

# Yingtian “Bill” Chen

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## Education

- **University of Michigan Department of Astronomy** | Ann Arbor, US 2020 – 2026  
Ph.D. candidate in Astronomy and Astrophysics  
M.S. in Astronomy and Astrophysics
- **Peking University School of Physics** | Beijing, China 2016 – 2020  
B.S. in Physics (with honours)

## Experience

- **Visiting Researcher**, MIT Kavli Institute | Cambridge, US 2019

## Research Interests

Galaxy formation · Star clusters · Stellar streams · Galactic archaeology · Computational astrophysics

- Galaxy and star cluster formation in high-resolution hydrodynamical simulations.
- Semi-analytical modeling of star cluster evolution in cosmological contexts.
- Probing the structure and evolution of galaxies and star clusters via stellar streams.

## Publications

See [the complete list of publications in ADS](#)

- **10 publications in total:** citations > 120, h-index = 7
- **8 publications as first author:** citations > 110, h-index = 7

### Publications as first author

1. **Yingtian Chen**<sup>✉</sup>, Hui Li<sup>✉</sup>, & Oleg Y. Gnedin (2025) *Stellar streams reveal the mass loss of globular clusters*, *ApJL* **980**, L18. [ADS link](#)
2. **Yingtian Chen**<sup>✉</sup>, Monica Valluri, Oleg Y. Gnedin, & Neil Ash (2025) *Improved particle spray algorithm for modeling globular cluster streams*, *ApJS* **276**, 32. [ADS link](#)
3. **Yingtian Chen**<sup>✉</sup> & Oleg Y. Gnedin (2024) *Galaxy assembly revealed by globular clusters*, *OJAp* **7**, 23. [ADS link](#)
4. **Yingtian Chen**<sup>✉</sup> & Oleg Y. Gnedin (2024) *Catalogue of model star clusters in the Milky Way and M31 galaxies*, *MNRAS* **527**, 3692. [ADS link](#)
5. **Yingtian Chen**<sup>✉</sup> & Oleg Y. Gnedin (2023) *Formation of globular clusters in dwarf galaxies of the Local Group*, *MNRAS* **522**, 5638. [ADS link](#)
6. **Yingtian Chen**<sup>✉</sup> & Oleg Y. Gnedin (2022) *Modeling the kinematics of globular cluster systems*, *MNRAS* **514**, 4736. [ADS link](#)
7. **Yingtian Chen**, Hui Li<sup>✉</sup>, & Mark Vogelsberger (2021) *Effects of initial density profiles on massive star cluster formation in giant molecular clouds*, *MNRAS* **502**, 6157. [ADS link](#)
8. **Yingtian Chen** & Bo-Qiang Ma<sup>✉</sup> (2021) *Novel pre-burst stage of gamma-ray bursts from machine learning*, *JHEAp* **32**, 78. [ADS link](#)

## Other publications

9. Neil Ash<sup>✉</sup>, Monica Valluri, **Yingtian Chen**, & Eric F. Bell (2024) *Stellar bars form dark matter counterparts in TNG50*, ApJ **976**, 189. [ADS link](#)
10. Sarah Pearson<sup>✉</sup>, Ana Bonaca, **Yingtian Chen**, & Oleg Y. Gnedin (2024) *Forecasting the population of globular cluster streams in Milky Way-type galaxies*, ApJ **976**, 54. [ADS link](#)

## Honours and Awards

- **Rackham Predoctoral Fellowship** 2025
- **Rackham Conference Travel Grant** × 2 2023 & 2024
- **Rackham International Student Fellowship** 2021
- **Weiming Physics Scholarship** (朱名物理学子) 2020
- **Outstanding Graduate** (北京市普通高等学校优秀毕业生) 2020
- **First Prize & Best speaker**, Xingcheng Forum (兴诚本科生学术论坛一等奖 & 最佳报告奖) 2019
- **Huabao Funding for Undergraduate Research Program** (本科生科研华宝基金) 2018
- **National Scholarship** (国家奖学金) 2018
- **Pacemaker to Merit Student** (三好学生标兵) 2018
- **Outstanding Award & SIAM Award**, Mathematical Contest in Modeling 2018
- **Gold Medal**, Chinese Physics Olympiad (全国中学生物理竞赛金牌) 2015

## Selected Talks

- **Invited talk**, *DESI MWS telecon* | Remote 2024
- **Poster & flash talk**, *DGSCS 2024*, UChicago | Chicago, US 2024
- **Invited seminar**, PKU · THU · SHNU · SHA · SJTU · PMO · NJU · ZJU | Beijing · Shanghai · Nanjing · Hangzhou, China 2024
- **Lunch talk** × 4, *Astronomy graduate student lunch talk series*, UM | Ann Arbor, US 2021 – 2024
- **Invited talk**, *Galaxy Formation group meeting*, CCA, Flatiron Institute | New York, US 2024
- **Invited talk**, UChicago | Remote 2024
- **Invited talk**, *SMWLVS Star Clusters Working Group meeting* | Remote 2023
- **Conference talk**, *MODEST-23*, NU | Evanston, US 2023
- **Conference talk**, *Great Lakes Clusters and Streams*, UM | Ann Arbor, US 2023
- **Talk**, *Seminar for undergraduate students*, PKU | Beijing, China 2019
- **Talk**, *Xingcheng Forum*, PKU | Beijing, China 2019
- **Talk**, *Seminar for theoretical physics*, FDU | Shanghai, China 2019

## Service

### Professional service

- **Referee**: ApJ · MNRAS Since 2023
- **Session co-chair**: *DGSCS 2024* 2024
- **Local organizing committee chair**: *Great Lakes Clusters and Streams* 2023
- **Code developer**: ART · gala · galax · galpy Since 2024
- **Organizer**: UM Stellar Halos Group meeting (weekly) Since 2024

### University service

- **Guest lecturer**: ASTRO 534 (Cosmology): *Cosmological N-body simulations* 2025

- **Graduate student instructor:** ASTRO 104 (Alien Skies) · 106 (Aliens) · 115 (Astrobiology) 2021 & 2024
- **Organizer:** Astronomy graduate student lunch talk series (weekly) 2024 – 2025
- **Organizer:** Astrocoffee journal club (bi-weekly) 2022 – 2025
- **Chair:** UM Chinese astronomers networking group Since 2022
- **Organizer:** Preliminary examination preparation club (weekly) 2022 – 2023
- **Department bread baker** (weekly) 2021 – 2022

## Skills

High performance computing · Data analysis and visualization · Machine learning · Web development

- **Programming Languages:** C/C++ · Python · Latex · MATLAB · HTML/CSS
- **Software/packages:** ART · AREPO · GADGET · MPI · AGAMA · multiprocessing · NumPy · Matplotlib · SciPy · scikit-learn · PyTorch · Astropy · yt · gala · galax · galpy · Bootstrap · Git
- **Languages:** Mandarin Chinese (native) · English (fluent)

## References

- **Dr. Oleg Y. Gnedin**, Professor, UM. ✉[ognedin@umich.edu](mailto:ognedin@umich.edu)
- **Dr. Monica Valluri**, Research Professor, UM. ✉[mvalluri@umich.edu](mailto:mvalluri@umich.edu)
- **Dr. Hui Li (李辉)**, Assistant Professor, THU. ✉[hliastro@tsinghua.edu.cn](mailto:hliastro@tsinghua.edu.cn)