

CURRICULUM VITAE

PERSONAL INFORMATION

Name Sifang Feng
Date of Birth May 29, 1997
Address Beijing Normal University, Beijing, China
Tel: +86 13146052033
Email: fengsf@mail.bnu.edu.cn
Personal website: <https://www.sifangfeng.blog/>

EDUCATION

Beijing Normal University **Beijing, China**
Ph.D. of Hydraulic engineering *Since 09/2021*

- Supervisor: Prof. Fanghua Hao and Prof. Zengchao Hao
- Thesis title: Linkages, attribution and projection among compound hot-dry events

Helmholtz-Centre for Environmental Research (UFZ) **Leipzig, Germany**
Visiting Student *10/2022 – 03/2024*

- Supervisor: Prof. Jakob Zscheischler and Dr. Emanuele Bevacqua
- Research topic: Spatial dependence between crop production

Beijing Normal University **Beijing, China**
Master of Hydraulic engineering *09/2018 – 06/2021*

- Supervisor: Prof. Zengchao Hao
- Thesis title: Variations of compound dry-hot events and impacts on global crop yields

Sichuan Agricultural University **Sichuan, China**
Bachelor of Water Resources and Hydropower Engineering *09/2014 – 06/2018*

- GPA: 90.1/100; Overall Rank: 2/188

AREA OF INTEREST

- Characteristic, attribution, and projection of high-impact extremes (e.g., wildfire, co-occurrent crop failure)
- Impact (e.g., crop loss) and physical drivers (e.g., ENSO) of compound climate extremes
- Evaluation and uncertainty of climate models (CMIP6) and impact models (e.g., crop models from ISIMIP)
- Large ensemble climate model simulations (SMILES)

PUBLICATIONS

First author (10)

- **Feng, S.**, Zscheischler, J., Hao, Z., & Bevacqua, E. (2024) Human-induced climate change contributed to regional extreme weekly fires from 2001 to 2015. (*Submitted*)

- **Feng, S.**, Zscheischler, J., Hao, Z., Jägermeyr, J., Müller, C. & Bevacqua, E. (2023). The correlation between crop production of major breadbaskets has little influence on extremely low global crop production in crop simulations. *Agricultural and Forest Meteorology*. (Under review)
- **Feng, S.**, Hao, Z., Zhang, Y., Zhang, X., & Hao, F. (2023). Amplified future risk of compound droughts and hot events from a hydrological perspective. *Journal of Hydrology*, 617, 129143.
- **Feng, S.**, Hao, Z., Zhang, X., Wu, L., Zhang, Y., & Hao, F. (2022). Climate change impacts on concurrences of hydrological droughts and high temperature extremes in a semi-arid river basin of China. *Journal of Arid Environments*, 202, 104768.
- **Feng, S.**, Hao, Z., Wu, X., Zhang, X., & Hao, F. (2021). A multi-index evaluation of changes in compound dry and hot events of global maize areas. *Journal of Hydrology*, 602, 126728. (cited by Nature communications)
- **Feng, S.**, & Hao, Z. (2021). Quantitative contribution of ENSO to precipitation-temperature dependence and associated compound dry and hot events. *Atmospheric Research*, 260, 105695.
- **Feng, S.**, Hao, Z., Zhang, X., & Hao, F. (2021). Changes in climate-crop yield relationships affect risks of crop yield reduction. *Agricultural and Forest Meteorology*, 304, 108401.
- **Feng, S.**, Wu, X., Hao, Z., Hao, Y., Zhang, X., & Hao, F. (2020). A database for characteristics and variations of global compound dry and hot events. *Weather and Climate Extremes*, 30, 100299. (cited by Science Advance; Nature communications)
- **Feng, S.**, & Hao, Z. (2020). Quantifying likelihoods of extreme occurrences causing maize yield reduction at the global scale. *Science of the Total Environment*, 704, 135250. (cited by Nature Food)
- **Feng, S.**, Hao, Z., Zhang, X., & Hao, F. (2019). Probabilistic evaluation of the impact of compound dry-hot events on global maize yields. *Science of the total environment*, 689, 1228-1234. (cited by Nature Reviews Earth and Environment; Nature communications)

Co-author (13)

- Meng, Y., Hao, Z., Zhang, Y., & **Feng, S.** (2023). The 2022-like compound dry and hot extreme in the Northern Hemisphere: Extremeness, attribution, and projection. *Atmospheric Research*, 295, 107009
- Hao, Z., Chen, Y., **Feng, S.**, Liao, Z., An, N., & Li, P. (2023). The 2022 Sichuan-Chongqing spatio-temporally compound extremes: a bitter taste of novel hazards. *Science Bulletin*, 68(13), 1337-1339.
- Zhang, Y., Hao, Z., **Feng, S.**, Zhang, X., & Hao, F. (2023). Changed relationship between compound dry-hot events and ENSO at the global scale. *Journal of Hydrology*, 621, 129559.
- Zhang, Y., Hao, Z., **Feng, S.**, Zhang, X., & Hao, F. (2022). Comparisons of changes in compound dry and hot events in China based on different drought indicators. *International Journal of Climatology*, 42(16), 8133-8145.
- Hao, Z., Hao, F., Xia, Y., **Feng, S.**, Sun, C., Zhang, X., ... & Meng, Y. (2022). Compound droughts and hot extremes: Characteristics, drivers, changes, and impacts. *Earth-Science Reviews*, 235, 104241.
- Meng, Y., Hao, Z., **Feng, S.**, Guo, Q., & Zhang, Y. (2022). Multivariate bias corrections of CMIP6 model simulations of compound dry and hot events across China. *Environmental Research Letters*, 17(10), 104005.
- Zhang, Y., Hao, Z., **Feng, S.**, Zhang, X., & Hao, F. (2022). Changes and driving factors of compound agricultural droughts and hot events in eastern China. *Agricultural Water Management*, 263, 107485.
- Meng, Y., Hao, Z., **Feng, S.**, Zhang, X., & Hao, F. (2022). Increase in compound dry-warm and wet-warm events under global warming in CMIP6 models. *Global and Planetary Change*, 210, 103773.
- Hao, Y., Hao, Z., **Feng, S.**, Wu, X., Zhang, X., & Hao, F. (2021). Categorical prediction of compound dry and hot events in northeast China based on large-scale climate signals. *Journal of Hydrology*, 602, 126729.

- Wu, X., Hao, Z., Tang, Q., Zhang, X., **Feng, S.**, & Hao, F. (2021). Population exposure to compound dry and hot events in China under 1.5 and 2 C global warming. *International Journal of Climatology*, 41(12), 5766-5775.
- Zhang, Y., Hao, Z., **Feng, S.**, Zhang, X., Xu, Y., & Hao, F. (2021). Agricultural drought prediction in China based on drought propagation and large-scale drivers. *Agricultural Water Management*, 255, 107028.
- Hao, Y., Hao, Z., Fu, Y., **Feng, S.**, Zhang, X., Wu, X., & Hao, F. (2021). Probabilistic assessments of the impacts of compound dry and hot events on global vegetation during growing seasons. *Environmental Research Letters*, 16(7), 074055.
- Hao, Y., Hao, Z., **Feng, S.**, Zhang, X., & Hao, F. (2020). Response of vegetation to El Niño-Southern Oscillation (ENSO) via compound dry and hot events in southern Africa. *Global and Planetary Change*, 195, 103358.

SUMMER SCHOOL & WORKSHOP & CONFERENCE

Summer school

- 21st SWISS CLIMATE SUMMER SCHOOL, 2023/09, Monte Verità, Ascona, Switzerland, **CLIMATE-WATER-ENERGY-FOOD-NEXUS**

Workshop

- ISIMIP, 2023/05, Prague, Czech Republic, **Interdependence among subregional crop production affects global crop failure risk**, Poster
- AgMIP, 2023/05, New York, United States, **Interdependence among subregional crop production affects global crop failure risk**, Oral

Conference organization

- The 4th Hydro90 Hydrology Youth Symposium, 2024/06, Online, **Physical drivers and risks of compound extreme events**, Main convener
- The 3rd Hydro90 Hydrology Youth Symposium, 2023/06, Online, **Definition, simulation and impact of compound extreme climate events**, Main convener
- The 2nd Hydro90 Hydrology Youth Symposium, 2022/05, Online, **Evolution, impact and mechanism of compound extreme climate events**, Main convener
- The 1st Hydro90 Hydrology Youth Symposium, 2021/05, Online, **Agricultural Hydrology and Food Security under Climate Change**, Main convener

Presentation

- EGU, 2023/04, Vienna, Austria, **Interdependence among subregional crop production affects global crop failure risk**. (Oral)
- EGU, 2022/05, Vienna, Austria, **Linkage among different compound drought-hot events at a global scale**. (Oral)
- Beijing Normal University, 2022/06, Online, **How to use probability theory as a stepping stone for interdisciplinary research**. (Invited oral)
- Tsinghua University, 2022/05, Online, **Data Visualization**. (Invited oral)
- The 10th CAS/THU Hydrology and Water Resource Symposium, 2022/01, Beijing, China, **Nonlinear response of crop yield to compound dry-hot events**. (Oral)

- The First Hydro90 Hydrology Youth Symposium, 2021/05, Online, **Statistical modeling of climate extremes and crop yields at the global scale.** (Oral)
- EGU, 2021/04, Vienna, Austria, **Uncertainties in the variation of compound dry and hot events due to differences in drought indices.** (Oral)
- The 10th International Workshop on Statistical Hydrology, 2019/10, Nanjing, China, **Statistical modeling of climate extremes and crop yields at the global scale.** (Oral)
- AGU, 2019/10, San Francisco, United States, **Quantifying likelihoods of extreme occurrences causing maize yield reduction at the global scale.** (Poster)

SCHOLARSHIPS & AWARDS

Ph.D.

- First-Class Academic Scholarship of Beijing Normal University, 2023
- Second-Class Academic Scholarship of Beijing Normal University, 2022
- Liu Changming Scholarship of Beijing Normal University, 2022, **4 winners a year**
- First-Class Academic Scholarship of Beijing Normal University, 2022
- First Prize for Academic Innovation of Beijing Normal University, 2021
- China National Scholarship, 2021, **Top 0.2%**
- Doctoral Freshman Special Scholarship of Beijing Normal University, 2021, **Top 5%**

Master

- Outstanding Graduate of Beijing Normal University, 2021, Top 10%
- Outstanding Graduate of Beijing City, 2021, **Top 5%**
- First-Class Academic Scholarship of Beijing Normal University, 2019/2020
- Graduate Freshman Scholarship of Beijing Normal University, 2018

Bachelor

- China National Scholarship, 2017, **Top 0.2%**

SKILLS

Language	Mandarin (native) and English (working proficiency)
Programming	Python, R, MATLAB, Supercomputers, Linux, ArcGIS, CDO
Physical Models	Variable Infiltration Capacity (VIC) model
Statistical Tools	Multivariate statistics (e.g., Vine copula); Logistic regression; Optimal Fingerprinting
Sports	Bouldering, Chess, Orienteering, Running/Roller skating marathon, Swimming