

Yang Ni

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🎓 Education

Princeton University Visiting Student Research Collaborators (VSRC), Host Advisor: Prof. Jeremy Goodman	2026.02 – Present <i>New Jersey, US</i>
Tsinghua University Ph.D. Candidate in Astronomy, Advisor: Prof. Xuening Bai	2022 – Present <i>Beijing, China</i>
Massachusetts Institute of Technology Summer Research (remote), Host Advisor: Prof. Mark Vogelsberger	2020 – 2021 <i>Cambridge, US</i>
Nanjing University B.S. in Astronomy (Magna Cum Laude), Advisor: Prof. Bin Luo	2018 – 2022 <i>Nanjing, China</i>

🔍 Research Interests

- Early-stage evolution of protoplanetary disks; planet formation
- Star formation in AGN disks
- Evolution of giant molecular clouds; star formation in ISM

📄 Publications

(**F** for first author, **C** for co-author)

F2. *Radiation Hydrodynamics of Self-gravitating Protoplanetary Disks I. Direct Formation of Gas Giants via Disk Fragmentation,*

Y. Ni, H. Deng, X. Bai ApJ, 995, 96

F1. *The Life Cycle of the Giant Molecular Clouds in Simulated Milky Way-mass Galaxies,*

Y. Ni, H. Li, M. Vogelsberger, F. Marinacci, L. Sales, P. Torrey A&A, 699, A282

C3. *RIGEL: Feedback regulated cloud-scale star formation efficiency in a simulated dwarf galaxy merger,* Y. Deng, ..., Y. Ni, et al. A&A, 704, A240

C2. *The THESAN-ZOOM project: Star formation efficiency from giant molecular clouds to galactic scale in high-redshift starbursts,*

Z. Wang, ..., Y. Ni, et al. MNRAS, 544, 2675

C1. *GRB 210121A: A Typical Fireball Burst Detected by Two Small Missions,*

X.-Y. Wang, ..., Y. Ni, et al. ApJ, 922, 237

👤 Talks and Posters

Exoplanets and Planet Formation Mini-Workshop, Tsinghua University, China	December 2025
ICEPF Conference 2025, Shanghai, China (<i>Poster</i>)	December 2025
East Asia Numerical Astrophysics Meeting (EANAM10), Jeju, Korea	September 2025
Exoplanets & Planet Formation Workshop 2025, Yunnan, China	August 2025
NSFC Scientific Meeting on CPDs and Satellite Formation, Beijing, China	May 2024
Exoplanets & Planet Formation Workshop 2023, Beijing, China (<i>Poster</i>)	December 2023

International Conference on Resolving Galaxy Ecosystems Across All Scales, The Chinese University of Hong Kong, China December 2023

Colloquium, Department of Astrophysics, Universität Zürich, Switzerland November 2023

Technical Skills

- ✔ Contribute to the M1-radiative transfer module in GIZMO
- ✔ Experienced in radiative (magneto-)hydrodynamic simulation with GIZMO
- ✔ IRAF/Pyraf; The Chandra Interactive Analysis of Observations (CIAO)
- ✔ Python: astropy, h5py, numpy, matplotlib, scipy, yt, networkx... ; C/C++; Mathematica; L^AT_EX
- ✔ Experienced in vibe coding with Claude/Codex

Honors & Awards

Selected:

Tsinghua Scholarship for Overseas Graduate Studies,	Tsinghua University
Comprehensive Scholarship,	Tsinghua University
National Astronomical Observatory of China (NAOC) Scholarship,	NAOC
People's Scholarship First Prize,	The Ministry of Education of the PRC
Outstanding Undergraduate,	Nanjing University
"Top-notch" First Prize,	Nanjing University
G. Zheng Scholarship for Oversea Study,	Zheng Foundation

References

(PhD Advisor) **Prof. Xuening Bai**, Tsinghua University

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(PhD Co-Advisor) **Prof. Hongping Deng**, Shanghai Astronomical Observatory (SHAO)

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Prof. Jeremy Goodman, Princeton University

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Prof. Mark Vogelsberger, Massachusetts Institute of Technology

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Prof. Hui Li, Tsinghua University

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Prof. Bin Luo, Nanjing University

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