Sifang Feng

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Education

2022 – present **Joint Ph.D., Helmholtz Centre for Environmental Research GmbH –UFZ** Leipzig, Germany.
Topic: *The impact of compound events on crop yields during the historical and future period*
Supervisor: Prof. Jakob Zscheischler and Dr. Emanuele Bevacqua

2021 – present **Ph.D., Beijing Normal University** Beijing, China
Topic: *Differences and linkages among different compound events.*
Supervisor: Prof. Fanghua Hao and Prof. Zengchao Hao

2018 – 2021 **M.Sc., Beijing Normal University** Beijing, China
Thesis title: *Variations of compound dry-hot events and impacts on global crop yields.*
Supervisor: Prof. Zengchao Hao

2014 – 2018 **B.Eng., Sichuan Agricultural University** Sichuan, China
Major: *Water Resources and Hydropower Engineering*

Research Publications

Journal Articles

1. **S. Feng**, Z. Hao, Y. Zhang, X. Zhang, and F. Hao, "Amplified future risk of compound droughts and hot events from a hydrological perspective," *Journal of Hydrology*, vol. 617, p. 129 143, 2023, ISSN: 0022-1694. DOI: https://doi.org/10.1016/j.jhydrol.2023.129143.
2. **S. Feng**, Z. Hao, X. Zhang, L. Wu, Y. Zhang, and F. Hao, "Climate change impacts on concurrences of hydrological droughts and high temperature extremes in a semi-arid river basin of china," *Journal of Arid Environments*, vol. 202, p. 104 768, 2022, ISSN: 0140-1963. DOI: https://doi.org/10.1016/j.jaridenv.2022.104768.
3. **S. Feng** and Z. Hao, "Quantitative contribution of enso to precipitation-temperature dependence and associated compound dry and hot events," *Atmospheric Research*, vol. 260, p. 105 695, 2021, ISSN: 0169-8095. DOI: https://doi.org/10.1016/j.atmosres.2021.105695.
4. **S. Feng**, Z. Hao, X. Wu, X. Zhang, and F. Hao, "A multi-index evaluation of changes in compound dry and hot events of global maize areas," *Journal of Hydrology*, vol. 602, p. 126 728, 2021, ISSN: 0022-1694. DOI: https://doi.org/10.1016/j.jhydrol.2021.126728.

5 **S. Feng**, Z. Hao, X. Zhang, and F. Hao, "Changes in climate-crop yield relationships affect risks of crop yield reduction," *Agricultural and Forest Meteorology*, vol. 304-305, p. 108 401, 2021, ISSN: 0168-1923. DOI: https://doi.org/10.1016/j.agrformet.2021.108401.

6 **S. Feng** and Z. Hao, "Quantifying likelihoods of extreme occurrences causing maize yield reduction at the global scale," *Science of The Total Environment*, vol. 704, p. 135 250, 2020, ISSN: 0048-9697. DOI: https://doi.org/10.1016/j.scitotenv.2019.135250.

7 **S. Feng**, X. Wu, Z. Hao, Y. Hao, X. Zhang, and F. Hao, "A database for characteristics and variations of global compound dry and hot events," *Weather and Climate Extremes*, vol. 30, p. 100 299, 2020, ISSN: 2212-0947. DOI: https://doi.org/10.1016/j.wace.2020.100299.

8 **S. Feng**, Z. Hao, X. Zhang, and F. Hao, "Probabilistic evaluation of the impact of compound dry-hot events on global maize yields," *Science of The Total Environment*, vol. 689, pp. 1228–1234, 2019, ISSN: 0048-9697. DOI: https://doi.org/10.1016/j.scitotenv.2019.06.373.

Honours and awards

2019, 2020, 2022 — Winner of scholarship for First-class Academic Scholarship from Beijing Normal University.

2022 — Winner at the 2nd Artificial Intelligence Weather Forecast Innovation Competition, obtaining the second prize.

2022 — Winner of scholarship for Liu Changming Water Science Foundation Scholarship.

2021 — Winner of scholarship for First-class Graduate Academic Innovation from Beijing Normal University.

2021 — Winner of scholarship for PhD National Scholarship.

2021 — Winner of scholarship for Special Scholarship for New PhD Students.

2021 — Winner of the Outstanding Graduate of Beijing.

2021 — Winner of the Outstanding Graduate of Beijing Normal University.

2018 — Winner of scholarship for New Masters Scholarship from Beijing Normal University.

2017 — Winner of scholarship for Undergraduate National Scholarship

Outreach in media

Blog posts

09/2022 — "We've created a hydrographic commons, would you like to see it?" . Blog of WeChat Official Account Hydro90. [Link]. Here, I collected various drawing resources to create a shared resource library for data visualization.

Outreach in media (continued)

05/2022 "After sorting through the IPCC AR6 charts, I found something interesting". Blog of WeChat Official Account Hydro90. [Link]. This blog has attracted a lot of attention from everyone. Therefore, I was invited to Tsinghua University to share my views on data visualization.

12/2021 "How to recreate the IPCC global zoning map with slides?". Blog of WeChat Official Account Hydro90. [Link].

Appearances in media

03/2022 Our paper that published in Journal of Hydrology on multi-index evaluation of compound dry-hot event was is recommended and shared by WeChat Official Account 无人机生态遥感. [Link].

08/2021 Our paper that published in Agricultural and Forest Meteorology on changed climate-crop yield relationship was is recommended and shared by WeChat Official Account Hydro90. [Link].

Experience

Organisation

05/2023 Main convener of the session "Definition, simulation and impact of compound extreme climate events", The 3rd Hydro90 Hydrology Youth Symposium (https://mp.weixin.qq.com/s/KHa_AS3Xp3r8bDTGC62NXw), Online.

05/2022 Main convener of the session "Evolution, impact and mechanism of compound extreme climate events", The 2nd Hydro90 Hydrology Youth Symposium (https://mp.weixin.qq.com/s/hM90GkmO1lBU3ZCFk23SrQ), Online.

05/2021 Main convener of the session "Agricultural Hydrology and Food Security under Climate Change", The First Hydro90 Hydrology Youth Symposium (https://mp.weixin.qq.com/s/cOfDXc9cjJ-zaxUbZAcqfA), Online.

Management

2021-2023 Manager, Hydrological-Figure section of the research community Hydro90.

Conference and Workshop presentations

Invited oral presentations

06/2022 **Feng, S.**, *How to use probability theory as a stepping stone for interdisciplinary research*, Beijing Normal University, Beijing, China.

05/2022 **Feng, S.**, *Data Visualization*, Tsinghua University, Beijing, China.

Conference and Workshop presentations (continued)

Other Oral presentation

04/2023 **Feng, S.**, Zscheischler, J., Hao, Z., Bevacqua, E., *Interdependence among subregional crop production affects global crop failure risk*, EGU General Assembly 2023, Vienna, Austria.

05/2022 **Feng, S.**, Hao, Z., *Linkage among different compound drought-hot events at a global scale*, EGU General Assembly 2022, Vienna, Austria. (Talk given online).

01/2022 **Feng, S.**, Hao, Z., *Nonlinear response of crop yield to compound dry-hot events*, The 10th CAS/THU Hydrology and Water Resource Symposium, Beijing, China.

05/2021 **Feng, S.**, *Statistical modeling of climate extremes and crop yields at the global scale*, The First Hydro90 Hydrology Youth Symposium, Online.

04/2021 **Feng, S.**, Hao, Z., *Uncertainties in the variation of compound dry and hot events due to differences in drought indices*, EGU General Assembly 2021, Vienna, Austria. (Talk given online).

10/2019 **Feng, S.**, Hao, Z., *Statistical modeling of climate extremes and crop yields at the global scale*, The 10th International Workshop on Statistical Hydrology, Nanjing, China.

Poster presentation

10/2021 **Feng, S.**, Hao, Z., *A general framework for impact assessments of compound dry-hot events on different sectors based on vine copula*, Second International Conference on "Natural Hazards and Risks in a Changing World", Potsdam, Germany. (Poster given online)

12/2019 **Feng, S.**, Hao, Z., *Quantifying likelihoods of extreme occurrences causing maize yield reduction at the global scale*, AGU Fall Meeting 2019, San Francisco, United States.

Skills

Programming languages	MATLAB, Python, R
Hydrologic Model	Variable Infiltration Capacity (VIC)
Others	Geographic Information System (GIS)