

# Hui-Wen Lai

## Personal Information

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Address | Guldhedsgatan 5A, 413 20 Göteborg, Sweden  
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## Education

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Sep. 2018 | **Doctoral Student in Earth Sciences**  
– *Current* | University of Gothenburg, Göteborg, Sweden  
Dissertation: “Dynamics and importance of convection for precipitation in the Third Pole region: model simulations” | Advisor: Prof. Deliang Chen

2018 | **Master of Science** in Meteorology and Atmospheric Science, The Pennsylvania State University, University Park, Pennsylvania, USA  
Thesis: “Large eddy simulation of multi-layered Arctic mixed-phase clouds” | Advisors: Prof. Eugene E. Clothiaux and Fuqing Zhang

## Work Experience

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Sep. 2018 | **Chapter Scientist**  
– *Current* | The Intergovernmental Panel on Climate Change, Working Group I, Chapter 1  
Assisted the Coordinating Lead Authors in coordinating the communications and schedules, as well as supporting the author team in compiling chapter contributions.

Sep. 2014  
– Jul. 2015 | **Research Assistant**  
Center for Space and Remote Sensing Research, National Central University, Taoyuan, Taiwan  
Applied data assimilation using the Gridpoint Statistical Interpolation (GSI) system to assimilate GPSRO into WRF. Focused on tropical cyclone forecasts, quantitative precipitation estimation, and ensemble forecasts.

## Publications

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- 2022 | Pang, G., D. Chen, X. Wang, and **H.-W. Lai**, 2022: Spatiotemporal variations of land surface albedo and associated influencing factors on the Tibetan Plateau. *Sci. Total Environ.*, 804, 150100, <https://doi.org/10.1016/j.scitotenv.2021.150100>.
- 2021 | Minola, L., H. Reese, **H.-W. Lai**, C. Azorin-Molina, J. A. Guijarro, S.-W. Son, and D. Chen, 2021: Wind stilling-reversal across Sweden: The impact of land-use and large-scale atmospheric circulation changes. *Int. J. Climatol.*, accepted, <https://doi.org/10.1002/joc.7289>.
- 2021 | **Lai, H.-W.**, H. W. Chen, J. Kukulies, T. Ou, and D. Chen 2021: Regionalization of seasonal precipitation over the Tibetan Plateau and associated large-scale atmospheric systems. *J. Clim.*, 34(7), 2635-2651, <https://doi.org/10.1175/JCLI-D-20-0521.1>.
- 2020 | Ou, T., D. Chen, X. Chen, C. Lin, K. Yang, **H.-W. Lai**, and F. Zhang, 2020: Simulation of summer precipitation diurnal cycles over the Tibetan Plateau at the gray-zone grid spacing for cumulus parameterization. *Clim. Dyn.*, 54, 3525–3539, <https://doi.org/10.1007/s00382-020-05181-x>.
- 2020 | **Lai, H.-W.**, F. Zhang, E. E. Clothiaux, D. R. Stauffer, B. J. Gaudet, J. Verlinde, and D. Chen, Modeling Arctic boundary layer cloud streets at grey-zone resolutions. *Adv. Atmos. Sci.*, 37(1), <https://doi.org/10.1007/s00376-019-9105-y>.
- 2019 | He, J., F. Zhang, X. Chen, X. Bao, D. Chen, H. M. Kim, **H.-W. Lai**, L. R. Leung, X. Ma, Z. Meng, T. Ou, Z. Xiao, E.-G. Yang, K. Yang, and L. Zhu, Development and Evaluation of an Ensemble-based Data Assimilation System for Regional Reanalysis over the Tibetan Plateau and Surrounding Regions. *J. Adv. Model. Earth Syst.*, 11. <https://doi.org/10.1029/2019MS001665>

## Honors and Scholarships

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2020	Travel scholarship from Adlerbertska Stipendiestiftelsen
2019	Travel fund to International Conference on Regional Climate-CORDEX 2019
2018	Research fund from Professor Sven Lindqvists forskningsstiftelse för doktorandstudier
2017	Chi Epsilon Pi, the National Meteorology Honor Society
2011	Scholarship from Chinese Society of Photogrammetry and Remote Sensing

## Skills

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Programming	Advanced: Python, MATLAB; Intermediate: Git, Fortran, LaTeX; Basic: Bash shell, R
OS	Linux, Windows
Graphics	NCL
NWP models	The Weather Research and Forecasting (WRF) model, WRF-LES, WRF-data assimilation

## Languages

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Native	Mandarin
Fluent	English
Studied	Swedish, Japanese

## Teaching

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2021	<b>Teaching Assistant</b> , Department of Earth Sciences, University of Gothenburg, Sweden *Climate change in an Earth System perspective
2017	<b>Teaching Assistant</b> , Department of Meteorology and Atmospheric Science, The Pennsylvania State University, Pennsylvania, USA *Introduction to Weather Analysis *Atmospheric Thermodynamics
2012 – 2014	<b>Teaching Assistant</b> , Center for General Education, National Central University, Taiwan *An Introduction to Global Environmental Change
2012	<b>Teaching Assistant</b> , Center for General Education, National Central University, Taiwan *Atmospheric Physics

## Presentations

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2021	Regionalization of seasonal precipitation over the Tibetan Plateau (vPICO), EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-13259, <a href="https://doi.org/10.5194/egusphere-egu21-13259">https://doi.org/10.5194/egusphere-egu21-13259</a> .
2019	Downscaled summer convective activities and precipitation over the Tibetan Plateau through ensemble-based data assimilation (poster), International Conference on Regional Climate-CORDEX 2019, China.
2018	Sensitivity of Arctic boundary layer cloud streets to modeling resolution (poster), AGU Fall Meeting 2018, USA.
2018	An observation and modeling study of a multi-layered Arctic mixed-phase boundary layer cloud (poster), 2018 ARM/ASR PI meeting, USA.
2017	Dynamic and thermodynamic processes in a multi-layered Arctic mixed-phase boundary layer cloud: A case study (poster), 2017 Radiation and Climate (GRC/GRS), USA.
2017	Apply Modeling and polarimetric radar studies of single- and multi-layered Arctic mixed-phase clouds. (poster), 2017 ARM/ASR PI meeting, USA.
2015	Evaluation of GPS Radio Occultation Data Impact in the Upper Air for Typhoon Prediction. (oral presentation), The International Symposium on Remote Sensing, Taiwan.
2013	Apply GSMaP Global Rainfall Data to Improve I-TRaP Approach over Taiwan. (oral presentation), 34th Asian Conference on Remote Sensing, Indonesia.