

# Yahan Pu

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## EDUCATION

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### University of Science and Technology Beijing

Beijing, China

Bachelor of Science in Applied Physics

2022–Present

- GPA 3.42/4.0
- Relevant Coursework: Quantum Mechanics, Atomic Physics, Computer Language C and Programming, Programming Python

## RESEARCH EXPERIENCE

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### Research on galaxy formation between different simulations

Sep 2024–Present

National Astronomical Observatories, Chinese Academy of Sciences

Beijing, China

Advisor: Dr. Lan Wang, Associate Researcher

- Developed Python code to analyze IllustrisTNG simulation data, focusing on the comparison of galaxy formation between TNG100-1 and TNG100-1-Dark.
- Investigated the differences in galaxy formation by comparing simulations that include both visible matter and simulations that exclude visible matter, focusing on dark matter and gas evolution.
- Post-processed the results to visualize the evolution of galaxies in both simulations, highlighting and comparing the distinct differences in galaxy formation between the two.

### Research on Natural convection of viscoelastic fluid

Oct 2023– Sep 2024

School of Mathematics and Physics, University of Science and Technology Beijing

Beijing, China

Students' Research Training Program (SRTP)

- Conducted research on natural convection of viscoelastic FENE-P fluid in a differentially heated square cavity with different thermal boundary conditions.
- Developed specific cases in open-source CFD platform(OpenFOAM) to simulate the natural convection of viscoelastic fluids with different thermal boundary conditions.
- Analyzed and post-processed simulation results using Tecplot to extract key physical quantities, visualize flow behavior, and validate against theoretical models.
- Drafted and revised manuscripts for publication.

## EXTRACURRICULAR ACTIVITIES

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### President, Student Physics Association

Sep 2024–Present

- Organized academic seminars related to physics and invited faculty members to deliver subject-specific lectures.
- Provided tutoring for physics-related competitions and organized physics seminars.
- Collaborated with the Natural Science Center at the University of Science and Technology Beijing to promote scientific outreach and create a collaborative learning environment for students.

### Student Lecturer in Physics in the School of Mathematics and Physics

Sep 2023- Sep 2024

- Provided one-on-one tutoring for students who made individual appointments.
- Delivered monthly tutoring sessions for physics courses, aligned with the instructor's course schedule.

### Department Head, Student Union

May 2024–Present

- Secured sponsorships from businesses to support student union activities, including funding for welcome packages for freshmen.
- Invited bands to perform on campus, enhancing the cultural atmosphere.
- Assisted in organizing large-scale and special events for the university.

## HONORS AND AWARDS

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- Third prize Scholarship of People Nov 2024
- China Undergraduate Physics Tournament (CUPT) North China Regional First Prize Oct 2024
- China Undergraduate Physics Experiment Competition Second Prize in the Beijing Division Sep 2024
- Outstanding student cadres, University of Science and Technology Beijing Nov 2023

## Skills

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**Technical Skills:** IllustrisTNG, OpenFOAM, MATLAB, Python, C/C++, LaTeX, Linux (Ubuntu), Origin, Jupyter Notebook

**Language Skills:** English (Fluent), Chinese (Native)