

Qunfeng Jiang – Curriculum Vitae

Current Position:

Research Assistant

Division of Geological and Planetary Sciences
California Institute of Technology, Pasadena, CA

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Education: June 2023

BS (Physics) Fudan University, China

Research Interests:

Atmosphere of planets in and out of the solar system. Evolution of planetary atmospheres. Observations and modeling of atmospheric properties. Habitability and comparison study of planets with the earth.

Research Experience:

July 2023 – present

Research Assistant, California Institute of Technology, Pasadena, CA
Topic: Atmospheric Methane Growth and Global Warming Hiatus
Supervisor: Prof. Yuk L. Yung

Oct 2023 – Nov 2023

Visiting Research Student, Stanford University, Palo Alto, CA
Topic: The Impact of Wildfires on Atmospheric Aerosol Optical Depth Using Linear Regression Models
Supervisor: Prof. Yuan Wang

July 2022 – Sept 2022

SURF Fellow, California Institute of Technology, Pasadena, CA
Topic: The Mismatch of Inclinations in the Black Hole X-ray Binary H 1743–322
Supervisor: Prof. Javier Garcia

July 2021 – Sept 2021

Research Assistant, National Astronomical Observatories, CAS, China
Topic: Geometry of Corona in the Black Hole MAXI J1348–630
Supervisor: Prof. Roberto Soria

July 2020 – June 2021

Research Assistant, Fudan University, China
Topic: Testing General Relativity Using X-ray Reflection Spectroscopy with the Black Hole EXO 1846–031
Supervisor: Prof. Cosimo Bambi

Honors and Awards:

2022

Caltech Summer Undergraduate Research Fellowship (SURF), \$6,840

2022

Chun-Tsung Scholar, the Hui-Chun Chin and Tsung-Dao Lee Chinese Undergraduate Research Endowment (CURE)

2021

Xiyuan Scholar, Fudan University

2021

First Prize at Fudan, National College Student Curricular Academic Works Competition

2020

Rising Star Scholar, Fudan University

Publications:

Google Scholar Profile: <https://scholar.google.com/citations?user=fuP6b2kAAAAJ>

GS Profile lists: 3 peer-reviewed publications, 1 conference paper, and 1 conference abstract

1. Wang, Xuejun, et al. "A closed-loop catalytic nanoreactor system on a transistor." *Sci. Adv.* 9, eadj0839 (2023). DOI: 10.1126/sciadv.adj0839.
2. Wang, Xuejun, et al. "Rapid SARS-CoV-2 nucleic acid testing and pooled assay by tetrahedral DNA nanostructure transistor." *Nano Lett.* 21.22 (2021): 9450-9457.
3. Yu, Zhibo, et al. "Constraining the Konoplya-Rezzolla-Zhidenko deformation parameters. II. Limits from stellar-mass black hole x-ray data." *Phys. Rev. D* 104.8 (2021): 084035.
4. Jiang, Qunfeng, et al. "The Mismatch between the Inner-disk and the Orbital Inclination in the Black Hole X-ray Binary H 1743–322." *Am. Astron. Soc. Meet. Abstr.* 55.2 (2023).
5. Gou, Q., et al. "Observation of Horizontal Air Showers with LHAASO-KM2A." *37th Int. Cosmic Ray Conf.*, 12-23 July 2021, Berlin (2022).

Public Talk:

Dec 2023	Poster presentation at the American Geophysical Union Annual Meeting 2023
Jan 2023	Research contributed talk at the 241st Meeting of the American Astronomical Society
Aug 2022	Poster presentation at the Caltech SURF Seminar
Apr 2022	Outreach talk on X-ray astronomy, invited by Fudan Liberal Arts Society

Teaching Experience:

Fall 2022	Teaching Assistant in College Physics A: Mechanics, Fudan University
Fall 2023	Supervised a high school student in China in a project on 'Visualizing Global Warming with Time Series of Temperature Anomalies using Python'

Leadership, Outreach, and Community Service:

2022 – 2023	Core Member	Fudan Liberal Arts Society
Nov 2021	Campus Coordinator	the Asia Office of Astronomy for Development of the International Astronomical Union (IAU)
July 2021 – Sept 2021	Outreach Intern	Scientific American (Chinese Version, Huanqiu Kexue)
July 2020	Core Organizer	Tianwen Summer Camp (a 7-day volunteer summer camp on astronomy for 50 students in impoverished rural areas in China)
2020 – 2021	Director	Outreach Department, Fudan Astronomy Society