Dr. Fangzhou Jiang

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Education and positions

Feb 2023–now	Assistant Professor, **Peking University**
Jan 2020–Jan 2023	Troesh Scholar at **Caltech** and Theory Fellow at the **Carnegie Observatories** Faculty hosts: Prof. Phillip Hopkins (Caltech), Dr. Andrew Benson (Carnegie)
Oct 2016–Dec 2019	PBC Fellow, **Hebrew University of Jerusalem** Faculty host: Prof. Avishai Dekel
July 2016	PhD in Astronomy, **Yale University** Advisor: Prof. Frank van den Bosch
Jun 2010	BSc, **Nanjing University**, Kuang Yaming Honors School

Publication [ADS][Google Scholar] – list of leading author publications on next page

59 papers: **16** as first/corresponding author, citations >2500, first/corresponding-author citations >1000, h-index=29 (Metrics source: Google Scholar, Jul 2025)

Grants and Awards

2025	PI of NSFC General Program No.12473007 520K CNY
2025	PI of Beijing Municipal Natural Science Foundation program QY25097 50K CNY
2023	PI of Beijing Municipal Natural Science Foundation program QY23018 50K CNY
2024	ACAMAR Visiting Fellowship (International Center for Radio Astronomy Research)
2024	First Prize, Peking University Young Faculty Teaching Skills Competition
2023	Peking University Boya Young Fellow
2020	Caltech Troesh Postdoctoral Scholar
2018	Rosenblem Prize for good postdoctoral research in astrophysics, Hebrew University
2017	PBC Fellowship, Planning and Budgeting Committee of Israel
2018	Brouwer Prize for Outstanding PhD thesis, Yale University
2015	Chinese Government Award for Outstanding Students Abroad, China Scholarship Council
2010	Pan Xueping Scholarship, Nanjing University (top-tier undergraduate scholarship)
2008	Goldman Sachs Global Leaders Award (IIE and Goldman Sachs Foundation)

Professional Services

Referee for journals: Nature Astronomy, MNRAS, ApJ, ApJL, A&A, and JCAP
Referee for funding agencies: NSF, HST, NSFC
Leading organizer of Peking University KIAA/DoA Colloquium Series (2025-2026)
Leading organizer of Peking University Galaxy-Club Seminar Series 2023-now
Leading organizer of Peking University KIAA/DoA Career Development Seminar Series (2024-now)
Leading organizer of Hebrew University CosmoLunch seminars (2017-2019)
Co-organizer of Caltech TAPIR seminars (2021-2022)

Software Development

`SatGen` – semi-analytic satellite galaxy generator [GitHub]
`IsothermalStitching` – semi-analytic model of self-interacting dark-matter halo [GitHub]
`MorphDecom` – kinematic galaxy morphological decomposition [GitHub]

PUBLICATIONS – showing 1st/corresponding-author papers – See [ADS library] for a full list

[16] *Formation and Environmental Context of Giant Bulgeless Disk Galaxies in the Early Universe: Insights from Cosmological Simulations*
Jiang F., Liang J., Jin B., Gao Z. et al, 2025, Nature Astronomy submitted, under revision, arXiv:2504.01070 [ADS Link]

[15] *Formation of the Little Red Dots from the Core-collapse of Self-interacting Dark Matter Halos*
Jiang F., Jia Z., Zheng H. et al, 2025, ApJL submitted, under revision, arXiv:2503.23710 [ADS Link]

[14] *Ultra-diffuse galaxies in the EAGLE simulation*
Zheng H., Liao S.*(corresponding), Gao L.*(corresponding), **Jiang F.***(corresponding), ApJ submitted, arXiv:2403.14749 [ADS Link]

[13] *Connection between galaxy morphology and dark-matter halo structure I: a running threshold for thin discs and size predictors from the dark sector*
Liang J., **Jiang F.***(corresponding), Mo H. et al, 2025, MNRAS, 541, 2304, arXiv:2403.14749 [ADS Link]

[12] *Constraining SIDM cross section models with a joint analysis of galaxies and clusters*
Yang S.*(corresponding), **Jiang F.***(corresponding), Benson A. et al, 2024, MNRAS, 533, 4007, arXiv:2305.05067 [ADS Link]

[11] *Constrain the Dark Matter Distribution of Ultra-diffuse Galaxies with Globular-Cluster Mass Segregation: A Case Study with NGC5846-UDG1*
Liang J., **Jiang F.***(corresponding), Danieli S. et al., 2024, ApJ, 964, 53, arXiv:2304.14431 [ADS Link]

[10] *A semi-analytic study of self-interacting dark-matter haloes with baryons*
Jiang F., Benson A., Hopkins P. F. et al., 2023, MNRAS, 521, 4630 [ADS Link]

[9] *SatGen: a semi-analytical satellite galaxy generator – I. The model and its application to Local-Group satellite statistics*
Jiang F., Dekel A., Freundlich J., van den Bosch F. C., Green S. B., Hopkins P. F., Benson A., Du X., 2021, MNRAS, 502, 621 [ADS Link] >100 citations

[8] *Formation of ultra-diffuse galaxies in the field and in galaxy groups*
Jiang F., Dekel A., Freundlich J., Romanowsky A.J., Dutton A., Macciò A., Di Cintio A., 2019, MNRAS, 487, 5272 [ADS Link] >150 citations

[7] *Is the dark-matter halo spin a predictor of galaxy spin and size?*
Jiang F., Dekel A., Kneller O., Lapiner S., Cerverino D., Primack J., Faber S., et al. 2019, MNRAS, 488, 4801 [ADS Link] >150 citations

[6] *Statistics of Dark Matter Substructure: III. Halo-to-Halo Variance*
Jiang F. & van den Bosch F.C., 2017, MNRAS, 472, 657 [ADS Link]

[5] *Comprehensive Assessment of the Too-Big-to-Fail Problem*
Jiang F. & van den Bosch F.C., 2015, MNRAS, 453, 3575 [ADS Link]

[4] *Statistics of Dark Matter Substructure: I. Model and Universal Fitting Functions*
Jiang F. & van den Bosch F.C., 2016, MNRAS, 458, 2848 [Link] >150 citations

[3] *Generating merger trees for dark matter halos: a comparison of methods*
Jiang F. & van den Bosch F.C., 2014, MNRAS, 440, 193 [ADS Link] >100 citations

[2] *A Nearby Analog of $z\sim2$ Compact Quiescent Galaxies with a Rotating Disk*
Jiang F., van Dokkum P., Bezanson R., Franx M., 2012, ApJL, 749, L10 [ADS Link]

[1] *Surface photometry & radial color gradients of nearby luminous early-type galaxies in SDSS Stripe 82*
Jiang F., Huang S., Gu Q., 2011, RAA, 11, 309 [ADS Link]

Presentations – in last 5 years

03/07/2024	Colloquium (invited talk)	Tsinghua, Beijing, China "*Galaxy-Halo Connection & Near-Field Cosmology with Numerical and Semi-Analytical Methods*"
03/07/2024	Colloquium (invited talk)	Tsinghua, Beijing, China "*Galaxy-Halo Connection & Near-Field Cosmology with Numerical and Semi-Analytical Methods*"
12/05/2023	Colloquium (invited talk)	NAOC, Beijing, China "*Galaxy-Halo Connection & Near-Field Cosmology with Numerical and Semi-Analytical Methods*"
11/01/2023	Conference (invited talk)	Shanghai Jiao Tong University, Shanghai, China "*Self-interacting dark matter and its role in the structural diversity of dwarf galaxies*"
08/05/2023	Workshop (invited talk)	University of California, Santa Cruz, Santa Cruz, CA "*Self-interacting dark matter and its role in the structural diversity of dwarf galaxies*" [**Video**]
06/24/2023	Workshop (invited talk)	Pollica, Italy "*A semi-analytical model of SIDM halos with inhabitant galaxies*"
11/08/2021	Seminar (invited talk)	MPA, Munich, Germany "*Galaxy-Halo Connection & Near-Field Cosmology with Numerical and Semi-Analytical Methods*"
09/14/2021	Seminar (invited talk)	University of Missouri, Columbia, MO, USA "*Galaxy-Halo Connection & Near-Field Cosmology with Numerical and Semi-Analytical Methods*"
09/17/2020	Seminar	Carnegie Observatories, Pasadena, CA, USA "*Astrophysical implications of self-interacting dark matter*"
07/06/2020	Seminar	Princeton, NJ, USA "*SatGen: a semi-analytic satellite galaxy generator*"

Teaching

2025-now, Spring	Peking		Dark Matter in the Universe (undergraduate course)
2025-now, Spring	Peking		Galaxy Physics (graduate course)
2025, Apr	UCAS		Galaxy Formation Theory / Milky Way (graduate seminar)
2023, Fall	Peking		Galaxy Physics (graduate course)
2023, Fall	Peking		Writing in Astronomy (graduate course)
2023, Summer	Nanjing		Galaxy Formation Theory (graduate seminar)
2017-2022 Spring	HUJI	lecturer	Advanced Cosmology (graduate course)
2017-2019 Spring	HUJI	advisor	Astrophysics Seminar (undergraduate research training course)
2014, Spring	Yale	TA	ASTR 210: Stellar Astrophysics
2012, Fall	Yale	TA	ASTR 110: Planets and Stars
2011, Fall	Yale	TA	ASTR 130: Origins and the Search for Life in the Universe
2011, Spring	Yale	TA	ASTR 120: Galaxies and the Universe
2010, Fall	Yale	TA	ASTR 255/PHYS 295: Research Methods in Astrophysics

Academic References

Prof. Dr. Avishai Dekel
(faculty host)

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