

Ruoxiao Gu

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RESEARCH INTERESTS

Paleoclimatology, the evolution of global monsoon systems, the development of climate models

EDUCATION

MSc Atmospheric Science, China University of Geosciences, Wuhan 09/2022 – recent

- GPA: 3.5/4.0
- **Core Modules:** Numerical Climate Modelling; Advanced Synoptic Meteorology; Quaternary Environment and Global Change; The Climate System; Frontiers in Atmospheric Chemistry

BSc Atmospheric Science, China University of Geosciences, Wuhan 09/2018 – 06/2022

- GPA: 3.14/4.0
- **Core Modules:** Synoptic Meteorology; Climatology; Atmospheric Dynamics; Geofluid Mechanics; Global Change; Paleoclimatology; Numerical Weather Prediction; Statistical methods for meteorological

RESEARCH EXPERIENCES

Author, Impacts of vegetation cover on the change of the East Asian monsoon and westerlies during the late Pliocene warm period 09/2023 - recent

- Analyzed simulation data from NorESM-L and applied the Climate Feedback Response Analysis Method (CFRAM) to quantify climate feedbacks.
- Conducted quantitative assessments of vegetation changes and greenhouse gas impacts on East Asian monsoon dynamics.
- Investigated 40,000-year (obliquity-cycle) climate variability mechanisms influenced by vegetation modifications.

Author, A study of tropical cyclones in the north-west Pacific Ocean on long-distance precipitation in Henan Province, 1961-2015 02/2022 - 2022/05

- Examined cyclone characteristics (path, intensity, frequency) using NCEP/NCAR reanalysis data.
- Applied k-means clustering to classify cyclone paths and analyzed associated circulation and precipitation patterns.

PUBLICATION

The crucial role of vegetation cover in shaping East Asian summer monsoon changes during the late Pliocene warm period (with editor) 12/2024

- Journal: **Quaternary Science Reviews** (JCR Q1, IF=3.2)
- Status: **With editor**
- Co-authors: **Ruoxiao Gu (First author)**, Xiangyu Li (*Corresponding Author*), Bo Liu, Hua Li, Zhongshi Zhang (*Corresponding Author*), Yong Liu

HONERS AND AWARDS

- **1st- Graduate Study Scholarship** 2024, 2023, 2022

ADDITIONAL EXPERIENCES

- **Conference**, the 9th Youth Geoscience Forum 05/2024
- **Conference**, the 7th Climate Change Detection and Monitoring Colloquium 08/2023
- **International Conference**, the 2022 INQUA LoessFest 08/2022
- **Summer Internship**, at Xianning Meteorological Administration 07/2021
- **Staff member**, in Infrastructure Management Department of the Student Union, Faculty of Environment 09/2018 - 06/2022
- **Field-survey of Geology and Geomorphology**, at Beidaihe district 07/2019 - 08/2019
- **Commissary for sports** 09/2018 - 06/2019

Technologies

- **Coding and Visualization Skills:** NCL; Fortran; Python; R; Office (Excel, PPT)
- **Languages:** Mandarin Chinese (native); English (conversational)
- **Hobbies:** Hiking; Badminton; Photography; Volunteering with animal conservation associations