

## YI-XIAN CHEN (陈逸贤)

Email: yc9993@princeton.edu | Tel: (+1) 408-333-4011 | Website: [yi-xian-chen.github.io](https://yi-xian-chen.github.io)

### EDUCATION

---

Department of Astrophysical Sciences, [Princeton University](#)

Princeton, NJ

PhD in Astrophysical Sciences

Sep 2021 – Expected June 2026

- **Research Interests:**

*Topics in planet formation:* Core-accretion theory of super-Earths and gas giants; Planet migration; Observable signatures of planet-disk interactions; Dust evolution in protoplanetary disks

*General application of accretion disk theory:* Tidally distorted accretion disks; Gravitational instability and measurement of turbulence in accretion disks; Evolution of Stellar-mass Black Holes embedded in AGN disks

Department of Physics, [Tsinghua University](#)

Beijing

Bachelor in Physics

Sep 2017 - Jun 2021

- **GPA:** 3.90/4.00

- **Awards & Honors:**

*Chi-sun Yeh (叶企孙) Scholarship (Highest Honor for Physics Major), 2021*

*[Tsinghua University Prestigious \(特等\) Scholarship](#) (Highest Honor for Undergraduates, 10 per year), 2020*

*Lin-bridge Scholarship (Awarded for Excellent Astrophysical Research), 2020*

*Tsinghua University Jiang Nan-xiang (蒋南翔) Scholarship (Highest Honor for Juniors), 2019*

*Tsinghua University Dec. 9<sup>th</sup> (一二九) Scholarship (Highest Honor for Sophomores), 2018*

*Tsinghua University Scholarship for Outstanding Overall Performance, 2018&2019*

*Tsinghua University Scholarship for Outstanding Scientific Research, 2018&2019*

*Tsinghua University Scholarship for Outstanding Art Performance, 2019*

- **Programs:**

Member of Tsinghua University Spark (星火) project, research scholar cultivation program

Member of Chi-sun Yeh Physics class, part of Tsinghua University talent cultivation program (学堂计划)

University of California, Berkeley

Berkeley

Semester Exchange Program (Fall 2019)

Aug 2019 - Dec 2019

- **GPA:** 4.00/4.00

- Department sponsored program for taking relevant courses and research

### PUBLICATIONS

---

1. **Chen Y.X.\***, Li Y.P., Li H., Lin D.N.C., [The Preservation of Super Earths and the Emergence of Gas Giants after Their Progenitor Cores Have Entered the Pebble Isolation Phase](#), The Astrophysical Journal, 896, 135
2. **Chen Y.X.\***, Zhang X., Li Y.P., Li H., Lin D.N.C., [Retention of Long-Period Gas Giant Planets: Type II Migration Revisited](#), The Astrophysical Journal, 900, 44
3. Li Y.P.\*, **Chen Y.X.\***, Lin D.N.C., Zhang X., [Accretion of Gas Giants Constrained by the Tidal Barrier](#), The Astrophysical Journal, 906, 52
4. **Chen Y.X.\***, Wang Z., Li Y.P., Baruteau C., Lin D.N.C., [Wide Dust Gaps in Protoplanetary Disks Induced by Eccentric Planets: A Mass-Eccentricity Degeneracy](#), accepted to ApJ

5. Li R.\*, **Chen Y.X.**, Lin D.N.C., *Dust-Accumulation near the Magnetosphere Truncation of Protoplanetary Discs around T Tauri Stars*, submitted to MNRAS

(\* indicates corresponding author)

## SELECTED SCIENTIFIC TALKS

---

- [Accretion of Gas Giants Constrained by the Tidal Barrier](#) Tucson, Arizona (Virtual)  
Online Talk, invited by UArizona Planet Group Dec 2019
- [The Lense-Thirring Precession and Warped Accretion Disks](#) Beijing  
Course project for General Relativity II Dec 2019
- [Understanding Migration of Gas Giants](#) Beijing  
Summary of research project Aug 2020
- [The Preservation of Hot Super Earths and Cold Gas Giants](#) Tucson, Arizona (Virtual)  
Online Talk, invited by UArizona Planet Group Jun 2020
- **Introduction to Planetary Astrophysics** Tucson, Arizona (Virtual)  
Chi-sun Yeh Academic Lectures, Tsinghua University Jun 2020
- [Formation of Close-in Planets \(sub-Neptunes/super-Earths\)](#) Beijing  
Department of Astronomy (DoA) seminar on theoretical astrophysics, Tsinghua University Apr 2020
- [Galactic Center Microlensing](#) Berkeley, California  
Summary of research project Dec 2019
- [Dust Diffusion in Protoplanetary Disks and Formation of super Earths](#) Urumqi, Xinjiang  
Summary of research project, Formation and Evolution of Planetary System Conference Jul 2019
- [Linear Magneto-Rotational Instability](#) Beijing  
DoA seminar on theoretical astrophysics, Tsinghua University Apr 2019

## CONFERENCES & WORKSHOPS

---

- IMPRS Summer School on “Planet Formation in Protoplanetary Disks”, Heidelberg (Virtual) August 2020
- Exoplanets III, Heidelberg (Virtual) July 2020
- Sagan Workshop on Extreme Precision Radial Velocity, Pasadena, California (Virtual) July 2020
- Formation and Evolution of Planetary System Seminar, Urumqi, Xinjiang July 2019
- Astrophysical Dynamics Conference, Shanghai July 2019

## SKILLS AND INTERESTS

---

### Language Abilities:

- Native in Mandarin Chinese
- Fluent in English, renowned oral speaker, representing China in international speech contests
- **Awards & Honors:**  
China Daily English Speaking Competition (College Group) [National Championship](#), 2019  
English Speaking Union International Public Speech Contest (IPSC) [Finalist/Third Place](#), 2019  
China Daily English Speaking Competition (High School Group) [National Championship](#), 2017

- Invited to star in and dub an official English Promotion Video for Tsinghua University: [\*Beyond the Pages\*](#)

**Programming Languages:** Mathematica, Matlab, python, C++, HTML, LaTeX

**Professional Softwares:** FARGO3D, RADMC-3D, Athena++

**Music and Vocal performance:**

- Member of Tsinghua University chorus and Berkeley Chinese Acappella, performed in various concerts and competitions, Award-winning campus singer, Guest performer on Student Gala
- Selected Live Vocal Performances: [\*My Way\*](#), [\*Wandering Earth Theme \(流浪地球\)\*](#), [\*Keep me by your Side \(让我留在你身边\)\*](#)

**Film production:**

- Wrote screenplays for and produced short play *Ode to Guitar (2018)* and sci-fi film [\*A Wicked Letter Through Time \(2019\)\*](#), well-received by audiences in department Student Gala
- Taken screenwriting courses at Berkeley Extension