

Jiaxuan Li

PERSONAL INFORMATION

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| NAME: | Jiaxuan Li (李嘉轩) | ADDRESS: | Building 28, Peking University |
| PHONE: | +86-18813020982 | | No.5 Yiheyuan Road, Haidian District, Beijing |
| EMAIL: | jiaxuan_li@pku.edu.cn | GitHub: | AstroJacobLi |
| HOMEPAGE: | https://astrojacobli.github.io/ | ORCID: | orcid.org/0000-0001-9592-4190 |

EDUCATION

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| SEPTEMBER 2016– | Undergraduate Student in DEPARTMENT OF ASTRONOMY, Peking University , China Major: Astrophysics GPA: 3.85/4 | Detailed Transcript |
| AUGUST 2013–JUNE 2016 | Senior High School, Dingxi NO.1 Middle School , Dingxi, Gansu | |
| AUGUST 2010–JUNE 2013 | Junior High School, Gongyuan Road Middle School , Dingxi, Gansu | |
| SEPTEMBER 2004–JUNE 2010 | Primary School, Dacheng Primary School , Dingxi, Gansu | |

FIELD OF INTEREST

- General formation and evolution of galaxies
- Quenching process of spiral galaxies
- Cosmological simulations and large-scale structure
- Probing outskirts of galaxies using deep sky surveys
- Explosion mechanism of Type Ia supernova and supernova surveys

RESEARCH EXPERIENCE

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| SEPT. 2018– | Reaching for the Edge: the Outskirts of Massive Galaxies with HSC, DECaLS, and Dragonfly |
| ADVISOR: ALEXIE LEAUTHAUD | |
| JULY 2017– | Inside-out quenching galaxies with H α ring-like structures |
| ADVISOR: YINGJIE PENG | We investigated galaxies with H α emission ring-like structures in Mapping Nearby Galaxies at APO (MaNGA) survey, with stellar mass in the range $9 < \log(M/M_{\odot}) < 12$. These galaxies are almost located in the green valley on SFR-stellar mass plane. The radius of H α rings are measured and good linear relations between bar length and H α ring radius are found. We reveal that the appearance of H α star-forming ring-like structure has a strong correlation with bar-induced activities, but not with active galactic nuclei (AGN). The majority of our H α ring galaxy sample are galaxies which are classified as LINER with $\text{EW}(\text{H}\alpha) < 3\text{\AA}$. Low luminosity AGN possibly plays a role in inside-out quenching accompanying with H α ring-like structure. Morphological quenching and bulge show less relation with H α ring galaxies. |

HONORS AND AWARDS

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| NOVEMBER 2018 | WEIMING PHYSICS OUSTANDING STUDENT (未名物理学子) (7,000 RMB) , Peking University, China. |
| OCTOBER 2018 | MERIT STUDENT, Peking University, China. |
| SEPTEMBER 2018 | AEON SCHOLARSHIP (10,000 RMB), Peking University, China. |
| SEPTEMBER 2018 | Second Prize (1800 RMB) of LINBRIDGE PRIZE FOR EXCELLENT UNDERGRADUATE RESEARCH PROJECTS IN ASTRONOMY AND ASTROPHYSICS, Peking University, China. |
| APRIL 2018 | MERITORIOUS WINNER IN MATHEMATICAL CONTEST IN MODELING (MCM/ICM). |
| MARCH 2018 | EXCELLENT MEMEBER OF COMMUNIST YOUTH LEAGUE (优秀共青团员), Peking University, China. |
| NOVEMBER 2017 | WEIMING PHYSICS OUSTANDING STUDENT (未名物理学子) (7,000 RMB) , Peking University, China. |
| OCTOBER 2017 | LEO KOGUAN SCHOLARSHIP (10,000 RMB), Peking University, China. |
| OCTOBER 2017 | MERIT STUDENT, Peking University, China. |
| OCTOBER 2017 | INNOVATION PRIZE, Peking University, China. |
| AUGUST 2017 | First Prize, 8 th CHINA UNDERGRADUATE PHYSICISTS' TOURNAMENT, Harbin, China. |
| JANUARY 2016 | Bronze Medal (6th place) & Innovation Prize, 2 nd PRINCETON UNIVERSITY PHYSICS COMPETITION, Princeton, US. |
| NOVEMBER 2015 | Bronze Medal, 32 nd CHINA PHYSICS OLYMPIAD, Changsha, China. |
| AUGUST 2015 | Silver Medal, 9 th INTERNATIONAL OLYMPIAD ON ASTRONOMY AND ASTROPHYSICS, Maglang, Indonesia. |
| APRIL 2015 | Gold Medal & Best Result, 11 th CHINA NATIONAL ASTRONOMY OLYMPIAD, Weihai, China. |
| JANUARY 2015 | Gold Medal (3rd place), 1 st PRINCETON UNIVERSITY PHYSICS COMPETITION, Princeton, US. |
| AUGUST 2014 | Bronze Medal, 8 th INTERNATIONAL OLYMPIAD ON ASTRONOMY AND ASTROPHYSICS, Suceava, Romania. |
| APRIL 2014 | Gold Medal & Best Result, 10 th CHINA NATIONAL ASTRONOMY OLYMPIAD, Beijing, China. |
| NOVEMBER 2013 | Gold Medal, 9 th ASIA-PACIFIC ASTRONOMY OLYMPIAD, Tomohon, Indonesia. |
| APRIL 2013 | Gold Medal, 9 th CHINA NATIONAL ASTRONOMY OLYMPIAD, Kunming, China. |

LEADERSHIP EXPERIENCE

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| MAY 2017-MAY 2018 | President of Youth Astronomy Society (YAS), Peking University Youth Astronomy Society is aiming at broadcasting astronomy knowledge to public, especially to students in Peking University. Youth Astronomy Society holds <i>Routine Observations</i> , <i>Scientific Outreach Lectures</i> , <i>Tuantu Series Lectures</i> , <i>Countryside Observations</i> , etc. There are also several groups, like Astro-photography Group, Meteor Group, etc. |
| SEPT 2016- | Monitor of Undergraduate Class 2016, Department of Astronomy |

COMPUTER SKILLS

- Skilled Languages:** Python, \LaTeX , Mathematica, Linux, Git.
- Often-used Packages:** [emcee](#), [astroML](#), [PyTorch](#), [Astropy](#), [The tractor](#), [GalSim](#).
- Basic Knowledge:** IRAF, SQL, Excel, Word, PowerPoint, Photoshop.
- Software Contributions:**
- [kungpao](#): Photometric analysis library for Hyper Suprime Camera images
 - [unagi](#): Search and download data from Hyper Suprime Camera Subaru Strategic Survey (HSC-SSP)
 - Some of my works can be found on Github: [@AstroJacobLi](#)

OBSERVATIONAL EXPERIENCE

- Peking University 40-cm Telescope (PKUFT)

LANGUAGES

- ENGLISH: Fluent.
TOEFL iBT: 103 (Jan 28, 2018)
Reading: 30; Listening: 26; Speaking: 22; Writing: 25.
- CHINESE MANDARIN: Mother tongue
- INTEREST: German, Hebrew.

ACTIVITIES AND TALKS

- NOV 2018 [THEORETICAL PROBLEMS DESIGNER](#), 12TH INTERNATIONAL OLYMPIAD ON ASTRONOMY AND ASTROPHYSICS (IOAA), Beijing, China.
- SEPT 2018 SDSS IV MANGA: INSIDE-OUT QUENCHING GALAXIES WITH $H\alpha$ RING-LIKE STRUCTURES, presented in PKU Undergraduate Astronomy Symposium.
- JULY 2018 Mentor, TRAINING FOR CHINESE NATIONAL ASTRONOMY OLYMPIAD TEAM, Beijing Planetarium, Beijing, China.
- JULY 2018 PKU Student Representative, "YOUNG TALENT PLAN" 10 YEAR ANNIVERSARY SYMPOSIUM, USTC, Hefei, China.
- JUNE 2018 SDSS IV MANGA: INSIDE-OUT QUENCHING GALAXIES WITH $H\alpha$ RING-LIKE STRUCTURES, presented in KIAA Interstellar Medium Group Meeting.
- AUGUST 2017 ASIAN SCIENCE CAMP, Kampar, Malaysia.
- APRIL 2013 PACIFIC ASTRONOMY AND ENGINEERING SUMMIT, Hawaii, U.S.

REFERENCES

- Prof. Yingjie Peng** Kavli Institute on Astronomy and Astrophysics, Peking University
✉ yjpeng@pku.edu.cn
- Prof. Alexie Leauthaud** University of California, Santa Cruz
✉ alexie@ucsc.edu
- Dr. Song Huang** University of California, Santa Cruz
✉ shuang89@ucsc.edu

Undergraduate Student's Transcript

Major: ASTROPHYSICS

Grades

| EXAM | GPA | CREDIT |
|---|-------|--------|
| Introduction to Computation | 3.77 | 3 |
| Language, Culture and Communication | 3.88 | 2 |
| Fundamental Astronomy | 3.85 | 3 |
| Linear Algebra (B) | 3.97 | 4 |
| Lectures on The Frontiers of Modern Physics (I) | Pass | 2 |
| Mechanics | 3.73 | 4 |
| Advanced Mathematics (B)(I) | 4.00 | 5 |
| Military Theory | 3.63 | 2 |
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| Outline of Chinese Modern History | 3.88 | 2 |
| Rings, Fields and Galois Theory | 3.97 | 2 |
| Chaos and Fractal in Natural Science | 3.89 | 2 |
| Electromagnetism | 3.73 | 4 |
| Methods of Mathematical Physics (I) | 3.93 | 3 |
| Advanced Mathematics (B)(II) | 3.63 | 5 |
| Thermal Physics | 3.94 | 3 |
| Data Structure and Algorithm | 3.52 | 3 |
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| The Logic of Life | 3.93 | 2 |
| Theoretical Mechanics (A) | 3.88 | 4 |
| Swimming | 3.52 | 1 |
| Equilibrium Statistical Physics | 3.88 | 4 |
| Atomic Physics | 3.97 | 3 |
| General Physics Experiment (I) | 3.85 | 3 |
| Methods of Mathematical Physics (II) | 3.93 | 3 |
| Optics | 3.63 | 4 |
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| Basics of Cosmological Physics | 3.98 | 3 |
| Astrophysics | 3.95 | 3 |
| Electrodynamics (A) | 3.88 | 4 |
| Special Topics of Methods of Mathematical Physics | 3.99 | 3 |
| An Introduction to Ideological & Moral Culture and Laws | 3.73 | 2 |
| General Physics Experiment (II) | 3.98 | 3 |
| Seminar for Astrophysics | 3.96 | 2 |
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| | Total | 93 |
| | GPA | 3.85 |