

# YUANBING YANG

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## EDUCATION BACKGROUND

**Fudan University**

September 2020 - Present

**Major:** B.S. in Physics

**Overall GPA:** 3.60/4.0; admitted on basis of performance on College Entrance Examination(697/750)

**Core Modual:** Group Theory, Methods of Mathematical Physics, Fundamentals of Computational Physics, Particle Physics, Quantum Mechanics II, Quantum Field Theory, Advanced Electrodynamics, Introduction to Astrophysics

## RESEARCH EXPERIENCE

**X-Ray Spectra Analysis Using Two-Corona Models**

July 2022 - December 2023

*Supervisor: Cosimo Bambi*

*Fudan University, Shanghai*

- Aimed to test whether two-corona models can fit better the X-ray spectral data of black holes with strange emissivity profiles.
- Fit spectra of GS1354-645 and EXO1846-031 using Nustar data with chosen combination of astrophysical models which contain two corona(eg. `relxill+relxill`, `relxill+cutoffpl`), including advanced models with many parameters: `relxill`, `relxilllp`, `relxillion_nk`(they are all relativistic reflection models)
- Compared the AICc of two-corona models with one-corona standard case and found that two corona models can fit better the X-ray spectral data of GS1354-645 but cannot fit better for EXO1846-031.

**Theoretical Existence of Galaxies Full of Neutral Hydrogen**

September 2023 - Present

*Supervisor: Jiajun Zhang*

*Shanghai Astronomical Observatory*

- Theoretically deduced the required conditions of galaxies full of neutral hydrogen(use the virial temperature of ionized hydrogen to restrict the maximum mass; use equivalence between heating and cooling to obtain another condition)
- Search the data of illustrisTNG to find the oriented galaxy candidates through the conditions theoretically calculated above(ongoing)
- put forward an observation proposal for FAST if any candidates are found in illustrisTNG(future)

## HONORS & AWARDS

Second Prize of the Scholarship for Outstanding Students at Fudan University

December 2021

Third Prize of the Scholarship for Outstanding Students at Fudan University

December 2022

Professional Scholarship at Fudan University

December 2022

Third Prize of the Scholarship for Outstanding Students at Fudan University

December 2023

Professional Scholarship at Fudan University

December 2023

National First Prize in the 14th Chinese Mathematics Competitions

December 2022

National Second Prize in the 13th Chinese Mathematics Competitions

December 2021

## VOLUNTEER ACTIVITIES

**Program Stars in Fudan Shine Forever**

October 2021 - March 2023

*team director*

*Fudan University, Shanghai*

- Visit the retired professors in Fudan University, communicate with them and record the stories of their past
- Finished a memoir of professor Huayun Liu and Duwu Pan in cooperation with the other team members
- Cultivated team work spirit and communication skills, have had new experience of histories