

Yi Qiu

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[My Website](#)

RESEARCH INTERESTS

- **Astrophysics:** star formation, planet formation, exoplanet, radio astronomy and dark matter halos
- **Computational Methods:** new generation surveys and data analysis, numerical (hydrodynamics) simulation and N-body simulation
- **Machine Learning:** advanced artificial neural network models

EDUCATION

Dalian University of Technology, Dalian, China

Bachelor of Science in Applied Physics

Sep. 2017 – Present.

Advisors: Weijie Fu, Lixin Xu

Major GPA: 3.87/4.00(from WES iGPA)

Last two years average grades: 89.1/100

Ranking: 1/41 in junior academic year

PREVIOUS RESEARCH EXPERIENCE

Summer Internship, Institute of Modern Physics, Chinese Academy of Sciences, China

Extreme emission line galaxies in the 3D-HST spectroscopic survey

July. 2020 – Aug. 2020

Advisor: Xiaodong Tang

- Calculate the cross sections of nuclear fusion in star core and compare them with experimental results
- Modulate and test the TPC (Time Projection Chamber) and helium 3 neutron detector
- Use TPC to measure the three-dimension paths of α particles striking silicon foil
- Analyze the data and export the energy spectrum of several decay processes using CERN ROOT

Chinese Undergraduate Innovation Training Program, Dalian, China

Application of machine learning in Quantum field theory

March. 2019 – May. 2020

Advisor: Weijie Fu

- Predict the spectral function by the integral equation of propagator with some data of kernel function
- Apply BP(Back Propagation) and GAN(Generative adversarial network) for spectra generation

Chinese Undergraduate Physics Tournament (CUPT), Dalian, Shenyang, Haerbing, Qingdao. China

Photometric properties of reionization-epoch galaxies in the Simba simulations

Sep. 2018 – Aug. 2019

Advisors: Hongliang Bai

- Design experiments to study the thermal lens effect, and investigate the phenomenon about how different parameters determining its formation
 - Develop a mathematical model for funnel and ball problem, using simulation to test the model and study the effects of relative parameters determining its aerodynamics evolution
 - Investigate the phenomenon of popsicle chain reaction, establish elastic mechanical model to explain its origin
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VOLUNTEER WORKS

Campus Volunteering, Dalian, China

volunteer (leader)

Mar. 2018 – Oct. 2018

- Library books sorting and organizing
- Lead and show invited children and their parents around our university, and deliver safety knowledge lecture to children

AIESEC Dare to Dream Project, Dalian, China

Program organizer, Local volunteer leader

Mar. 2018 – Aug. 2018

- Contact and interview foreign volunteers, and arrange their trip for coming China
- Help foreign volunteers to find host families in Dalian, and contact local volunteers to accompany foreign volunteers during the project time
- Assisted foreign volunteers to adapt to the Chinese culture environment and help them carry out their volunteer works

AIESEC Empower Youth Project, Jilin, China

Local volunteer

July. 2018 – July. 2018

- Organize foreign volunteers to hold global village activities in Yangshulin Junior High School in Jilin province
- Lead foreign volunteers to experience Chinese traditional cultures such as Guzheng and Chinese paper cutting arts

AWARDS/ HONOURS/ SCHOLARSHIPS

Learning Excellence Award (First Prize) in academic year of 2019-2020 (Top 1/41)	Sep. 2020
Second-class prize in China Undergraduate Mathematical Contest in Modeling	Sep. 2019
First-class prize in Physics Experiment Competition in Dalian University of Technology	Sep. 2019
National second-class prize in Chinese Undergraduate Physics Tournament (CUPT)	Aug. 2019
First-class prize in Division of Northeast China of CUPT	July 2019
First-class prize in Optoelectronic Design Competition at Dalian University of Technology	June 2019
First-class prize in Division of Liaoning province of CUPT	May 2019
Excellent Undergraduate Innovation Training Program at Dalian University of Technology	Apr. 2019
Dalian University of Technology Undergraduate Physics Tournament (DUPT) (Top 1/32)	Apr. 2019
Second-level Certificate for National Computer Rank Examination	Mar. 2019
Second-class prize in Physics Experiment Competition in Division of Liaoning province	Oct. 2018
Third-class prize in China Undergraduate Mathematical Contest in Modeling	Sep. 2018

COMPUTER SKILLS

- **Applications:** L^AT_EX, COMSOL, IBM SPSS, Origin, Microsoft suite, Apple suite
- **High-level numerical languages:** Mathematica, Matlab, Numerical Python
- **Operating Systems:** Unix/Linux, Mac, Windows

ADDITIONAL INFORMATION

Leadership: president of the hiking student association, vice-chairman of culture and arts student union, vice-monitor and sports secretary of physics class 1701

Instructor: 8-months tutoring service for school's CUPT teams, individual studying mentor for 2 sophomore students major in physics

Interests: running, cycling, swimming, hiking, foreign culture, 20th century literature, travelling