

# **Yuxi(Lucy) Lu Curriculum vitae**

## **EDUCATION**

- Graduate student. Columbia University, New York, NY. **Aug 2019 - present**
- Bachelor of Science, Honors Degree. University of Maryland, College Park, MD. **Aug 2014 - May 2018**
- **Jan 2019**, online Machine Learning course by Stanford University, passed with 95.7%

## **FELLOWSHIPS**

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

## **TRAVEL GRANTS**

- 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 - present**

## **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**

**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. *Ages for old low-mass K/M dwarfs with gyrochronology and spectroscopy*. Seminar at European Space Research and Technology Centre. Noordwijk, Netherlands. September 2022.
2. *Bridging the gap — uncovering the behavior of the intermediate period gap with  $\mathcal{Z}TF$* . Toulouse, France. July 2022.
3. *Properties of the high- and low-alpha disk & the age-metallicity relation in the Galaxy*. Galactic archeology group meeting at MPIA. Online. April 2022.
4. *Properties of the high- and low-alpha disk & the age-metallicity relation in the Galaxy*. GASP group meeting at ANU. Online. March 2022.
5. *Gyro-kinematic ages for around 30,000 Kepler stars*. FIFTY YEARS OF THE SKUMANICH RELATIONS. Boulder, Colorado. March 2022.
6. *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.
7. **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=-36oGa8AAAAJ&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., *There is No Place Like Home — Finding Birth Radii of Stars in the Milky Way*. Submitted to Nature., in review.
2. **Yuxi Lu**, et al., *Bridging the gap — uncovering the intermediate period gap with  $\mathcal{Z}TF$* . A.J., accepted.
3. **Yuxi Lu**, et al., *Exploring the reliability and limitations of inferring birth radii with NIHAO-UHD simulations*. MNRAS., 515, L34., 2022
4. **Yuxi Lu**, et al., *Turning Points in the Age-Metallicity Relations — Collective Effects from Radial Migration and Major Mergers*. MNRAS. 512, 2890., 2022
5. **Yuxi Lu** et al., *Similarities behind the high- and low- $\alpha$  disc: small intrinsic abundance scatter and migrating stars*. MNRAS., 512, 2890., 2022
6. **Yuxi Lu**. et al., *Gyro-Kinematic Ages for around 30,000 Kepler Stars*. A. J., 161:189., 2021.
7. **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.
8. **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. Ruth Angus. et al. *The 3D Galactocentric Velocities of Kepler Stars: Marginalizing Over Missing Radial Velocities*. A.J., 164, 25., 2022.
3. David, Trevor J. et al. *Small Planet Sizes Evolve Over Billions of Years*. AJ, 161, 265. 2020.
4. Kirsten Blancato et al., *Data-driven derivation of stellar properties from photometric time series data using convolutional neural networks*. ArXiv, 2020.
5. Ruth Angus. et al. *Exploring the evolution of stellar rotation using Galactic kinematics*. A.J., 160, 90., 2020.
6. 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.
7. 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-Cl  mente, et al., *Study of Cosmic-Ray Light Nuclei Transport with GALPROP*. International Cosmic Ray Conference, Netherlands, July, 2015. PoS(ICRC2015)555.