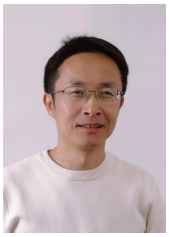
Jiaxin Han (韩家信)

jiaxin.han@sjtu.edu.cn

http://gax.sjtu.edu.cn/jxhan

updated: June 22, 2024



Employment History

2018 – · · · · **Associate Professor** (tenure-track), Department of Astronomy, Shanghai Jiao Tong University, China
2018–2023 Visiting Scientist to Kavli IPMU

2016 – 2018 **Postdoc Researcher** (IPMU fellow), Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo, Japan

2013 – 2016 **Postdoc Researcher**, Institute for Computational Cosmology, Durham University, UK

Education

2007 – 2013 **Ph.D.** in Astrophysics, Shanghai Astronomical Observatory, Chinese Academy of Sciences
Thesis: Subhalo-Tracing in Simulations and Subhalo Observation in Gamma-rays
Supervisors: Prof. Yipeng Jing (Shanghai) and Prof. Carlos Frenk (Durham)

2003 – 2007 **B.Sc.** in Astronomy, Nanjing University (graduated with top grade)

Visits & Secondments

2010 – 2012 Marie-Curie Early Stage Researcher, Durham University

2007 – 2008 Graduate course study, Unviersity of Science and Technology of China

2006 Exchange Student (Fung Scholar), The University of Hong Kong

Grants Awarded

As PI:

2021 – 2024 China Manned Space Project, Cosmological simulations for CSST, sub-project III, CNY *3.16 million*

2020 – 2023 NSFC General Program, Formation and Evolution of Warm Dark Matter Subhalos, CNY *630 thousand*

2019 – 2023 China National Youth Thousand Talents Plan Professorship, CNY *3 million*

SJTU Startup grant, CNY *3 million*

2017 – 2019 JSPS Grant in Aid for Young Scientists (Japan), JPY *4.03 million*

Grants Awarded (continued)

2010 – 2012 Marie-Curie Early Stage Researcher (EU)

As participants:

2019 – 2023
- NSFC Major Program No. 11890691, Frontier research on cosmological structures based on massive spectroscopic surveys (PI: Yipeng Jing)
- National Key Basic Research and Development Program of China No. 2018YFA0404504, Galaxy structure, evolution and cosmology (PI: Shude Mao)

Softwares

- HBT+ A genuine and physical tracking subhalo finder and merger tree builder
- oPDF A first principle and minimal assumption dynamical model
- SubGen A fast subhalo generator according to our unified subhalo distribution model.

Teaching

2019–· · · · **Introduction to Astrophysics**,
Undergraduate level, Astronomy major, 3 lectures per week, Autumn semester.
This course won the *highest* rank in the physics department (rank #4 among all science majors) according to student feedback on course quality in 2020.

2022–· · · · **Graduate Lecture Series on Modern Astronomy**,
Graduate level, 2 lectures per week, Spring semester

Research Group

Current Students Yifeng Zhou, Feihong He, Zhenlin Tan, Yanrui Zhou, Mingtao Yang, Wenkang Jiang, Jiale Zhou,
Qingyang Li (co-supervised with Xiaohu Yang), Hao Yang (co-supervised with Wenting Wang)

Former Students Hongyu Gao (co-supervised with Yipeng Jing)

Current Postdocs Carles G. Palau

Former Postdocs Zhaozhou Li (now a Marie-Curie Fellow at Hebrew University of Jerusalem), Matthew Fong (now a data scientist at Amazon)

Conferences & Talks

Conferences Organized

2023
- 32nd Texas Symposium on Relativistic Astrophysics, Shanghai, Mini-Symposium co-chair
- 2nd Shanghai Assembly on Cosmology and Structure Formation, Shanghai, SOC & LOC co-chair
- Collaboration Workshop on Cosmology and Galaxy Formation, Shanghai, SOC & LOC co-chair

2019
- First Shanghai Assembly on Cosmology and Galaxy Formation, Shanghai, SOC & LOC co-chair
- Workshop on Halo and Galaxy Assembly Bias, Shanghai, SOC co-chair

2018
- PFS Collaboration Meeting, Shanghai, LOC co-chair
- Studying the Universe with GAlaxy suRveys–Revealing the Unlimited in ShangHai (SUGAR-RUSH), Shanghai, SOC co-chair

Invited Talks

2024
- Colloquium at KIAA, PKU: New Frontiers of Dark Matter Halo
- 2024 SWIFAR workshop on cosmology and structure formation: Rejuvenating the halo model with the depletion radius
- NAOC Fundamental Science Forum: New frontiers of dark matter halo

2023
- Seminar at the Hebrew University of Jerusalem: Expanding the boundaries of a dark matter halo
- CSST Annual Meeting, spotlight talk: The Jiutian Simulations for the Chinese Space Station Telescope Survey

2022
- LAMOST-GAIA Sprint, Yichang: Charting the multi-layer dark matter halo in the Milky Way and beyond
- Seminar at Tsung-Dao Lee Institute: Charting the multi-layer dark matter halo in the Milky Way and beyond

2021
- CSST Lectures, CSST Science Center at NAOC: The Jiutian Simulations for the Chinese Space State Telescope Survey

2020
- Colloquium at University of Science and Technology of China: The dynamical state and boundary of dark matter halos
- 22nd Guo Shoujing Workshop of the Chinese Astronomical Union: The depletion radius as a natural halo boundary
- 9th KIAS Workshop on Cosmology and Structure Formation, Seoul: The depletion radius as a natural halo boundary
- Colloquium at National Astronomical Observatory of China: Dark matter halo from inside out
- Colloquium at Tsinghua University: The quasi-equilibrium dark matter halos

2019
- Colloquium at SWIFAR, Yunnan University: The small scale distribution of dark matter–from simulations to observations

Conferences & Talks (continued)

2018 8th KIAS Workshop on Cosmology and Structure Formation, Seoul: A multidimensional view of halo bias

2014 Sussing merger trees workshop, Sussex: A tracking approach to find subhaloes and build merger trees

2012 Subhaloes going Notts workshop, Nottingham: The HBT subhalo finder

Services

- Referee for MNRAS, PASA, RAA, Physics Letters A
- Management Panel of the Jiutian Simulation Collaboration
- Graduate Teaching Supervision Committee of School of Physics and Astronomy
- Builder and Manager of the departmental supercomputer Gravity
- Organizer of departmental colloquium for 2020

Outreach & Communications

- Scientific consultation for the construction of the Shanghai Astronomy Museum
- 揭开银河系的隐匿版图 An invited article on our Milky Way mass measurements published on a popular domestic online media《知识分子》
- 暗物质晕的疆域 An outreach article on the depletion radius of dark matter halo

Publications

- Online list on ADS

First/Corresponding Author

1. Cristóbal Sifón and **Jiaxin Han**. "The history and mass content of cluster galaxies in the EAGLE simulation". In: A&A 686, A163 (June 2024), A163. DOI: 10.1051/0004-6361/202348980. arXiv: 2312.12529 [astro-ph.GA].
2. Feihong He, **Jiaxin Han**, Hongyu Gao, and Jiajun Zhang. "Extending the unified subhalo model to warm dark matter". In: MNRAS 526.2 (Dec. 2023), pp. 3156–3169. DOI: 10.1093/mnras/stad2959. arXiv: 2309.01109 [astro-ph.CO].
3. Yifeng Zhou and **Jiaxin Han**. "A physical and concise halo model based on the depletion radius". In: MNRAS 525.2 (Oct. 2023), pp. 2489–2508. DOI: 10.1093/mnras/stad2375. arXiv: 2303.10886 [astro-ph.CO].
4. Hongyu Gao, **Jiaxin Han**, Matthew Fong, Y. P. Jing, and Zhaozhou Li. "Physical Evolution of Dark Matter Halo around the Depletion Boundary". In: ApJ 953.1, 37 (Aug. 2023), p. 37. DOI: 10.3847/1538-4357/acdfcd. arXiv: 2303.10887 [astro-ph.CO].
5. Yanrui Zhou and **Jiaxin Han**. "Mining the Information Content of Member Galaxies in Halo Mass Modeling". In: ApJ 939.1, 10 (Nov. 2022), p. 10. DOI: 10.3847/1538-4357/ac9478. arXiv: 2203.15222 [astro-ph.CO].
6. Qingyang Li, **Jiaxin Han**, Wenting Wang, et al. "What to expect from dynamical modelling of cluster haloes - II. Investigating dynamical state indicators with Random Forest". In: MNRAS 514.4 (Aug. 2022), pp. 5890–5904. DOI: 10.1093/mnras/stac1739. arXiv: 2203.15268 [astro-ph.CO].
7. Matthew Fong, **Jiaxin Han**, Jun Zhang, et al. "First measurement of the characteristic depletion radius of dark matter haloes from weak lensing". In: MNRAS 513.4 (July 2022), pp. 4754–4769. DOI: 10.1093/mnras/stac1263. arXiv: 2205.01816 [astro-ph.CO].
8. Fuyu Dong, Donghai Zhao, **Jiaxin Han**, et al. "The Universal Specific Merger Rate of Dark Matter Halos". In: ApJ 929.2, 120 (Apr. 2022), p. 120. DOI: 10.3847/1538-4357/ac5aaa. arXiv: 2112.08047 [astro-ph.CO].
9. Qingyang Li, **Jiaxin Han**, Wenting Wang, et al. "What to expect from dynamical modelling of cluster haloes - I. The information content of different dynamical tracers". In: MNRAS 505.3 (Aug. 2021), pp. 3907–3922. DOI: 10.1093/mnras/stab1633. arXiv: 2106.03011 [astro-ph.GA].
10. Zhao-Zhou Li and **Jiaxin Han**. "The Outermost Edges of the Milky Way Halo from Galaxy Kinematics". In: ApJ 915.1, L18 (July 2021), p. L18. DOI: 10.3847/2041-8213/ac0a7f. arXiv: 2105.04978 [astro-ph.GA].
11. Matthew Fong and **Jiaxin Han**. "A natural boundary of dark matter haloes revealed around the minimum bias and maximum infall locations". In: MNRAS 503.3 (May 2021), pp. 4250–4263. DOI: 10.1093/mnras/stab259. arXiv: 2008.03477 [astro-ph.CO].

12 WenTing Wang, **JiaXin Han**, Marius Cautun, ZhaoZhou Li, and Miho N. Ishigaki. "The mass of our Milky Way". In: *Science China Physics, Mechanics, and Astronomy* 63.10, 109801 (May 2020), p. 109801. DOI: 10.1007/s11433-019-1541-6. arXiv: 1912.02599 [astro-ph.GA].

13 **Jiaxin Han**, Wenting Wang, and Zhaozhou Li. "Satellite galaxies as better tracers of the Milky Way halo mass". In: *Galactic Dynamics in the Era of Large Surveys*. Ed. by Monica Valluri and J. A. Sellwood. Vol. 353. Jan. 2020, pp. 109–112. DOI: 10.1017/S1743921319008020. arXiv: 1909.02690 [astro-ph.GA].

14 Zhao-Zhou Li, Yong-Zhong Qian, **Jiaxin Han**, Wenting Wang, and Y. P. Jing. "A Versatile and Accurate Method for Halo Mass Determination from Phase-space Distribution of Satellite Galaxies". In: ApJ 886.1, 69 (Nov. 2019), p. 69. DOI: 10.3847/1538-4357/ab4f6d. arXiv: 1910.11257 [astro-ph.GA].

15 Wenting Wang, **Jiaxin Han**, Alessandro Sonnenfeld, et al. "The stellar halo of isolated central galaxies in the Hyper Suprime-Cam imaging survey". In: MNRAS 487.2 (Aug. 2019), pp. 1580–1606. DOI: 10.1093/mnras/stz1339. arXiv: 1811.04714 [astro-ph.GA].

16 **Jiaxin Han**, Yin Li, Yipeng Jing, et al. "The multidimensional dependence of halo bias in the eye of a machine: a tale of halo structure, assembly, and environment". In: MNRAS 482.2 (Jan. 2019), pp. 1900–1919. DOI: 10.1093/mnras/sty2822. arXiv: 1802.09177 [astro-ph.CO].

17 **Jiaxin Han**, Shaun Cole, Carlos S. Frenk, Alejandro Benitez-Llambay, and John Helly. "HBT+: an improved code for finding subhaloes and building merger trees in cosmological simulations". In: MNRAS 474.1 (Feb. 2018), pp. 604–617. DOI: 10.1093/mnras/stx2792. arXiv: 1708.03646 [astro-ph.CO].

18 Wenting Wang, **Jiaxin Han**, Shaun Cole, Carlos Frenk, and Till Sawala. "What to expect from dynamical modelling of galactic haloes". In: MNRAS 470.2 (Sept. 2017), pp. 2351–2366. DOI: 10.1093/mnras/stx1334. arXiv: 1605.09386 [astro-ph.GA].

19 **Jiaxin Han**, Shaun Cole, Carlos S. Frenk, and Yipeng Jing. "A unified model for the spatial and mass distribution of subhaloes". In: MNRAS 457.2 (Apr. 2016), pp. 1208–1223. DOI: 10.1093/mnras/stv2900. arXiv: 1509.02175 [astro-ph.CO].

20 **Jiaxin Han**, Wenting Wang, Shaun Cole, and Carlos S. Frenk. "The orbital PDF: general inference of the gravitational potential from steady-state tracers". In: MNRAS 456.1 (Feb. 2016), pp. 1003–1016. DOI: 10.1093/mnras/stv2707. arXiv: 1507.00769 [astro-ph.GA].

21 **Jiaxin Han**, Wenting Wang, Shaun Cole, and Carlos S. Frenk. "The orbital PDF: the dynamical state of Milky Way sized haloes and the intrinsic uncertainty in the determination of their masses". In: MNRAS 456.1 (Feb. 2016), pp. 1017–1029. DOI: 10.1093/mnras/stv2522. arXiv: 1507.00771 [astro-ph.GA].

22 **Jiaxin Han**, Vincent R. Eke, Carlos S. Frenk, et al. "Galaxy And Mass Assembly (GAMA): the halo mass of galaxy groups from maximum-likelihood weak lensing". In: MNRAS 446.2 (Jan. 2015), pp. 1356–1379. DOI: 10.1093/mnras/stu2178. arXiv: 1404.6828 [astro-ph.CO].

23 **Jiaxin Han**, Carlos S. Frenk, Vincent R. Eke, et al. "Constraining extended gamma-ray emission from galaxy clusters". In: MNRAS 427.2 (Dec. 2012), pp. 1651–1665. DOI: 10.1111/j.1365-2966.2012.22080.x. arXiv: 1207.6749 [astro-ph.CO].

24 **Jiaxin Han**, Y. P. Jing, Huiyuan Wang, and Wenting Wang. "Resolving subhaloes' lives with the Hierarchical Bound-Tracing algorithm". In: MNRAS 427.3 (Dec. 2012), pp. 2437–2449. DOI: 10.1111/j.1365-2966.2012.22111.x. arXiv: 1103.2099 [astro-ph.CO].

Co-author

1 Yizhou Gu, Xiaohu Yang, **Jiaxin Han**, et al. "CSST large-scale structure analysis pipeline: I. Constructing reference mock galaxy redshift surveys". In: MNRAS 529.4 (Apr. 2024), pp. 4015–4027. DOI: 10.1093/mnras/stae762. arXiv: 2403.10754 [astro-ph.GA].

2 Wenxiang Pei, Qi Guo, Ming Li, et al. "Simulating emission line galaxies for the next generation of large-scale structure surveys". In: MNRAS 529.4 (Apr. 2024), pp. 4958–4979. DOI: 10.1093/mnras/stae866. arXiv: 2404.00092 [astro-ph.GA].

3 Yike Zhang, Wenting Wang, **Jiaxin Han**, et al. "Using the Two-point Correlation Function to Understand the Assembly Histories of Milky Way–like Galaxies". In: ApJ 961.2, 223 (Feb. 2024), p. 223. DOI: 10.3847/1538-4357/ad188c. arXiv: 2310.17104 [astro-ph.GA].

4 JUST Team, Chengze Liu, Ying Zu, et al. "The Jiao Tong University Spectroscopic Telescope (JUST) Project". In: *Astronomical Techniques and Instrument* 1.1 (Jan. 2024), pp. 1–15. DOI: 10.61977/ati2024008.

5 Wenting Wang, Ling Zhu, Yipeng Jing, et al. "Unraveling the Complexity of Dwarf Galaxy Dynamics: A Study of Binary Orbital Motions". In: ApJ 956.2, 91 (Oct. 2023), p. 91. DOI: 10.3847/1538-4357/acf314. arXiv: 2306.04311 [astro-ph.GA].

6 Wenting Wang, Ling Zhu, Zhaozhou Li, et al. "Is the Core-cusp Problem a Matter of Perspective? Jeans Anisotropic Modeling against Numerical Simulations". In: ApJ 941.2, 108 (Dec. 2022), p. 108. DOI: 10.3847/1538-4357/ac9b19. arXiv: 2206.12121 [astro-ph.GA].

7 Rui Shi, Wenting Wang, Zhaozhou Li, et al. "A machine learning approach to infer the accreted stellar mass fractions of central galaxies in the TNG100 simulation". In: MNRAS 515.3 (Sept. 2022), pp. 3938–3955. DOI: 10.1093/mnras/stac1541. arXiv: 2112.07203 [astro-ph.GA].

8 Qingyang Li, Xiaohu Yang, Chengze Liu, et al. "Groups and Protocluster Candidates in the CLAUDS and HSC-SSP Joint Deep Surveys". In: ApJ 933.1, 9 (July 2022), p. 9. DOI: 10.3847/1538-4357/ac6e69. arXiv: 2205.05517 [astro-ph.CO].

9 Wenting Wang, Xiangchong Li, Jingjing Shi, et al. "The Stellar Mass in and around Isolated Central Galaxies: Connections to the Total Mass Distribution through Galaxy-Galaxy Lensing in the Hyper Suprime-Cam Survey". In: ApJ 919.1, 25 (Sept. 2021), p. 25. DOI: 10.3847/1538-4357/ac0e38. arXiv: 2104.05355 [astro-ph.GA].

10 Xiangchong Li, Masamune Oguri, Nobuhiko Katayama, et al. "FPFS Shear Estimator: Systematic Tests on the Hyper Suprime-Cam Survey First-year Data". In: ApJS 251.2, 19 (Dec. 2020), p. 19. DOI: 10.3847/1538-4365/abbad1. arXiv: 1911.02195 [astro-ph.CO].

11 Zhao-Zhou Li, Dong-Hai Zhao, Y. P. Jing, **Jiaxin Han**, and Fu-Yu Dong. "Orbital Distribution of Infalling Satellite Halos across Cosmic Time". In: ApJ 905.2, 177 (Dec. 2020), p. 177. DOI: 10.3847/1538-4357/abc481. arXiv: 2008.05710 [astro-ph.CO].

12 Zhao-Zhou Li, Yong-Zhong Qian, **Jiaxin Han**, et al. "Constraining the Milky Way Mass Profile with Phase-space Distribution of Satellite Galaxies". In: ApJ 894.1, 10 (May 2020), p. 10. DOI: 10.3847/1538-4357/ab84f0. arXiv: 1912.02086 [astro-ph.GA].

13 Fuyu Dong, Jun Zhang, Yu Yu, et al. "Constraining Dark Energy with Stacked Concave Lenses". In: ApJ 874.1, 7 (Mar. 2019), p. 7. DOI: 10.3847/1538-4357/ab0648. arXiv: 1809.00282 [astro-ph.CO].

14 Lei Yang, Yipeng Jing, Xiaohu Yang, and **Jiaxin Han**. "Using the Modified Nearest Neighbor Method to Correct Fiber-collision Effects on Galaxy Clustering". In: ApJ 872.1, 26 (Feb. 2019), p. 26. DOI: 10.3847/1538-4357/aafc22. arXiv: 1810.00323 [astro-ph.CO].

15 Zhen Yuan, Jiang Chang, Projjwal Banerjee, et al. "StarGO: A New Method to Identify the Galactic Origins of Halo Stars". In: ApJ 863.1, 26 (Aug. 2018), p. 26. DOI: 10.3847/1538-4357/aacd0d. arXiv: 1806.06341 [astro-ph.GA].

16 Wenting Wang, **Jiaxin Han**, Shaun Cole, et al. "What to expect from dynamical modelling of galactic haloes - II. The spherical Jeans equation". In: MNRAS 476.4 (June 2018), pp. 5669–5680. DOI: 10.1093/mnras/sty706. arXiv: 1801.07373 [astro-ph.GA].

17 Difu Shi, Baojiu Li, and **Jiaxin Han**. "Environmental screening of dark matter haloes in f(R) gravity". In: MNRAS 469.1 (July 2017), pp. 705–715. DOI: 10.1093/mnras/stx865. arXiv: 1702.03940 [astro-ph.CO].

18 Yang Wang, Frazer R. Pearce, Alexander Knebe, et al. "Sussing merger trees: stability and convergence". In: MNRAS 459.2 (June 2016), pp. 1554–1568. DOI: 10.1093/mnras/stw726. arXiv: 1604.01463 [astro-ph.CO].

19 Wenting Wang, Simon D. M. White, Rachel Mandelbaum, et al. "A weak gravitational lensing recalibration of the scaling relations linking the gas properties of dark haloes to their mass". In: MNRAS 456.3 (Mar. 2016), pp. 2301–2320. DOI: 10.1093/mnras/stv2809. arXiv: 1509.05784 [astro-ph.CO].

20 Peter Behroozi, Alexander Knebe, Frazer R. Pearce, et al. "Major mergers going Notts: challenges for modern halo finders". In: MNRAS 454.3 (Dec. 2015), pp. 3020–3029. DOI: 10.1093/mnras/stv2046. arXiv: 1506.01405 [astro-ph.CO].

21 Marius Cautun, Sownak Bose, Carlos S. Frenk, et al. "Planes of satellite galaxies: when exceptions are the rule". In: MNRAS 452.4 (Oct. 2015), pp. 3838–3852. DOI: 10.1093/mnras/stv1557. arXiv: 1506.04151 [astro-ph.GA].

22 Wenting Wang, **Jiaxin Han**, Andrew P. Cooper, et al. "Estimating the dark matter halo mass of our Milky Way using dynamical tracers". In: MNRAS 453.1 (Oct. 2015), pp. 377–400. DOI: 10.1093/mnras/stv1647. arXiv: 1502.03477 [astro-ph.GA].

23 Difu Shi, Baojiu Li, **Jiaxin Han**, Liang Gao, and Wojciech A. Hellwing. "Exploring the liminality: properties of haloes and subhaloes in borderline f(R) gravity". In: MNRAS 452.3 (Sept. 2015), pp. 3179–3191. DOI: 10.1093/mnras/stv1549. arXiv: 1503.01109 [astro-ph.CO].

24 Lingyu Wang, Marco Viero, Nicholas P. Ross, et al. "Co-evolution of black hole growth and star formation from a cross-correlation analysis between quasars and the cosmic infrared background". In: MNRAS 449.4 (June 2015), pp. 4476–4493. DOI: 10.1093/mnras/stv559. arXiv: 1406.7181 [astro-ph.GA].

25 Jaehyun Lee, Sukyoung K. Yi, Pascal J. Elahi, et al. "Sussing merger trees: the impact of halo merger trees on galaxy properties in a semi-analytic model". In: MNRAS 445.4 (Dec. 2014), pp. 4197–4210. DOI: 10.1093/mnras/stu2039. arXiv: 1410.1241 [astro-ph.GA].

26 Kai Hoffmann, Susana Planelles, Enrique Gaztañaga, et al. "Subhaloes gone Notts: subhaloes as tracers of the dark matter halo shape". In: MNRAS 442.2 (Aug. 2014), pp. 1197–1210. DOI: 10.1093/mnras/stu933. arXiv: 1401.2060 [astro-ph.CO].

27 Lingyu Wang, Michael Rowan-Robinson, Peder Norberg, Sebastien Heinis, and **Jiaxin Han**. "The Revised IRAS-FSC Redshift Catalogue (RIFSCz)". In: MNRAS 442.3 (Aug. 2014), pp. 2739–2750. DOI: 10.1093/mnras/stu915. arXiv: 1402.4991 [astro-ph.GA].

28 Santiago Avila, Alexander Knebe, Frazer R. Pearce, et al. "SUSSING MERGER TREES: the influence of the halo finder". In: MNRAS 441.4 (July 2014), pp. 3488–3501. DOI: 10.1093/mnras/stu799. arXiv: 1402.2381 [astro-ph.CO].

29 C. Y. Jiang, Y. P. Jing, and **Jiaxin Han**. "A Scaling Relation between Merger Rate of Galaxies and Their Close Pair Count". In: ApJ 790.1, 7 (July 2014), p. 7. DOI: 10.1088/0004-637X/790/1/7. arXiv: 1307.3322 [astro-ph.CO].

30 Arnau Pujol, Enrique Gaztañaga, Carlo Giocoli, et al. "Subhaloes gone Notts: the clustering properties of subhaloes". In: MNRAS 438.4 (Mar. 2014), pp. 3205–3221. DOI: 10.1093/mnras/stt2446. arXiv: 1310.0825 [astro-ph.CO].

31 Chaichalit Srisawat, Alexander Knebe, Frazer R. Pearce, et al. "Sussing Merger Trees: The Merger Trees Comparison Project". In: MNRAS 436.1 (Nov. 2013), pp. 150–162. DOI: 10.1093/mnras/stt1545. arXiv: 1307.3577 [astro-ph.CO].

32 Alexander Knebe, Frazer R. Pearce, Hanni Lux, et al. "Structure finding in cosmological simulations: the state of affairs". In: MNRAS 435.2 (Oct. 2013), pp. 1618–1658. DOI: 10.1093/mnras/stt1403. arXiv: 1304.0585 [astro-ph.CO].

33 Pascal J. Elahi, **Jiaxin Han**, Hanni Lux, et al. "Streams going Notts: the tidal debris finder comparison project". In: MNRAS 433.2 (Aug. 2013), pp. 1537–1555. DOI: 10.1093/mnras/stt825. arXiv: 1305.2448 [astro-ph.CO].

34 Julian Onions, Yago Ascasibar, Peter Behroozi, et al. "Subhaloes gone Notts: spin across subhaloes and finders". In: MNRAS 429.3 (Mar. 2013), pp. 2739–2747. DOI: 10.1093/mnras/sts549. arXiv: 1212.0701 [astro-ph.CO].

35 Cheng Li, Y. P. Jing, Shude Mao, et al. "Internal Kinematics of Groups of Galaxies in the Sloan Digital Sky Survey Data Release 7". In: ApJ 758.1, 50 (Oct. 2012), p. 50. DOI: 10.1088/0004-637X/758/1/50. arXiv: 1206.3566 [astro-ph.CO].

36 Julian Onions, Alexander Knebe, Frazer R. Pearce, et al. "Subhaloes going Notts: the subhalo-finder comparison project". In: MNRAS 423.2 (June 2012), pp. 1200–1214. DOI: 10.1111/j.1365-2966.2012.20947.x. arXiv: 1203.3695 [astro-ph.CO].

37 Xiaohu Yang, H. J. Mo, Frank C. van den Bosch, Youcai Zhang, and **Jiaxin Han**. "Evolution of the Galaxy-Dark Matter Connection and the Assembly of Galaxies in Dark Matter Halos". In: ApJ 752.1, 41 (June 2012), p. 41. DOI: 10.1088/0004-637X/752/1/41. arXiv: 1110.1420 [astro-ph.CO].

38 Wenting Wang, Y. P. Jing, Cheng Li, Teppei Okumura, and **Jiaxin Han**. "Galaxy Clustering and Projected Density Profiles as Traced by Satellites in Photometric Surveys: Methodology and Luminosity Dependence". In: ApJ 734.2, 88 (June 2011), p. 88. DOI: 10.1088/0004-637X/734/2/88. arXiv: 1011.2058 [astro-ph.CO].