

Curriculum Vitae

Siyi Zhou

Contact

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Personal

Born on March 29th, 1992 in China.

Education

Postdoc, Stockholm University (2019-now)

Graduate student, Hong Kong University of Science and Technology (2014-2019).

Supervisor: Prof. Yi Wang

B. S., University of Science and Technology of China (2010-2014).

Research Interest

Early universe cosmology, especially cosmological collider physics, holographic approach to inflation and initial conditions of the early universe.

Teaching Experience

Teaching Assistant of PHYS2022: Modern Physics, HKUST (2015, 2016)

Teaching Assistant of PHYS6810D: Introduction to Quantum Field Theory, HKUST (2016)

Teaching Assistant of PHYS6810C: Advanced Cosmology, HKUST (2015)

Teaching Assistant: Theoretical Mechanics, USTC (2013)

Awards

the Hong Kong University of Science and Technology, School of Science, Research Excellence Award (2018-2019)

Hong Kong PhD Fellowship Scheme (HKPFS) (2014-2018)

Best-poster prize in YITP workshop of Quantum Gravity, String Theory and Holography (2017)
Best Teaching Assistant Honorable Mention (2015,2016)
Guanghua Education Scholarship (2012)
Outstanding Student Scholarship (2010,2011,2013)

Seminars and Conference Talks

Invited Talk, Gravitational Production of Superheavy Dark Matter and Associated Cosmological Signatures, August 2019, Rencontres du Vietnam: Cosmology 2019

Talk, Heavy Spinning Particles from Signs of Primordial Non-Gaussianities: Beyond the Positivity Bounds, July, 2019, Gordon Research Seminar on Particle Physics (GRS), HKUST

Seminar, Heavy Spinning Particles from Signs of Primordial Non-Gaussianities: Beyond the Positivity Bounds, May, 2019, Tsinghua University

Seminar, Heavy Spinning Particles from Signs of Primordial Non-Gaussianities: Beyond the Positivity Bounds, May, 2019, Beijing University of Technology

Seminar, Particle Production in the Early Universe, April 2019, Kavli Institute for the Physics and Mathematics of the Universe

Seminar, Particle Production in the Early Universe, April 2019, Kobe University

Seminar, Amplitudes Meet Cosmology, March, 2019, Chinese Academy of Sciences

Talk, Unsuppressed Primordial Standard Clocks in Warm Quasi-single Field Inflation, International Conference on Particle Physics and Cosmology, August, 2018, Institute for Basic Science

Talk, Warm Quasi-Single Field Inflation, Summer School on Cosmology, Jun, 2018, the Abdus Salam International Centre for Theoretical Physics

Talk, Strongly Coupled Cosmological Collider, International Symposium on Cosmology and Particle Astrophysics, December, 2017, Yukawa Institute for Theoretical Physics

Talk, Partial Effective Field Theory Approach to Cosmological Collider, The 20th Conference of the Physical Society of Hong Kong, June, 2017, the Hong Kong University of Science and Technology

Seminar, Holographic Single Field Inflation, April, 2017, Tokyo University

Seminar, Partial Effective Field Theory Approach to Cosmological Collider, April, 2017, Kobe University

Seminar, Holographic Single Field Inflation, July, 2016, Chinese Academy of Sciences

Talk, Initial Condition of Inflationary Fluctuations, Phenomenology 2017 Symposium, May, 2016, University of Pittsburgh

Informal Seminar, Holographic Single Field Inflation, May, 2016, Harvard University

Informal Seminar, Holographic Single Field Inflation, April, 2016, University of Wisconsin-Madison

Talk, Holographic Single Field Inflation, CfA@USTC Junior Symposium on Gravitation and Cosmology April, 2016, Hefei, Anhui

Talk, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, The 18th Conference of the Physical Society of Hong Kong, June, 2015, the Hong Kong Polytechnic University

Seminar, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, April, 2015, Asia Pacific Center for Theoretical Physics

Seminar, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, April, 2015, Korea Insititute for Advanced Study

Seminar, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, April, 2015, Sungkyunkwan University

Seminar, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, April, 2015, Sogang University

Talk, Inflation with Massive Vector Fields, KASI-APCTP joint workshop, April, 2015, Korea Astronomy and Space Science Institute

Seminar, Non-Uniqueness of Classical Inflationary Trajectories on a High-Dimensional Landscape, March, 2015, Seoul National University

Journal Articles and Preprints on ArXiv

1. Cosmological Signatures of Superheavy Dark Matter
By Lingfeng Li, Shiyun Lu, Yi Wang and Siyi Zhou
arXiv: 2002.01131 [hep-ph]
2. String Regge trajectory on de Sitter space and implications to inflation
By Toshifumi Noumi, Toshiaki Takeuchi and Siyi Zhou
arXiv:1907.02535 [hep-th]
3. Heavy Spinning Particles from Signs of Primordial Non-Gaussianities: Beyond the Positivity Bounds
By Suro Kim, Toshifumi Noumi, Keito Takeuchi and Siyi Zhou
JHEP **1912** (2019) 107, arXiv:1906.11840 [hep-th]
4. Gravitational Production of Superheavy Dark Matter and Associated Cosmological Signatures
By Lingfeng Li, Tomohiro Nakama, Chon Man Sou, Yi Wang and Siyi Zhou
JHEP **1907** (2019) 067, arXiv:1903.08842 [hep-th]

5. Operator Method and Recursion Relations for Inflationary Correlator
By Shek Kit Chu, Yi Wang and Siyi Zhou
JCAP **1903** (2019) no.03, 042, arXiv:1812.00322 [hep-th]
6. Imprints of Schwinger Effect on Primordial Spectra
By Wan Zhen Chua, Qianhang Ding, Yi Wang and Siyi Zhou
JHEP **1904** (2019) 066, arXiv:1810.09815 [hep-th]
7. KLT-Like Behaviour of Inflationary Graviton Correlators
By Shing Yan Li, Yi Wang and Siyi Zhou
JCAP **1812** (2018) no.12, 023, arXiv:1806.06242 [hep-th]
8. Hybrid Quasi-Single Field Inflation
By Yi Wang, Yi-Peng Wu, Jun'ich Yokoyama and Siyi Zhou
JCAP **1807**, no. 07, 068 (2018), arXiv:1804.07541 [astro-ph.CO]
9. Connections between Minkowski and Cosmological Correlation Functions
By Shek Kit Chu, Mang Hei Gordon Lee, Shiyun Lu, Xi Tong, Yi Wang and Siyi Zhou
JCAP **1806**, no. 06, 001 (2018), arXiv:1803.09637 [hep-th]
10. Unsuppressed Primordial Standard Clocks in Warm Quasi-Single Field Inflation
By Xi Tong, Yi Wang and Siyi Zhou
JCAP **1806**, no. 06, 013 (2018), arXiv:1801.05688 [hep-th]
11. Fluctuations through a Vibrating Bounce
By Robert Brandenberger, Qiuyue Liang, Rudnei O. Ramos and Siyi Zhou
Phys. Rev. D **97** no. 4, 043504 (2018), arXiv:arXiv:1711.08370 [hep-th]
12. Strongly Coupled Quasi-Single Field Inflation
By Aditya Varna Iyer, Shi Pi, Yi Wang, Ziwei Wang and Siyi Zhou
JCAP **1801**, no. 01, 041 (2018), arXiv:1710.03054 [hep-th]
13. On the Effective Field Theory for Quasi-Single Field Inflation
By Xi Tong, Yi Wang and Siyi Zhou
JCAP **1711**, no. 11, 045 (2017) arXiv:1708.01709 [astro-ph.CO]
14. Holographic non-Gaussianities in General Single-field Inflation
By Hiroshi Isono, Toshifumi Noumi, Gary Shiu, Sam S.C. Wong and Siyi Zhou
JHEP **1612**, 028 (2016), arXiv:1610.01258 [hep-th]
15. Differentiating G-inflation from String Gas Cosmology using the Effective Field Theory Approach
By Minxi He, Junyu Liu, Shiyun Lu, Siyi Zhou, Yi-Fu Cai, Yi Wang and Robert Brandenberger
JCAP **1612**, 040 (2016), arXiv:1601.01179 [hep-th]
16. On the Initial Condition of Inflationary Fluctuations
By Hongliang Jiang, Yi Wang and Siyi Zhou
JCAP **1604**, no. 04, 041 (2016), arXiv:1601.01179 [hep-th]
17. Inflation with Massive Vector Fields
By Junyu Liu, Yi Wang and Siyi Zhou
JCAP **1508**, 033 (2015), arXiv:1502.05138 [hep-th]

18. Nonuniqueness of Classical Inflationary Trajectories on a High-dimensional Landscape
By Junyu Liu, Yi Wang and Siyi Zhou
Phys. Rev. D **91**, no. 10, 103525 (2015), arXiv:1501.06785 [hep-th]