Tong Li

Curriculum Vitae

Pacific Climate Impacts Consortium
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Personal Information

Name	Tong Li
Nationality	Chinese
Identity	Post-doctoral Scientist
Supervisors	Prof. Francis Zwiers, Prof. Xuebin Zhang

Research Interests

My research focuses on global and regional climate change, detection and attribution, and future projections. Currently, I am working on exploring the implementation of observational constraint techniques to improve estimation accuracy, as well as integrating historical climate change with future projections within a unified statistical framework to better understanding the ongoing changing climate.

Work Experience

07/2023–Current **Post-doctoral Scientist**, Pacific Climate Impacts Consortium (PCIC), University of Victoria (UVIC), Victoria, Canada

Education

09/2018–06/2023 **Ph.D. in Meteorology**, Nanjing University of Information Science and Technology (NUIST), Nanjing, China

School of Atmospheric Sciences

09/2014–06/2018 **B.Sc. in Mathematics and Applied mathematics**, NUIST, Nanjing, China

School of Mathematics and Statistics

Peer-Reviewed Publications

- **Li, T.**, F. Zwiers, X. Zhang 2025 Should we think of observationally constrained multidecade climate projections as predictions? *Science Advances*. **11 (20)** eadt6485. DOI: 10.1126/sciadv.adt6485
- **Li, T.**, F. Zwiers, X. Zhang, 2025 Constrained estimates of externally forced past and future warming for Canada. Submitted to Earth's Future.
- Li, C., F. Zwiers, X. Zhang, E. Fischer, F. Du, J. Liu, J. Wang, Y. Liang, **T. Li** 2025 Constraining the entire Earth system projections for more reliable climate change adaptation planning. *Science Advances*. **11 (9)** eadr5346. DOI: 10.1126/sciadv.adr5346
- Wang, B., Y. Sun, X. Zhang, T. Hu, **T. Li** 2025 Constrained Projections of Extreme Low Temperatures in Eastern China. *Journal of Geophysical Research: Atmospheres*. **130 (6)** e2024JD042741 DOI: 10.1029/2024JD042741
- **Li, T.**, X. Zhang, Z. Jiang 2024 What aspect of model performance is the most relevant to skillful future projection on regional scale? *Journal of Climate*. **37** 1567-1580. DOI: 10.1175/jcli-d-23-0312.1

- Li, M., Z. Jiang, **T. Li**, Y. Sang 2024 Interdecadal variations and possible causes of rain belt's advancing velocity in Eastern China based on evolutionary circulation pattern. *Climate Dynamics*. **62** 7365–7380. DOI: 10.1007/s00382-024-07283-2
- Li, C., Q. Sun, J. Wang, Y. Liang, F. Zwiers, X. Zhang, **T. Li.** 2024 Constraining projected changes in rare intense precipitation events across global land regions. *Geophysical Research Letters*. **51**. DOI: 10.1029/2023gl105605
- Zhu, H., Z. Jiang, L. Li, W. Li, S. Jiang, P. Zhou, W. Zhao, **T. Li.** 2023 Intercomparison of multi-model ensemble-processing strategies within a consistent framework for climate projection in China. *Science China Earth Sciences*. **66** 2125–2141. DOI: 10.1007/s11430-022-1154-7
- **Li, T.**, Z. Jiang, H. L. Treut, L. Li, L. Zhao, and L. Ge 2021 Machine learning to optimize climate projection over China with multi-model ensemble simulations. *Environmental Research Letters*. **16** 094028. DOI: 10.1088/1748-9326/ac1d0c
- Li, M., Q. Sun, M. A. Lovino, S. Ali, M. Islam, **T. Li.**, et al. 2021 Non-uniform changes in different daily precipitation events in the contiguous United States. *Weather and Climate Extremes*. **35** 100417. DOI: 10.1016/j.wace.2022.100417
- **Li, T.**, Z. Jiang, L. Zhao, and L. Li 2020 Multi-model ensemble projection of precipitation changes over China under global warming of 1.5 and 2°C with consideration of model performance and independence. *Journal of Meteorological Research*. **35** 184-197. DOI: 10.1007/s13351-021-0067-5

Peer Review Activities

01/2024–12/2024 Reviewed one manuscript for *Environmental Research Letters*, one manuscript for *Journal of Geophysical Research-Atmospheres*, and assisted in reviewing one manuscript for *Geophysical Research Letters*.

01/2022–12/2022 Reviewed for one manuscript for *Environmental Research Letters*.

Selected Conference Presentations and Posters

05/2025 Li, T., F. Zwiers and X. Zhang, Constrained estimates of externally forced past and future warming for Canada. EGU2025. Oral presentation. Vienna, Austria

05/2025 Li, T., F. Zwiers and X. Zhang, How much of the historical global mean surface temperature record is needed to well constrain projections of future warming? EGU2025. Poster presentation. Vienna, Austria

06/2024 Li, T., F. Zwiers and X. Zhang, Constrained attributable past warming and future projection for Canada. IMSC2024. Oral presentation. Toulouse, France

10/2022 Li, T. and X. Zhang, What aspect of model performance is the most relevant to skillful future projection on regional scale?. ECCC CRD seminar. Oral presentation. Online

12/2021 Li, T., Z. Jiang and L. Li, Machine learning to optimize climate projection over China with multi-model ensemble simulations. AGU Fall Meeting 2021. Poster presentation. Online

11/2021 Li, T., Z. Jiang and L. Li, Machine learning to optimize climate projection over China with multi-model ensemble simulations. 1st IAMES Conference 2021. Oral presentation. Nanjing, China

11/2021 Li, T., Z. Jiang and L. Li, Weighting strategy and Machine learning to optimize multi-model ensemble projection. Academic Innovation Forum of Atmospheric Science for Postgraduates in Jiangsu Province 2021. Oral presentation. Nanjing, China

10/2019 Li, T., WCRP Institute of Advanced Studies in Climate Extremes and Risk Management 2019. Participated and volunteer. Nanjing, China

10/2019 Li, T., Z. Jiang and L. Li, Projected changes of mean and extreme climate events over China under 1.5°C and 2°C based on machine learning. International Conference on Regional Climate-CORDEX 2019. Oral presentation. Beijing, China

10/2019 Li, T., Z. Jiang and L. Li, Projected changes of mean and extreme climate events over China under 1.5°C and 2°C based on machine learning. Symposium of Climate Variation, Prediction and Application 20-Year Anniversary of IOD Research 2019. Poster presentation. Nanjing, China

Key Scholarships & Awards

12/2021 First Prize of Academic Performance scholarship (Top 10%), School of Atmospheric Sciences, NUIST, Nanjing, China

11/2021 Best Oral Presentation Award of 1st IAMES Conference 2021, International Association of Meteorological Education and Sciences(IAMES), Nanjing, China

10/2021 First Prize of Ph.D. proposal scholarship (Top 10%), School of Atmospheric Sciences, NUIST, Nanjing, China

11/2018 First Prize of Academic Performance scholarship, School of Atmospheric Sciences, NUIST, Nanjing, China

04/2017 Meritorious Winner of 2017 Mathematical/Interdisciplinary Contest In Modeling, COMAP, America

10/2016 First Prize of 2016 China Undergraduate Mathematical Contest in Modeling, CSIAM, China

Skills and Interests

Language Native in Chinese; Fluent in English

Coding Advanced: Python, NCL, CDO; Basic: R, MATLAB, Bash

Software Microsoft Office, EndNote, LaTeX, MindMaster

Hobbies Badminton, Movies, Hiking

Websites

Google scholar https://scholar.google.ca/TongLi

ORCID https://orcid.org/0000-0001-6204-1172

ResearchGate https://www.researchgate.net/profile/Tong-Li-138