■ FIRST-AUTHORED PAPERS (6 papers in total, including 1 single-authored paper)

1. *Ultra-diffuse galaxies in the Auriga simulations*
   Shihong Liao, Liang Gao, Carlos S. Frenk, Robert J. J. Grand, Qi Guo, Facundo A. Gómez, Federico Marinacci, Rüdiger Pakmor, Shi Shao, Volker Springel, 2019, accepted by MNRAS (arXiv:1904.06356)

2. *Impact of filaments on galaxy formation in their residing dark matter haloes*
   Shihong Liao, Liang Gao, 2019, MNRAS, 485, 464 (arXiv:1805.10944)

3. *An alternative method to generate pre-initial conditions for cosmological N-body simulations*
   Shihong Liao, 2018, MNRAS, 481, 3750 (arXiv:1807.03574)

4. *The segregation of baryons and dark matter during halo assembly*
   Shihong Liao, Liang Gao, Carlos S. Frenk, Qi Guo, Jie Wang, 2017, MNRAS, 470, 2262 (arXiv:1610.07592)

5. *A universal angular momentum profile for dark matter halos*
   Shihong Liao, Jianxiong Chen, M.-C. Chu, 2017, ApJ, 844, 86 (arXiv:1612.00117)

6. *Angular momentum - mass relation for dark matter halos*
   Shihong Liao, Dalong Cheng, M.-C. Chu, Jiayu Tang, 2015, ApJ, 809, 64 (arXiv:1412.3515)

■ CO-AUTHORED PAPERS (9 papers in total, including 2 second-authored papers)

7. *Hunting for primordial black holes with stochastic gravitational-wave background in the space-based detector frequency band*
   Yi-Fan Wang, Qing-Guo Huang, Tjonnie G. F. Li, **Shihong Liao**, 2019, arXiv preprint (arXiv:1910.07397)

8. *Distribution-based particle data reduction for in-situ analysis and visualization of large-scale N-body cosmological simulations*
   Guan Li, Jiayi Xu, Tianchi Zhang, Guihua Shan, Han-Wei Shen, Ko-Chih Wang, **Shihong Liao**, ZhongHua Lu, 2019, submitted to PacificVis 2020

9. *HIKER: a halo-finding method based on kernel-shift algorithm*
   Shuangpeng Sun, **Shihong Liao**, Qi Guo, Qiao Wang, Liang Gao, 2019, accepted by Research in Astronomy and Astrophysics (arXiv:1909.13301)

10. *Further evidence for a population of dark matter-deficient dwarf galaxies*
    Qi Guo, Huijie Hu, Zheng Zheng, **Shihong Liao**, Wei Du, Shude Mao, Linhua Jiang, Jing Wang, Yingjie Peng, Liang Gao, Jie Wang, Hong Wu, 2019, accepted by Nature Astronomy (arXiv:1908.00046)

11. *Dark-matter-deficient galaxies in hydrodynamical simulations*
    Yingjie Jing, Chunxiang Wang, Ran Li, **Shihong Liao**, Jie Wang, Qi Guo, Liang Gao, 2019, MNRAS, 488, 3298 (arXiv:1811.09070)

12. *The optimal gravitational softening length for cosmological N-body simulations* [Co-supervised PhD project]
    Tianchi Zhang, **Shihong Liao**, Ming Li, Liang Gao, 2019, MNRAS, 487, 1227 (arXiv:1810.07055)

13. *The first constraint from SDSS galaxy–galaxy weak lensing measurements on interacting dark energy models*
    Jiajun Zhang, Rui An, Wentao Luo, Zhaozhou Li, **Shihong Liao**, Bin Wang, 2019, ApJL, 875, L11 (arXiv:1807.05522)

14. *Fully self-consistent cosmological simulation pipeline for interacting dark energy models*
Jiajun Zhang, Rui An, **Shihong Liao**, Wentao Luo, Zhaozhou Li, Bin Wang, 2018, Phys. Rev. D, 98, 103530 (arXiv:1811.01519)

15. *A universe of ultra-diffuse galaxies: theoretical predictions from the ΛCDM simulation*
Yu Rong, Qi Guo, Liang Gao, **Shihong Liao**, Lizhi Xie, Thomas H. Puzia, Shuangpeng Sun, Jun Pan, 2017, MNRAS, 470, 4231 (arXiv:1703.06147)