Chris "Le" Wang

Curriculum Vitae

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Education

Aug. 2021 – May 2025 — **Johns Hopkins University**, *Baltimore, MD, USA*
BSc in Computer Science and Physics
GPA: 3.97/4.00
Minor: Applied Mathematics & Statistics, Mathematics

Aug. 2018 – May 2021 — **Hangzhou Foreign Languages School**, *Hangzhou, China*
GCE A-Level & Chinese High School Diploma
GPA: 4.0/4.0

Research Projects

Jan. 2022 – present

Schlaufman Exoplanet Group

Advisor: Dr. Kevin C. Schlauman

- **Unresolved Binary Star Rejection**: Assemble photometry for every star confirmed as an open cluster member by Gaia. Write algorithms that fit Hertzsprung–Russell diagrams and reject unresolved binary stars in Python.
- **Stellar Elemental Abundance and Planet Formation**: Simulate the mass evolution of stellar surface convective zone using Modules for Experiments in Stellar Astrophysics (MESA). Determine the relationship between stellar abundance pattern and planet formation. Coded in Python, C++, Bash, and Fortran.

May 2022 – Present

Sing Exoplanet Group

Advisors: Dr. David K. Sing, Zafar Rustamkulov

- **JWST data reduction**: Optimize James Webb Space Telescope's Bright Object Time Series Python codes using nested sampling to extract transit light curves; reduced the light curve extraction runtime by an order of magnitude.
- **Transmission Spectroscopy**: Use JWST SOSS and NIRSpec commissioning data to extract transmission spectra of Hat-p-14.

Apr. 2020 – Nov. 2020

Polar Research Institute of China (PRIC)

Advisor: Dr. Peng Jiang

- **General Relativity Testing**: coauthored a paper (three authors contributed equally) on the possibility to detect general relativity in exoplanet systems. Derived an analytic formula evaluating the sensitivity of perihelion's precession in radial velocity measurements. Explored the possibility to detect general relativistic precession in exoplanets through radial velocity measurements using RadVel.

Jan 2020 – May 2020 **Duke University**

Advisor: Dr. Thomas C. Mehen

- **Quantum Computing**: coauthored a paper on testing Bell's and Mermin's inequalities on quantum computers. Designed two-Qbit and three-Qbit quantum circuits and analyzed simulation results.

Publications

4. Liu, R.*, **Wang, C. L.***, Rustamkulov, Z., & Sing, D. K., "Rereduction and Calibration of JWST NIRSpec and NIRISS Commissioning Data on Hat-p-14b with the Latest Methods" *in prep.* (*: Co-first author)
3. **Wang, C. L.** & Schlaufman, K. C., "Elemental Abundance Trends with Condensation Temperature are Unrelated to Planet Formation" *in prep.*
2. Gou, X.*, Pan, X.*, **Wang, C. L.***, "General Relativity Testing in Exoplanetary Systems " *IOP Conf. Ser.: Earth Environ. Sci.* (2021). (*: Equal contributions).
1. Zheng, Y., Wang, X., **Wang, C. L.** et al., "Test of Bell's and Mermin's inequalities on Quantum Computer" *2020 2nd International Conference on Information Technology and Computer Application* (2020).

Awards & fellowships

2023 **Summer Provost's Undergraduate Research Award**
$6,000, JHU, Research fellowship

2023 **Krieger School of Arts & Science Research Award (Dean's ASPIRE Grants)**
$2,474, JHU, Research fellowship

2022 **Hophacks 2^{nd} place**
Hopkins's premier 36-hour hackathon. 2/40. $512 prize.

2022 **Quest2Learn Most Innovative Platform to Help with Learning**
Awarded for creating an application that helps with learning.

2022 **Bloomberg Distinguished Professor Fellowship**
$6,000, JHU, Research fellowship

2021–present **Dean's List**
Excellence in academics. Awarded every semester (4/4).

Talks & Presentations

June 2023 **Elemental Abundance Trends with Condensation Temperature are Unrelated to Planet Formation**
Origins of Solar Systems Gordon Research Conference, Mount Holyoke College, MA

June 2023 **Elemental Abundance Trends with Condensation Temperature are Unrelated to Planet Formation**
No-PhD Journal Club, Johns Hopkins University, MD

Aug. 2022 **Optimizing JWST BOTS Transit Light Curve Fitting**
The Center for Astrophysics Research Experience, Johns Hopkins University, MD

Teaching appointments

2023 Fall Teaching Assistant, AS.171.107 General Physics I (Undergraduate, 46 students)

2023 Spring Teaching Assistant, AS.171.101 General Physics I (Undergraduate, 46 students)

2022 Fall Teaching Assistant, AS.171.101 General Physics I (Undergraduate, 23 students)

Skills

Programming	Python, C/C++, Java, Assembly, Fortran, Matlab, R, HTML, CSS, JavaScript, Bash
Languages	English, Chinese, French
Astronomy Softwares	DS9, MESA, Siril, Rebound
Other	Pytorch, LaTeX, Git, Mathematica, JupyterLab, Adobe Lightroom, Adobe Photoshop, Blender