Huajia Wang

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EDUCATION

2009 – 2015 **Stanford University**, Department of Physics, CA, USA
PhD in Physics
Advisor: Prof. Shamit Kachru

2005 – 2009 **Washington University in St. Louis**, MO, USA
B. S. in Mathematics and Physics
Advisor: Prof. Mark Alford

POSITIONS AND EXPERIENCES

- **Faculty**, Kavli Institute for Theoretical Sciences (KITS), University of Chinese Academy of Sciences (UCAS), Beijing (starting in 2020)
- **Postdoctoral Scholar**, Kavli Institute for Theoretical Physics (KITP), University of California, Santa Barbara (UCSB), (2018-present)
- **Postdoctoral Researcher**, University of Illinois at Urbana-Champain (UIUC), (2015-2018)

PUBLICATIONS

1. B. Han, **H. Wang**, P. Ye, *"Symmetry-protected topological phases with both spatial and internal symmetries"* arXiv: 1807.10844 [cond-mat]
2. T. Faulkner, M. Li, **H. Wang**, *"A modular toolkit for bulk reconstruction"* **JHEP** 1904 119 (2019) arXiv: 1806.10560 [hep-th]
3. T. Faulkner, **H. Wang**, *"Probing beyond ETH at large c"* **JHEP** 1806 123 (2018) arXiv: 1712.03464 [hep-th]
4. **H. Wang**, Y. Wang, G. Torroba, *"Superconductivity vs quantum criticality: effects of thermal fluctuations"* **Phys. Rev. B** 97, 054502 (2018) arXiv: 1708.04624 [cond-mat]
5. S. Balakrishnan, T. Faulkner, Z. Khandker, **H. Wang**, *"A General Proof of the Quantum Null Energy Condition"* arXiv: 1706.09432 [hep-th]
6. **H. Wang**, G. Torroba, *"Non-Fermi liquids at finite temperature: normal state and infrared singularities"* **Phys. Rev. B** 96, 144508 (2017) arXiv: 1706.07471 [cond-mat.str-el]

7. **H. Wang**, S. Raghu, G. Torroba, *"Non-Fermi liquid Superconductivity: Eliashberg versus the Renormalization Group"* **Phys. Rev. B** 95, 165137 (2017) arXiv: 1612.01971 [cond-mat.str-el]

8. S. Kachru, M. Mulligan, G. Torroba, **H. Wang**, *"Non-supersymmetric dualities from mirror symmetry"* **Phys. Rev. Lett.** 118, 011602 (2017) arXiv: 1609.02149 [hep-th]

9. F. Lin, **H. Wang**, J. Zhang *"Thermality and excited state Renyi entropy in two-dimensional CFT"* **JHEP** 1611 116 (2016) arXiv: 1610.01362 [hep-th]

10. S. Kachru, M. Mulligan, G. Torroba, **H. Wang**, *"Bosonization and Mirror symmetry"* **Phys. Rev. D** 94, 085009 (2016) arXiv: 1608.05077 [hep-th]

11. T. Faulkner, R. Leigh, O. Parrikar, **H. Wang**, *"Modular Hamiltonian for deformed half-spaces and the Averaged Null Energy Condition"* **JHEP** 09 038 (2016) arXiv: 1605.08072 [hep-th]

12. E. Shaghoulian, **H. Wang**, *"Timelike BKL singularities and chaos in AdS/CFT"* **Class. Quant. Grav** V33, 12 (2016) arXiv: 1601.02599 [hep-th]

13. S. Raghu, G. Torroba, **H. Wang**, *"Metallic quantum critical points with finite BCS couplings"* **Phys. Rev. B** 92, 205104 (2015) (editor's suggestion) arXiv: 1507.06652 [cond-mat.str-el]

14. S. Kachru, M. Mulligan, G. Torroba, **H. Wang**, *"Mirror symmetry and the half-filled Landau level"* **Phys. Rev. B** 92, 235105 (2015) arXiv: 1506.01376 [cond-mat.str-el]

15. L. Fitzpatrick, G. Torroba, **H. Wang**, *"Aspects of renormalization in finite density field theory,"* **Phys. Rev. B** 91, 195135 (2015) arXiv: 1410.6811 [cond-mat.str-el]

16. L. Fitzpatrick, S. Kachru, J. Kaplan, S. Raghu, G. Torroba, **H. Wang**, *"Enhanced pairing of quantum critical metals near $d = 3 + 1$,"* **Phys. Rev. B** 92, 045118 (2015) arXiv: 1410.6814 [cond-mat.str-el]

17. G. Torroba and **H. Wang**, *"Quantum Critical Metals in 4-ϵ Dimensions,"* **Phys. Rev. B** 90, 165144 (2014) arXiv: 1406.3029 [cond-mat.str-el]

18. A. Hook, S. Kachru, G. Torroba and **H. Wang**, *"Emergent Fermi Surfaces, Fractionalization and Duality in Supersymmetric QED,"* **JHEP** 08, 031 (2014) arXiv: 1401.1500 [hep-th]

19. G. Torroba and **H. Wang**, *"Black branes in flux compactifications,"* **JHEP** 1310, 126 (2013) [arXiv:1306.3982 [hep-th]].

20. N. Lizuka, S. Kachru, N. Kundu, P. Narayan, N. Sircar, S. Trivedi and **H. Wang**, *"Extremal Horizons with Reduced Symmetry: Hyperscaling Violation, Stripes, and a Classification for the Homogeneous Case,"* **JHEP** 1303, 126, (2013). arXiv: 1212.1948 [hep-th]

21. X. Dong, S. Harrison, S. Kachru, G. Torroba and **H. Wang**, *"Aspects of Holography for Theories with Hyperscaling Violation,"* **JHEP** 1206, 041, (2012) arXiv:1201.1905 [hep-th]

22. S. Harrison, S. Kachru and **H. Wang**, *"Resolving Lifshitz Horizon,"* **JHEP** 1402, 085, (2014). arXiv: 1202.6635 [hep-th]

Invited Talks

- Institute of Condensed Matter Theory, physics seminar, UIUC, Urbana, Feb 29, 2016
- Invited talk at the Urbana-Chicago Fest Theory Symposium, UIUC, Urbana, Apr 2, 2016
- John Hopkins University, physics seminar, Baltimore, Sep 29, 2016,
- Boston University, physics seminar, Boston, Mar 01, 2017,
- Yale University, physics seminar, New Haven, Oct 03 2017,
- Invited talk at the Workshop on chaos, duality and topology, Institute of Condensed Matter Theory, UIUC, Urbana, Nov 3-5 2017
- Sichuan University, physics seminar, Chengdu, China, Dec 08, 2017,
- Southern University of Science and Technology, physics seminar, Shenzhen, China, Dec 12, 2017,
- Yau Center for Mathematical Sciences, Tsinghua, mathematical physics seminar, Beijing, China, Dec 14, 2017,
- Peking University, physics seminar, Beijing, China, Dec 15, 2017,
- Institute for Theoretical Physics, Chinese Academy of Science, physics seminar, Beijing, China, Dec 18, 2017,
- Fudan University, physics seminar, Shanghai, China, Dec 20, 2017,
- Invited talk at the Tsinghua Sanya International Mathematics Forum on "Black holes, quantum chaos, and solvable quantum system", Sanya, Jan 22-26, 2018
- University of Kentucky, physics seminar, Lexington, Jan 29, 2018.
- Princeton University, physics seminar, Princeton, April 9, 2018.
- McGill University, physics seminar, Montreal, April 27, 2018.
- Kavli Institute for Theoretical Physics, Unversity of California, Santa Barbara, physics seminar, Santa Barbara, Oct 16, 2018.
- Invited participation to the annual meeting of "It from Qubit: Simons Collaboration on Quantum Gravity, Fields, and Information", New York, Dec 6-7, 2018.
- Invited talk at the Workshop on "Black Holes, Inflation and Gravitational Waves", IAS, HKUST, Hong Kong, Jan 3-5, 2019.
- Invited talk at the Workshop on Black holes and Holography, Tsinghua Sanya International Mathematics Forum, Sanya, Jan 7-11, 2019.
- University of California, Davis, physics seminar, Davis, Feb 14, 2019.
- University of Michigan, Strings Brown Bag seminar, Young High Energy Theorist Visitor Program, Ann Arbor, Feb 20, 2019.
- Stanford Institute for Theoretical Physics, seminar, Palo Alto, Apr 18, 2019

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