YING-HE CELESTE LÜ

Department of Astronomy, University of Illinois, 1002 W Green St, Urbana, IL 61801

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EDUCATION

University of Illinois, Urbana-Champaign — *expected Aug. 2020*
Ph.D. Astronomy — Urbana, Illinois, USA

University of Illinois, Urbana-Champaign — *Aug. 2018*
M.Sc. Astronomy — Urbana, Illinois, USA

Peking University — *Jul. 2013*
B.S. Physics — Beijing, China

RESEARCH EXPERIENCE

- *Thesis Research* — Summer 2014 - Present
  A New Generation of AGN Feedback Models in Simulations of Galaxy Clusters
  Department of Astronomy, University of Illinois at Urbana-Champaign
  Advisor: Prof. Paul Ricker

- *Research Internship* — Summer 2017, Summer 2018
  Calibration of AGN Feedback Modeling in Cosmological Simulations
  Computational Cosmology Center, Lawrence Berkeley National Lab
  Advisors: Dr. Zarija Lukić & Dr. Ann Almgren

- *Research Assistant* — Summer 2015 - Summer 2016
  Using Accelerator Hardware to Improve Subresolution Modeling in Astrophysical Simulations
  National Center For Supercomputing Applications, University of Illinois at Urbana-Champaign
  Advisors: Prof. Paul Ricker & Dr. Volodymyr Kindratenko

- *Bachelor Thesis Research* — Fall 2012 - Spring 2013
  The Pseudo-Evolution of Dark Matter Halos
  Kavli Institute of Astronomy and Astrophysics, Peking University
  Advisor: Prof. Marcel Zemp

PUBLICATIONS

- Lü , Y. and Ricker, P. M. "The Effect of Under-Resolving AGN Feedback in Simulations of Galaxy Clusters" 2019, in prep

- Lü , Y. and Ricker, P. M. "AGN Feedback from Precessing Jets on the Turbulent Intra-cluster Medium" 2019, in prep

- Lü , Y. and Ricker, P. M. "A New Generation of AGN Feedback Models in Simulations of the Turbulent Intracluster Medium." 2018, in Radio Galaxies: Resolving the AGN Phenomenon (Proc. IAU FM 3), V. Beckmann and C. Ricci, eds. (Cambridge: Cambridge U. P.), in press

TECHNICAL STRENGTHS

Simulation Codes & Packages	FLASH, Athena, Nyx, yt
Programming Languages	C/C++, Fortran 90, Python
Parallel Programming	OpenMP, MPI, OpenACC
Other Tools	Matlab, Mathematica, Javascript, Git

CONFERENCES & WORKSHOPS

- 234th AAS Meeting, St. Louis, MO   Jun. 2019
  Poster Presentation: AGN Feedback from Precessing Jets on the Turbulent Intra-cluster Medium

- IAU General Assembly, Vienna, Austria   Aug. 2018
  Poster Presentation: A New Generation of AGN Feedback Models in Simulations of the Turbulent Intra-cluster Medium

- Santa Fe Cosmology Workshop, Santa Fe, NM   Jul. 2015

- Dark Energy Survey (DES) Collaboration Meeting, Urbana, IL   May 2014

TALKS

- AGN Feedback in the Cores of Galaxy Clusters
  Theoretical Astrophysics Seminar, UIUC   Sep. 2019

- AGN Feedback from Precessing Jets on the Turbulent Intra-cluster Medium
  Illinois Astro-Fest   Apr. 2019

- Journal Club, UIUC

  - Cosmological Simulations with Black Hole Driven Feedback   2018

  - The Generation of AGN Winds and Its Interaction with Host Galaxies   2017

  - Supermassive Binary Black Holes and the Final Parsec Problem   2016

  - Numerical Simulations of AGN Jets   2015

  - Cold Filaments in Cores of Galaxy Clusters   2014

AWARDS

- Third Prize, Excellent Undergraduate Research Projects, Peking University   2012

- University's Most Outstanding Student Organization Leader, Peking University   2011

TEACHING & OUTREACH

- **Teaching Assistant, UIUC**

  - As Main Instructor: Introduction to Astronomy (ASTR 100, online)

  - As Course Assistant: Theoretical Stellar Astrophysics (ASTR 504), Computation in Astronomy (ASTR 310), Computational Astrophysics (ASTR 510), Special Relativity (PHYS 225), Astronomical Techniques (ASTR 404)

- **Mentoring**

  - Physics Peer-mentoring Program: George Wong (PhD Student, UIUC)

  - Women in Astronomy Mentoring Program: Sreevani Jarugula (PhD Student, UIUC), Jingyao Zhu (Undergraduate Student, UIUC)

- **Outreach Activities**

  - Solar Eclipse Outreach Volunteer, UIUC   2017

  - Vice-President of Asronomy Club, Peking University   2010-2012