Curriculum Vitae

Yuexing Cindy Li

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Education:

Columbia University: Ph. D., Astronomy, 2005 (Dissertation advisor: M.-M. Mac Low)
Peking University, Beijing: M. A., Astrophysics, 1998
University of Science & Technology Beijing: B. A., Physics, 1994

Professional History:

2017 – Present, Associate Professor, Dept. of Astronomy & Astrophysics, Penn State University
2009 – 2016, Assistant Professor, Dept. of Astronomy & Astrophysics, Penn State University
2007 –2009, Keck Postdoctoral Research Fellow, Harvard-Smithsonian Center for Astrophysics
2005 –2007, ITC Postdoctoral Research Fellow, Harvard-Smithsonian Center for Astrophysics
1998 – 2005, Research Assistant, Department of Astronomy, Columbia University, and AMNH
1998 – 2000, Teaching Assistant, Department of Astronomy, Columbia University

Fellowships and Grants:

1. August 2016, awarded NSF Major Research Instrument grant 1626251 (PI, $920,688) to build a high-performance hybrid computer cluster to advance cyberscience at Penn State.
2. August 2014, awarded NSF grant AST-1412719 (PI, $506,533) to bridge the gap between theories and observations of galaxies and quasars.
3. October 2010, awarded NSF grant AST-1009867 (PI, $245,225) to study the formation, evolution, and observational signatures of the first massive black holes.
4. December 2008, granted NASA Spitzer Warm Mission "Spitzer Extended Deep Survey" (co-I of ES 60022, PI Giovanni Fazio) to study galaxy assembly at different redshifts.
5. July 2008, awarded NSF grant AST-0807312 (PI, $237,962, transferred to AST-0965694) to develop a radiative transfer code to study multi-band properties of galaxies.
6. 2007, awarded Keck Postdoc Fellowship, Harvard-Smithsonian Center for Astrophysics
7. 2005, awarded ITC Postdoc Fellowship, Harvard-Smithsonian Center for Astrophysics

Research Interests:

I am an observationally oriented theorist working on computational cosmology. I study the formation and evolution of galaxies and black holes from the cosmic dawn to the present day, and their properties in a full spectrum from electromagnetic radiation to gravitational waves, by combining multi-scale cosmological simulations, multi-wavelength radiative transfer and multi-phase gravitational waveforms calculations of black hole mergers. My goal is to bridge the gap between theories and observations, to understand the origin and destiny of the universe and the nature of the dark side of the cosmos: black holes, dark matter, and dark energy.

Granted Observing Proposals:

1. 2014, EVLA, "Formation of the Luminous Quasars at z>6", co-I (PI Ran Wang).
2. 2013, McDonald VIRUS, "Spatially and Spectrally Resolved Observations of Lyman-Alpha Blobs", co-I (PI Alex Hagen).
3. 2008, NASA ES 60022, Spitzer Warm Mission proposal "Spitzer Extended Deep Survey", co-I (PI Giovanni Fazio).

Advising & Mentoring:

1. I have been faculty adviser of 35 undergrads and 11 graduate students.
2. I have supervised 7 students and 3 postdocs on their dissertation or research projects.

Teaching:

Over the past years at Penn State, I have taught 6 different courses at both undergrad and graduate levels at Penn State, and have created and taught a new course for the Penn State In-Service Workshop in Astronomy, *Computers and the Universe*, for high-schools science teachers since 2015.

1. ASTRO 001, *The Astronomical Universe* (undergrad General Education), ~930 students
2. ASTRO 120, The Big Bang Universe (undergrad General Education), ~40 students
3. ASTRO 410, *Computational Astrophysics* (advanced undergrad), ~60 students
4. ASTRO 480, *Galaxies and Cosmology* (advanced undergrad), ~62 students
5. ASTRO /PHYS 527, *Computational Physics and Astrophysics* (Graduate), ~35 students
6. ASTRO 502, Fundamental Astrophysics (Graduate Elective), 4 students

Committees, Services, Seminars, and Outreaches:

1. I have served as a committee member for a dozen of departmental committees, as a grant proposal review panelist for NSF and NASA, and as a referee for scientific journals including Astrophysical Journal and Monthly Notices of the Royal Astronomical Society.
2. I have also provided scientific animations of my simulations to three space shows produced by the Hayden Planetarium at the American Museum of Natural History: "Search for Life", "Cosmic Collisions", and "Journey to the stars", and the TV program "The Cosmic Front" aired in July, 2015 by Japan Broadcasting Corporation NHK.
3. I organized a highly successful international conference "The First Galaxies, Quasars, and Gamma-Ray Bursts" at PSU in 2010, and have given over two dozens invited talks at various institutions and conferences.

Publications:

I have published over 40 refereed papers and a number of conference proceedings and white papers, with > 1930 citations and the h-index 19.