107067.
4. Wang, S.-H.*, H.-Y. Huang, C.-H. Lin, S.K. Pani, N.-H. Lin, C.T. Lee, S. Janjai, B. N. Holben, and S. Chantara (2024), Columnar aerosol types and compositions over peninsular Southeast Asia based on long-term AERONET data, *Air Qual Atmos Health*, 17, 1193–1204, https://doi.org/10.1007/s11869-021-01119-2.

5. Tran, H. D., Huang H.-Y., Yu J.-Y., and S.-H. Wang* (2023), Forecasting hourly PM2.5 concentration with an optimized LSTM model, Atmospheric Environment, 315, 120161, https://doi.org/10.1016/j.atmosenv.2023.120161.
6. Pani, S.K., H.-Y. Huang, S.-H. Wang*, B. N. Holben, and N.-H. Lin* (2023), Long-term observation of columnar aerosol optical properties over the remote South China Sea, *Science of The Total Environment*, 905, 167113, https://doi.org/10.1016/j.scitotenv.2023.167113.
7. Lin, K.-I., K.-S. Chung*, S.-H. Wang, L.-H. Chen, Y.-C. Liou, P.-L. Lin, W.-Y. Chang, H.-J. Chiu, and Y.-H. Chang: Evaluation of hygroscopic cloud seeding in warm-rain processes by a hybrid microphysics scheme using a Weather Research and Forecasting (WRF) model: a real case study (2023), *Atmos. Chem. Phys.*, 23, 10423–10438, https://doi.org/10.5194/acp-23-10423-2023.
8. Pani, S.K., N.-H. Lin, S.-H. Wang, S. Chantara, S. M. Griffith, and J. H.-W. Chang (2023), Aerosol mass scattering efficiencies and single scattering albedo under high mass loading in Chiang Mai valley, Thailand, *Atmospheric Environment*, 308, 119867, https://doi.org/10.1016/j.atmosenv.2023.119867.
9. Ou-Yang, C.-F., C.-C. Chang, S.-H. Wang, C. C.-K. Chou, M.-T. Chuang, T.-H. Lin, W.-N. Chen, T.-C. Hsiao, M.-C. Yen, Y.-C. Wang, N.-H. Lin, and J.-L. Wang, (2023) Integrated ground and vertical measurement techniques to characterize overhead atmosphere: Case studies of local versus transboundary pollution, *Science of The Total Environment*, 163919, https://doi.org/10.1016/j.scitotenv.2023.163919.
10. Jeong, U., S.-C. Tsay, N. C. Hsu, D. M. Giles, J. W. Cooper, J. Lee, R. J. Swap, B. N. Holben, J. J. Butler, S.-H. Wang, S. Chantara, H. Hong, D. Kim, and J. Kim (2022), Simultaneous retrievals of biomass burning aerosols and trace gases from the ultraviolet to near-infrared over northern Thailand during the 2019 pre-monsoon season, *Atmos. Chem. Phys.*, 22, 11957–11986, https://doi.org/10.5194/acp-22-11957-2022.
11. Su, S.-H., Y.-H. Chang, C.-H. Liu, W.-T. Chen, W.-Y. Chang, J.-P. Chen, et al. (2022), Observing severe precipitation near complex topography during the Yilan Experiment of Severe Rainfall in 2020 (YESR2020). *Q J R Meteorol Soc*, 1– 20. https://doi.org/10.1002/qj.4271.
12. Macatangay, R., Thongsame, W., Solanki, R., Wu, Y. J., Wang, S. H., Supasri, T., & Noisapung, J. (2022). Improved mixing height estimates from atmospheric LiDAR measurements. *J. Phys.: Conf. Ser*, 2145(1), 012053. IOP Publishing, https://doi.org/10.1088/1742-6596/2145/1/012053
13. Yang, S.-C., F.-Y. Cheng, L.-J. Wang, S.-H. Wang, and C.-H. Hsu (2022), Impact of lidar data assimilation on planetary boundary layer wind and PM2.5 prediction in Taiwan, *Atmospheric Environment*, 277, 119064.
14. Xu, N., M. Hu, Z. Zhang, X. Li, S. Hu, J. Chen, Z. Zhang, R. Tang, L. Zeng, F. Chen, Z. Jin, F. Yang, H. Lin, J. Chen, Y. Chen, M. Li, R. Zheng, C.-T. Lee, S.-H. Wang, C.-W. Lee, C.-S. Yuan, C.-T. Chang, K.-H. Chang, and Y. Zhang (2022), Chemical characteristics and sources of organic aerosols across the Taiwan Strait, *Atmospheric Pollution Research*, 13(2), https://doi.org/10.1016/j.apr.2021.101312. (IF= 4.352)
15. Cheng, F.-Y., Wang, Y.-T., Huang, M.-Q., Lin, P.-L., Lin, C.-H., Lin, P.-H., S.-H. Wang, and B.-J. Tsuang (2022), Boundary layer characteristics over complex terrain in central Taiwan: Observations and numerical modeling. *Journal of Geophysical Research: Atmospheres*, 127, e2021JD035726. https://doi.org/10.1029/2021JD035726
16. Chuang, M. T., Chou, C. C., Hsiao, T. C., Lin, K. Y., Lin, N. H., Lin, W. Y., ... & Lee, C. T. (2021), Analyzing the increasing importance of nitrate in Taiwan from long-term trend of measurements. *Atmospheric Environment*, 267, 118749, https://doi.org/10.1016/j.atmosenv.2021.118749

17. Rose, C. et al. (2021), Seasonality of the particle number concentration and size distribution: a global analysis retrieved from the network of Global Atmosphere Watch (GAW) near-surface observatories, *Atmos. Chem. Phys.*, 21, 17185–17223, https://doi.org/10.5194/acp-21-17185-2021, 2021.
18. Huang, WS., Griffith, S.M., Lin, YC. et al. (2021), Satellite-based Emission Inventory Adjustments Improve Simulations of Long-range Transport Events, *Aerosol Air Qual. Res.* 21, 210121. https://doi.org/10.4209/aaqr.210121
19. Ooi, M. C.-G., M.-T. Chuang, J. S. Fu, S. S. Kong, W.-S. Huang, S.-H. Wang, S. Pimonsree, A. Chan, S. K. Pani, and N.-H. Lin (2021), Improving prediction of trans-boundary biomass burning plume dispersion: from northern peninsular Southeast Asia to downwind western North Pacific Ocean, *Atmos. Chem. Phys.*, 21, 12521–12541, https://doi.org/10.5194/acp-21-12521-2021.
20. Wang, Y.C., S.-H. Wang*, J.R. Lewis, S.C. Chang, and S.M. Griffith (2021), Determining planetary boundary layer height by micro-pulse lidar with validation by UAV measurements. *Aerosol Air Qual. Res.*, https://doi.org/10.4209/aaqr.200336
21. Punsompong, P., S. K. Pani, S.-H. Wang*, and T. T. B. Pham (2021), Assessment of biomass-burning types and transport over Thailand and the associated health risks, *Atmospheric Environment*, 247, 2021, 118176, https://doi.org/10.1016/j.atmosenv.2020.118176.
22. Chen, Y.-C., S.-H. Wang*, Q. Min, S. Lu, P.-L. Lin, N.-H. Lin, K.-S. Chung, and E. Joseph (2021), Aerosol impacts on warm-cloud microphysics and drizzle in a moderately polluted environment, Atmos. Chem. Phys., 21, 4487–4502, https://doi.org/10.5194/acp-21-4487-2021.
23. Chuang, M.-T.*, M. C. G. Ooi, N.-H. Lin, J. S. Fu, C.-T. Lee, S.-H. Wang, M.-C. Yen, S. S.-K. Kong, and W.-S. Huang (2020), Study on the impact of three Asian industrial regions on PM2.5 in Taiwan and the process analysis during transport, Atmos. Chem. Phys., 20, 14947–14967, https://doi.org/10.5194/acp-20-14947-2020.
24. Nguyen L. S. P., H.-Y. Huang, T. L. Lei, T. T. Bui, S.-H. Wang*, K. H. Chi, G.-R. Sheu*, C.-T. Lee, C.-F. Ou-Yang, and N.-H. Lin (2020), Characterizing a landmark biomass-burning event and its implication for aging processes during long-range transport. Atmospheric Environment, 241, 117766, https://doi.org/10.1016/j.atmosenv.2020.117766. (IF= 4.633)
25. Griffith S. M. et al. (2020), Long-Range Air Pollution Transport in East Asia During the First Week of the COVID-19 Lockdown in China. Science of The Total Environment, 741, 140214. (IF=6.551)
26. Lolli, S., Y.-C. Chen, S.-H. Wang*, and G. Vivone (2020), Impact of meteorological conditions and air pollution on COVID-19 pandemic transmission in Italy. Scientific Reports 10, 16213 (2020). https://doi.org/10.1038/s41598-020-73197-8. (IF= 4.576)
27. Wang S.-H.*, H.-W. Lei, S. K. Pani, H.-Y. Huang, N.-H. Lin, E.J. Welton, S.-C. Chang, Y.-C. Wang (2020), Determination of Lidar Ratio for Major Aerosol Types over Western North Pacific Based on Long-Term MPLNET Data. Remote Sensing, 12(17), 2769. (IF= 4.509)
28. Laj P. et al. (2020), A global analysis of climate-relevant aerosol properties retrieved from the network of GAW near-surface observatories, Atmospheric Measurement Techniques, 13, 4353–4392, https://doi.org/10.5194/amt-13-4353-2020. (IF=3.668)
29. Lolli, S.*, K. Qin, J.R. Campbell, S.-H. Wang (2020), Editorial for Special Issue "High Resolution Active Optical Remote Sensing Observations of Aerosols, Clouds and Aerosol–Cloud Interactions and Their Implication to Climate". Remote Sensing, 12, 2166. (IF=4.509)

30. Pani S. K., S.-H. Wang, N.-H. Lin*, S. Chantara, C.-T. Lee, and D. Thepnuan (2020), Black carbon over an urban atmosphere in northern peninsular Southeast Asia: Characteristics, source apportionment, and associated health risks. Environmental Pollution, 259, 113871. (IF=6.792)
31. Huang H.-Y., S.-H. Wang*, W.-X. Huang, N.-H. Lin, M.-T. Chuang, A. M. da Silva, and C.-M. Peng (2020), Influence of synoptic-dynamic meteorology on the long-range transport of Indochina biomass burning aerosols. Journal of Geophysical Research: Atmospheres, 125, e2019JD031260. (IF= 3.821)
32. Wang S.-H.*, R.-Y. Hung, N.-H. Lin, Á. Gómez-Losada, J. C.M. Pires, K. Shimada, S. Hatakeyama, and A. Takami (2020), Estimation of background PM2.5 concentrations for an air-polluted environment, Atmospheric Research, 231, 104636. Doi: https://doi.org/10.1016/j.atmosres.2019.104636. (IF= 4.676)
33. Hung W.-T.*, C.-H. Lu*, S.-H. Wang, S.-P. Chen, F. Tsai, and C.-K. Chou (2019), Investigation of long-range transported PM2.5 events over Northern Taiwan during 2005–2015 winter seasons, Atmospheric Environment, 217, 116920. Doi: https://doi.org/10.1016/j.atmosenv.2019.116920. (IF=4.039)
34. Huang K., J. S. Fu*, N.-H. Lin*, S.-H. Wang, X. Dong, and G. Wang (2019), Superposition of Gobi dust and Southeast Asian biomass burning: the effect of multi-source long-range transport on aerosol and regional meteorology modification, Journal of Geophysical Research, 124. Doi: https://doi.org/10.1029/2018JD030241. (IF=4.039)
35. Pani S. K., C.-F. Ou-Yang, S.-H. Wang, J. A. Ogren, P. J. Sheridan, G.-R. Sheu, and N.-H. Lin*, (2019), Relationship between atmospheric black carbon and carbon monoxide at a high altitude background station in East Asia. Atmospheric Environment, 210, 86-99. Doi: https://doi.org/10.1016/j.atmosenv.2019.04.05. (IF=4.039)
36. Pani S. K., N.-H. Lin*, S. Chantara, S.-H. Wang, C. Khamkaew, T. Prapamontol, and S. Janjai (2018), Radiative response of biomass-burning aerosols over an urban atmosphere in northern peninsular Southeast Asia, Science of the Total Environment, 633, 892-911. doi: 10.1016/j.scitotenv.2018.03.204. (IF=5.589)
37. Kishcha P.*, S.-H. Wang, N.-H. Lin, A. da Silva, T.-H. Lin, P.-H. Lin, G.-R. Liu, B. Starobinets, and P. Alpert (2018), Differentiating between Local and Remote Pollution over Taiwan, Aerosol and Air Quality Research, 18(7), 1788-1798, DOI: 10.4209/aaqr.2017.10.0378. (IF=2.735)
38. Dong X., J. S. Fu*, K. Huang, N.-H. Lin, S.-H. Wang, and C.-E. Yang (2018), Analysis of the co-existence of long-range transport biomass burning and dust in the subtropical West Pacific region, Scientific Reports, 8, 8962. (IF=4.011)
39. Pani S. K., C.-T. Lee*, C. C.-K. Chou, K. Shimada, S. Hatakeyama, A. Takami, S.-H. Wang, and N.-H. Lin* (2017), Chemical Characterization of Wintertime Aerosols over Islands and Mountains in East Asia: Impacts of the Continental Asian Outflow, Aerosol and Air Quality Research, 17 (12), 3006-3036, doi: 10.4209/aaqr.2017.03.0097. (IF= 2.606)
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1. Wang, S.-H., et al. (2024), UAS-based analysis of rainfall mechanisms in a complex terrain area during the YESR experiment, 2024 American Geophysical Union Fall Meeting (AGU24), DC, USA.
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13. Yueh-Chen Wang, S.-H. Wang (2023), Investigating the Relationship between PM2.5 Concentration and Planetary Boundary Layer Height by using Taiwan MicroPulse Lidar Network , 2023 American Geophysical Union Fall Meeting (AGU23), San Francisco, USA
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Teaching Experience

Course in Lecture(上portal>eclass update+年分)

Atmospheric instrument design and application implementation
Atmospheric instrument design and application implementation I
Remote sensing and air quality applications
Atmospheric instrumentation and observation I
Atmospheric instrumentation and observation II
Special topic on advanced instrumentation and application of atmospheric radiation
Innovative Interdisciplinary Learning Course-Understanding and Observing PM2.5

Student Advisory (學生指導)

Ph. D 博士論文

1. 王悅晨(2024)，多部氣膠光達解析臺灣大氣邊界層特性與空氣污染差異之研究，博士論文。
2. 黃翔昱(2020)，中南半島生質燃燒氣膠傳送動力機制及區域氣候反饋，博士論文。

Masters 碩士論文

1. 黃文琪(2024)，斗六地區高PM2.5事件期間之天氣特徵與大氣垂直結構，碩士論文。
2. 潘巧玲(2024)，微型大氣探空開發及T-POMDA空污實驗應用，碩士論文。
3. 劉豪聯(2024)，宜蘭地形迴流與冬季降雨機制－無人機觀測與分析，碩士論文。
4. 林伯勳(2024)，鹿林山春季雲事件之高時間解析雲微物理觀測與分析研究，碩士論文。
5. 吳秉謙(2023)，全天空影像雲量估算與極短期輻射量預測能力之評估研究，碩士論文。
6. 洪家呈(2023)，無人機觀測臺南地區海陸風三維結構 與伴隨之$PM_{2.5}$演化，碩士論文。
7. 阿彌陀(2023)，PBL 發展和山谷風環流對泰北生質燃燒霾害日夜變化的影響，碩士論文。
8. 陳瑜(2023)，利用深度學習之長短期記憶模型預報台灣地面$PM_{2.5}$濃度，碩士論文。
9. 吳崑旭(2022)，大氣亂流儀量測方法建立及儀器開發與實測，碩士論文。
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12. 張哲維(2021)，利用向日葵8號衛星及單層輻射傳送模式反演地面輻射量，碩士論文。
13. 陳威儒(2021)，氣膠光學及微物理反演法開發:以鹿林山大氣背景站應用為例，碩士論文。
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15. 徐健恩(2020)，氣膠對臺灣中部平原夏季降水日變化之影響，碩士論文。
16. 林哲玄(2019)，利用AERONET資料解析中南半島氣膠種類及成分，碩士論文。
17. 柯立晉(2018)，發展適用於大氣邊界層觀測之無人機系統，碩士論文。
18. 陳映潔(2018)，氣膠對臺灣北部暖雲為物理與毛雨的影響，碩士論文。
19. 薛乃儒(2018)，Characteristics and corrections of thermal offset for secondary standard pyranometers, master thesis.
20. 洪若雅(2017)，臺灣大氣背景$PM_{2.5}$質量濃度之推估，碩士論文。
21. 姚徵閔(2017)，Mapping surface solar radiation with satellite data over Taiwan, master thesis.
22. 陳柏霖(2017)，雲林斗六$PM_{2.5}$濃度變化與氣膠光學特性及氣膠條件之關聯性研究，碩士論文。
23. 李慶偉(2014)，中壢地區光達消光散射比之長期分析與污染物關聯性研究，碩士論文。
24. 林定賢(2014)，中南半島生質燃燒氣膠濃度分布之年際變化與其對區域環境衝擊研究，碩士論文。
25. 黃翔昱(2013)，鹿林山背景站大氣輻射及氣膠輻射驅動力之研究，碩士論文。

Student Award 學生獲獎紀錄**(研發系統+系辦+學生自填補充)**

1. 指導碩士學生林定賢，榮獲科技部補助研究生出席國際學術會，2013 年台泰國際氣膠研討會(Nov. 8-9, 2013)於泰國曼谷舉辦，並發表 Aerosol optical properties of biomass-burning haze over northern SE Asia measured by AERONET during 7-SEAS field deployments 一文。
2. 指導碩士學生李慶偉，榮獲科技部補助研究生出席國際學術會，2013 年台泰國際氣膠研討會(Nov. 8-9, 2013)，並發表 Long-term Analysis of Aerosol-Type Dependent Lidar Ratio over Chung-Li City, Taiwan 一文。
3. 指導學士級畢業學生助理洪暐婷，榮獲 2015 年大氣科學學門成果發表會暨研究生海報競賽(Feb 28, 2015)佳作。
4. 指導博士班學生黃翔昱，榮獲中央大學地科院補助研究生出席國際學術會，第十三屆大氣科學與空氣品值應用研討會 November 11-13 ,2015 (Nov. 11-13, 2015)於日本神戶舉辦，並發表 Investigating smoke transport and its radiative effects during the 7-SEAS/BASELInE experiment using the MERRAero 一文。
5. 指導碩士生姚徵閔，榮獲 2017 年大氣科學學門成果發表會暨研究生海報競賽(Feb 09, 2015)亞軍。
6. 指導碩士學生薛乃儒，榮獲科技部補助研究生出席國際學術會，2017 年美國海洋大氣總署 全球觀測年會(May 21-26, 2017)，並發表 Analysis of Solar Radiation Measurements at BSRN Lulin Candidate Station 一文。
7. 2018 王簾傑，財團法人全錄文教基金會國內學術研究獎助，優等。

8. 2018 王簾傑，25 屆國際氣膠科技研討會暨 2018 細懸浮微粒管制與能見度改善研討會學生論文競賽，第三名。

Other Activities

Supporting Science Education Popularize 科普教育參與

- 協助『環保署氣候變遷知識』審查校稿。(2019/10/15)
- 協助『桃園農博天候競技場』大氣氣象科普文案規劃。(2019/7/1)
- 科普影片『一沙一世界影片』科學顧問及審稿。(2017/6/1)
- 接受文化局補助造雲師動畫片顧問。(2017/4/24)
- 接受city news 城市新聞電訪有關中國霾害對台灣的影響。(2015/3/12)
- 參與大愛電視台—節氣樂活家錄影訪談。 (2015/1/29)
- 參與大愛電視台地球鐵證—單元: 導讀<烏雲籠罩的世界頂峰>紀錄片 (2014/4/24)
- 參與國科會補助媒體製作—『何處惹塵埃』全球大氣傳輸與影響，科學顧問及協助拍攝 (2012 -2013)

Professional development 教學培力

- 參與「教育美學師培研習-大學教師的追尋與擺渡」2018/8/20-24
- 參與「驚艷一分鐘簡報術讀書會」2018/3/29
- 參與「專利檢索與競爭情報研習」2018/3/28
- 參與「106年度創新教學徵件與分享會」 2017/2/14
- 參與【如何讓學生真正有熱情與動機學習?】葉丙成教授講座 2014/12/2
- 參與「新一代數位學習對教學的衝擊與影響研討會」 2014/12/13