Yuxi(Lucy) Lu Curriculum vitae

EDUCATION

- Doctor of Philosophy, Columbia University, New York, NY. **Aug 2019 - Aug 2023**
- Master of Philosophy, New York, NY. **2019 - 2022**
- Master of Arts, Columbia University, New York, NY. **2019 - 2021**
- Bachelor of Science, Honors Degree. University of Maryland, College Park, MD. **2014 - 2018**
- Machine Learning course by Stanford University, passed with 95.7%. Online. **Jan 2019**

FELLOWSHIPS

- 2021 - 2023 RGGS Graduate Student Fellowship
- 2022 Kade Fellowship
- 2019 - 2021 Columbia University Graduate Fellowship

TRAVEL GRANTS

- 2023 White Dwarf Research Corporation conference fund
- 2019 Raynor L. Duncombe Student Research Prize

PHD THESIS INFORMATION

PhD candidate, Advisor: Ruth Angus & Melissa Ness, Department of Astronomy, Columbia University, Manhattan, New York & Department of Astronomy, American Museum of Natural History, Central Park West, Manhattan, New York, **Sep. 2021 - Aug. 2023**

- Dissertation Title: Rewinding the Milky Way in Time

TEACHING EXPERIENCE

Head Teaching Assistant, Department of Astronomy, Columbia University in the City of New York, New York, New York, **Aug 2021 - June 2022**

Teaching Assistant, Department of Astronomy, Columbia University in the City of New York, New York, New York, **Aug 2019 - June 2021**

Teaching Assistant, Department of Astronomy & Department of Physics, University of Maryland, College Park, Maryland, **May 2016 - May 2018**

Tutor, Department of Astronomy, College Park, Maryland, **Feb. 2017 - May 2018**

COMMUNITY SERVICE

Seminar committee member, Department of Astronomy, American Museum of Natural History, Central Park West, Manhattan, New York, **Sep. 2022 - present**

Committee for Sexual-Orientation & Gender Minorities in Astronomy (SGMA) committee member, American Astronomical Society, **Aug 2021 - present**

Graduate student representative for faculty search, Astronomy department, Columbia University in the City of New York, New York, New York. **2022**

INVITED TALKS

1. *Rewinding the Milky Way in time*. Exoplanets & Stars Seminar. Yale University. Nov 2023.
2. *Rewinding the Milky Way in time*. CCAPP seminar. The Ohio State University. Sep 2023.
3. *Rewinding the Milky Way in time*. University of Florida. Sep 2023.
4. *Rewinding the Milky Way in time*. University of Hawaii Institute for Astronomy (IfA). July 2023.
5. *An Abrupt change in the stellar spin-down law at the fully convective boundary*. Columbia University. May 2023.
6. *Galactic Archaeology in the Solar Neighborhood with Gyrochronology*. Center for Astrophysics Harvard & Smithsonian (CfA). March 2023.
7. *There is No Place Like Home — Finding Birth Radii of Stars in the Milky Way*. Group Meeting of Kate Daniel. CCA. December 2022.
8. *Ages for old low-mass K/M dwarfs with gyrochronology and spectroscopy*. Seminar at European Space Research and Technology Centre (ESA). Noordwijk, Netherlands. September 2022.
9. *Bridging the gap — uncovering the behavior of the intermediate period gap with ZTF*. Toulouse, France. July 2022.
10. *Properties of the high- and low-alpha disk & the age-metallicity relation in the Galaxy.* Galactic archeology group meeting at MPIA. Online. April 2022.
11. *Properties of the high- and low-alpha disk & the age-metallicity relation in the Galaxy.* GASP group meeting at ANU. Online. March 2022.
12. *Gyro-kinematic ages for around 30,000 Kepler stars.* FIFTY YEARS OF THE SKUMANICH RELATIONS. Boulder, Colorado. March 2022.
13. *Astraea: A Random Forest Algorithm to Predict Long Rotation Periods of TESS Stars with 27-Day Light Curves*. TESS science collaboration meeting. Online. 2020.

OUTREACH TALKS:

1. **Yuxi Lu**, et al. *Do robots dream of light curves? Using machine learning to measure rotation periods of stars*. Columbia Astronomy outreach. NYC. March, 2020.
2. **Yuxi Lu**, et al. *Do robots dream of light curves? Using machine learning to measure rotation periods of stars*. AMNH high school class. NYC. March, 2020.

PUBLICATIONS

google scholar page: https://scholar.google.com/citations?user=-360Ga8AAAAJ&hl=en&oi=ao

ADS page: https://ui.adsabs.harvard.edu/search/q=orcid%3A0000-0003-4769-3273&sort=date%20desc%2C%20bibcode%20desc&p_=0

First author peer-reviewed publications:

1. **Yuxi Lu**, et al. *In this day and age: Gyrochronology Relation for Partially and Fully Convective Single Field Stars*. In prep.
2. **Yuxi Lu**, et al., *Abrupt change in the stellar spin-down law at the fully convective boundary*., submitted to Nature astronomy, accepted.
3. **Yuxi Lu**, et al., *There is No Place Like Home — Finding Birth Radii of Stars in the Milky Way.* Submitted., in review.
4. **Yuxi Lu**, et al., *Bridging the gap — uncovering the intermediate period gap with ZTF.* A.J., 164, 251. 2022.
5. **Yuxi Lu**, et al., *Exploring the reliability and limitations of inferring birth radii with NIHAO-UHD simulations*. MNRAS, 515, L34. 2022.
6. **Yuxi Lu**, et al., *Turning Points in the Age-Metallicity Relations — Collective Effects from Radial Migration and Major Mergers*. MNRAS, 512, 2890. 2022.
7. **Yuxi Lu** et al., *Similarities behind the high- and low-a disc: small intrinsic abundance scatter and migrating stars*. MNRAS, 512, 2890. 2022.
8. **Yuxi Lu**. et al., *Gyro-Kinematic Ages for around 30,000 Kepler Stars*. A. J., 161, 189. 2021.
9. **Yuxi Lu**. et al., *Astraea: A Random Forest Algorithm to Predict Long Rotation Periods of TESS Stars with 27-Day Light Curves*. A.J., 160, 168. 2020.
10. **Yuxi Lu**, Ronald Ballouz, and Derek Richardson. *Exploring Shear Free Ringlet Formation with Direct Simulations of Saturn's A and B Rings*. A. J., 156, 129. 2018.

Other peer-reviewed publications:

1. Victor See, **Yuxi Lu**, et al. *The impact of stellar metallicity on rotation and activity evolution in the Kepler field using gyro-kinematic ages*. In prep.
2. Tobias Buck, et al. *The impact of early massive mergers on the chemical evolution of Milky Way-like galaxies: insights from NIHAO-UHD simulations*. MNRAS, 523, 1565. 2023.
3. Ruth Angus, et al. *The 3D Galactocentric Velocities of Kepler Stars: Marginalizing Over Missing Radial Velocities*. A.J., 164, 25. 2022.
4. Trevor David, et al. *Small Planet Sizes Evolve Over Billions of Years*. A.J., 161, 265. 2020.
5. Kirsten Blancato, et al., *Data-driven derivation of stellar properties from photometric time series data using convolutional neural networks*. A.J., 933, 241. 2020.
6. Ruth Angus, et al. *Exploring the evolution of stellar rotation using Galactic kinematics*. A.J., 160, 90. 2020.
7. S. C. Kang, et al. *On-orbit performance of the top and bottom counting detectors for the ISS-CREAM experiment on the international space station*. Advances in Space Research, Volume 64, Issue 12, p. 2564-2569. 2019.
8. Jik K. Lee, et al. *The ISS-CREAM Silicon Charge Detector for identification of the charge of cosmic rays up to $Z = 26$: Design, fabrication and ground-test performance*. Astroparticle Physics, Volume 112, p. 8-15. 2019.

Published Conference Proceeding:

1. Nicolas Picot-Clémente, et al., *Study of Cosmic-Ray Light Nuclei Transport with GALPROP* . International Cosmic Ray Conference, Netherlands, July, 2015. PoS(ICRC2015)555.