

Bibliographic metrics: > 950 citations, h -index = 19 (source: [Google Scholar](#)). Normalised citation count: 127.0 (source: [ADS](#)). As of 14 November, 2019.

Publications (as first author)

- [1] J. Wang, **Bose, S.**, C. S. Frenk, L. Gao, A. Jenkins, V. Springel, and S. D. M. White. *Universality in the structure of dark matter haloes over twenty orders of magnitude in halo mass*. **submitted; as joint first author**, Nov 2019.
- [2] **Bose, S.**, A. J. Deason, V. Belokurov, and C. S. Frenk. *The little things matter: relating the abundance of ultrafaint satellites to the hosts' assembly history*. *arXiv e-prints*, page arXiv:1909.04039, Sep 2019.
- [3] **Bose, S.**, D. J. Eisenstein, L. Hernquist, A. Pillepich, D. Nelson, F. Marinacci, V. Springel, and M. Vogelsberger. *Revealing the galaxy-halo connection in IllustrisTNG*. *MNRAS*, page 2192, Sep 2019.
- [4] **Bose, S.**, M. Vogelsberger, J. Zavala, F. Pfrommer, C. and Cyr-Racine, and T. Bohr, S. and Bringmann. *ETHOS - an Effective Theory of Structure Formation: detecting dark matter interactions through the Lyman- α forest*. *MNRAS*, 487(1):522–536, Jul 2019.
- [5] **Bose, S.**, C. S. Frenk, A. Jenkins, A. Fattahi, F. A. Gómez, R. J. J. Grand, F. Marinacci, J. F. Navarro, K. A. Oman, R. Pakmor, J. Schaye, C. M. Simpson, and V. Springel. *No cores in dark matter-dominated dwarf galaxies with bursty star formation histories*. *MNRAS*, 486(4):4790–4804, Jul 2019.
- [6] **Bose, S.**, A. J. Deason, and C. S. Frenk. *The Imprint of Cosmic Reionization on the Luminosity Function of Galaxies*. *ApJ*, 863:123, August 2018.
- [7] **Bose, S.**, I. Ginsburg, and A. Loeb. *Dating the Tidal Disruption of Globular Clusters with GAIA Data on Their Stellar Streams*. *ApJ*, 859:L13, May 2018.
- [8] **Bose, S.**, B. Li, A. Barreira, J.-h. He, W. A. Hellwing, K. Koyama, C. Llinares, and G.-B. Zhao. *Speeding up N-body simulations of modified gravity: chameleon screening models*. *J. Cosmology Astropart. Phys.*, 2:050, February 2017.
- [9] **Bose, S.**, W. A. Hellwing, C. S. Frenk, A. Jenkins, M. R. Lovell, J. C. Helly, B. Li, V. Gonzalez-Perez, and L. Gao. *Substructure and galaxy formation in the Copernicus Complexio warm dark matter simulations*. *MNRAS*, 464:4520–4533, February 2017.
- [10] **Bose, S.**, C. S. Frenk, J. Hou, C. G. Lacey, and M. R. Lovell. *Reionization in sterile neutrino cosmologies*. *MNRAS*, 463:3848–3859, December 2016.
- [11] **Bose, S.**, W. A. Hellwing, C. S. Frenk, A. Jenkins, M. R. Lovell, J. C. Helly, and B. Li. *The Copernicus Complexio: statistical properties of warm dark matter haloes*. *MNRAS*, 455:318–333, January 2016.
- [12] **Bose, S.**, W. A. Hellwing, and B. Li. *Testing the quasi-static approximation in $f(R)$ gravity simulations*. *J. Cosmology Astropart. Phys.*, 2:034, February 2015.
- [13] **Bose, S.**, J. Gundry, and Y.-H. He. *Gauge theories and dessins d'enfants: beyond the torus*. *Journal of High Energy Physics*, 1:135, January 2015.

Publications (as co-author; ranked by contribution)

- [1] B. Hadzhiyska, **Bose, S.**, D. J. Eisenstein, L. Hernquist, and D. N. Spergel. *Limitations to the “basic” HOD model and beyond*. *arXiv e-prints*, art. arXiv:1911.02610, Nov 2019.
- [2] S. Tacchella, **Bose, S.**, C. Conroy, D. J. Eisenstein, and B. D. Johnson. *A Redshift-independent Efficiency Model: Star Formation and Stellar Masses in Dark Matter Halos at $z > 4$* . *ApJ*, 868(2): 92, Dec 2018. doi: 10.3847/1538-4357/aae8e0.
- [3] M. R. Lovell, **Bose, S.**, A. Boyarsky, R. A. Crain, C. S. Frenk, W. A. Hellwing, A. D. Ludlow, J. F. Navarro, O. Ruchayskiy, T. Sawala, M. Schaller, J. Schaye, and T. Theuns. *Properties of Local Group galaxies in hydrodynamical simulations of sterile neutrino dark matter cosmologies*. *MNRAS*, 468:4285–4298, July 2017. doi: 10.1093/mnras/stx654.
- [4] M. R. Lovell, **Bose, S.**, A. Boyarsky, S. Cole, C. S. Frenk, V. Gonzalez-Perez, R. Kennedy, O. Ruchayskiy, and A. Smith. *Satellite galaxies in semi-analytic models of galaxy formation with sterile neutrino dark matter*. *MNRAS*, 461:60–72, September 2016. doi: 10.1093/mnras/stw1317.
- [5] A. D. Ludlow, **Bose, S.**, R. E. Angulo, L. Wang, W. A. Hellwing, J. F. Navarro, S. Cole, and C. S. Frenk. *The mass-concentration-redshift relation of cold and warm dark matter haloes*. *MNRAS*, 460:1214–1232, August 2016. doi: 10.1093/mnras/stw1046.
- [6] A. Barreira, **Bose, S.**, B. Li, and C. Llinares. *Weak lensing by galaxy troughs with modified gravity*. *J. Cosmology Astropart. Phys.*, 2:031, February 2017. doi: 10.1088/1475-7516/2017/02/031.
- [7] A. Barreira, **Bose, S.**, and B. Li. *Speeding up N-body simulations of modified gravity: Vainshtein screening models*. *J. Cosmology Astropart. Phys.*, 12:059, December 2015. doi: 10.1088/1475-7516/2015/12/059.
- [8] M. Cautun, **Bose, S.**, C. S. Frenk, Q. Guo, J. Han, W. A. Hellwing, T. Sawala, and W. Wang. *Planes of satellite galaxies: when exceptions are the rule*. *MNRAS*, 452:3838–3852, October 2015. doi: 10.1093/mnras/stv1557.
- [9] M. R. Lovell, V. Gonzalez-Perez, **Bose, S.**, A. Boyarsky, S. Cole, C. S. Frenk, and O. Ruchayskiy. *Addressing the too big to fail problem with baryon physics and sterile neutrino dark matter*. *MNRAS*, 468:2836–2849, July 2017. doi: 10.1093/mnras/stx621.
- [10] A. Barreira, C. Llinares, **Bose, S.**, and B. Li. *RAY-RAMSES: a code for ray tracing on the fly in N-body simulations*. *J. Cosmology Astropart. Phys.*, 5:001, May 2016. doi: 10.1088/1475-7516/2016/05/001.
- [11] R. P. Naidu, S. Tacchella, C. A. Mason, **Bose, S.**, P. A. Oesch, and C. Conroy. *Rapid Reionization by the Oligarchs: The Case for Massive, UV-Bright, Star-Forming Galaxies with High Escape Fractions*. *arXiv e-prints*, art. arXiv:1907.13130, Jul 2019.
- [12] M. Cautun, E. Paillas, Y.-C. Cai, **Bose, S.**, J. Armijo, B. Li, and N. Padilla. *The Santiago-Harvard-Edinburgh-Durham void comparison - I. SHEDding light on chameleon gravity tests*. *MNRAS*, 476(3):3195–3217, May 2018. doi: 10.1093/mnras/sty463.
- [13] W. A. Hellwing, C. S. Frenk, M. Cautun, **Bose, S.**, J. Helly, A. Jenkins, T. Sawala, and M. Cykowski. *The Copernicus Complexio: a high-resolution view of the small-scale Universe*. *MNRAS*, 457:3492–3509, April 2016. doi: 10.1093/mnras/stw214.

- [14] R. Li, C. S. Frenk, S. Cole, L. Gao, **Bose, S.**, and W. A. Hellwing. *Constraints on the identity of the dark matter from strong gravitational lenses*. MNRAS, 460:363–372, July 2016. doi: 10.1093/mnras/stw939.
- [15] J. Hou, C. S. Frenk, C. G. Lacey, and **Bose, S.** *Constraining SN feedback: a tug of war between reionization and the Milky Way satellites*. MNRAS, 463:1224–1239, December 2016. doi: 10.1093/mnras/stw2033.
- [16] P. Mocz, A. Fialkov, M. Vogelsberger, F. Becerra, M. A. Amin, **Bose, S.**, M. Boylan-Kolchin, P.-H. Chavanis, L. Hernquist, L. Lancaster, F. Marinacci, V. H. Robles, and J. Zavala. *First Star-Forming Structures in Fuzzy Cosmic Filaments*. Phys. Rev. Lett., 123:141301, Oct 2019. doi: 10.1103/PhysRevLett.123.141301.
- [17] M. R. Lovell, D. Iakubovskyi, D. Barnes, **Bose, S.**, C. S. Frenk, T. Theuns, and W. A. Hellwing. *Simulating the Dark Matter Decay Signal from the Perseus Galaxy Cluster*. ApJ, 875(2): L24, Apr 2019. doi: 10.3847/2041-8213/ab13ac.
- [18] H. A. Winther, F. Schmidt, A. Barreira, C. Arnold, **Bose, S.**, C. Llinares, M. Baldi, B. Falck, W. A. Hellwing, K. Koyama, B. Li, D. F. Mota, E. Puchwein, R. E. Smith, and G.-B. Zhao. *Modified gravity N-body code comparison project*. MNRAS, 454:4208–4234, December 2015. doi: 10.1093/mnras/stv2253.
- [19] M. R. Lovell, D. Barnes, Y. Bahé, J. Schaye, M. Schaller, T. Theuns, **Bose, S.**, R. A. Crain, C. dalla Vecchia, C. S. Frenk, W. Hellwing, S. T. Kay, A. D. Ludlow, and R. G. Bower. *The signal of decaying dark matter with hydrodynamical simulations*. MNRAS, 485(3):4071–4089, May 2019. doi: 10.1093/mnras/stz691.
- [20] S. Hilbert, A. Barreira, G. Fabbian, P. Fosalba, C. Giocoli, M. **Bose, S.** and Calabrese, C. Carbone, C. T. Davies, B. Li, C. Llinares, and P. Monaco. *The Accuracy of Weak Lensing Simulations*. arXiv e-prints, art. arXiv:1910.10625, Oct 2019.
- [21] M. Cataneo, L. Lombriser, C. Heymans, A. J. Mead, A. Barreira, **Bose, S.**, and B. Li. *On the road to percent accuracy: nonlinear reaction of the matter power spectrum to dark energy and modified gravity*. MNRAS, page 1778, Jul 2019. doi: 10.1093/mnras/stz1836.
- [22] E. Paillas, M. Cautun, B. Li, Y. C. Cai, N. Padilla, J. Armijo, and **Bose, S.** *The Santiago-Harvard-Edinburgh-Durham void comparison II: unveiling the Vainshtein screening using weak lensing*. MNRAS, 484(1):1149–1165, Mar 2019. doi: 10.1093/mnras/stz022.
- [23] M. Jauzac, D. Eckert, J. Schwinn, D. Harvey, C. M. Baugh, A. Robertson, **Bose, S.**, R. Massey, M. Owers, H. Ebeling, H. Y. Shan, E. Jullo, J.-P. Kneib, J. Richard, H. Atek, B. Clément, E. Egami, H. Israel, K. Knowles, M. Limousin, P. Natarajan, M. Rexroth, P. Taylor, and C. Tchernin. *The extraordinary amount of substructure in the Hubble Frontier Fields cluster Abell 2744*. MNRAS, 463:3876–3893, December 2016. doi: 10.1093/mnras/stw2251.
- [24] P. Mocz, A. Fialkov, M. Vogelsberger, F. Becerra, J. Shen, V. H. Robles, M. A. Amin, J. Zavala, M. Boylan-Kolchin, **Bose, S.**, F. Marinacci, P.-H. Chavins, L. Lancaster, and L. Hernquist. *Galaxy Formation with Λ CDM – II. Cosmic Filaments and First Galaxies*. arXiv e-prints, art. arXiv:1911.05746, Nov 2019.