

Cheng Peng

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ACADEMIC POSITIONS

Brown University, Providence, RI, USA
Postdoctoral researcher, 2016–

ETH Zurich, Zürich, Switzerland
Postdoctoral researcher, 2013–2016

EDUCATION

Ph.D. in Physics — August 2013
University of Michigan, Ann Arbor, MI, USA
Advisor: Prof. Henriette Elvang

Bachelor of Science — July 2008
Yuanpei College,
Peking University, Beijing, China

RESEARCH INTEREST

★ Quantum field theory ★ Gauge/Gravity duality
★ Soluble models ★ Higher spin theory

CONFERENCE TALKS

- Apr 30, 2011, talk at the “Great Lakes Strings 2011” conference, University of Chicago, USA.
- Mar 3, 2012, talk at the “Great Lakes String 2012” conference, Purdue University, USA.
- Jul 24, 2014, talk at the “Recent development of string theory” conference, Ascona, Switzerland.
- Mar 28, 2015, talk at the “Great lakes String 2015” conference, University of Michigan, Ann Arbor, USA.
- Sep 7, 2015, talk at the “SwissMAP general meeting 2015” conference, Engelberg, Switzerland.
- Apr 27, 2017, talk at the workshop “New Developments in AdS3/CFT2 Holography”, Galileo Galilei Institute for Theoretical Physics, Florence, Italy.
- Aug 20, 2018, talk at the workshop “SYK Models: From Interacting Quantum Matter to Black Holes.” Aspen center for physics, Aspen, USA.
- Oct 9, 2018, talk at the workshop “Chaos and Order: from Strongly Correlated Systems to Black Holes.” Kavli Institute for Theoretical Physics, UC Santa Barbara, USA.
- March 27, 2019, talk at the workshop “Higher spins and holography”, the Erwin Schrödinger International Institute for Mathematics and Physics (ESI), Vienna, Austria

**SEMINAR
TALKS
(selected)**

- Jan 29, 2013, KITP, University of California, Santa Barbara, USA.
- Oct 8, 2013, ETH Zurich, Switzerland.
- Dec 23, 2014, Korea Institute for Advanced Study, Seoul, Republic of Korea.
- Nov 10, 2015, Albert Einstein Institute, Potsdam-Golm, Germany.
- Nov 5, 2015, Vienna University of Technology, Austria.
- Sep 14, 2016, Brown University, USA.
- Oct 16, 2017, Brandeis University, USA.
- Dec 6, 2017, University of Michigan, Ann Arbor, USA.
- Apr 20, 2017, Scuola Normale Superiore di Pisa, Pisa, Italy.
- Jan 17, 2017, KU Leuven, Belgium.
- Apr 29, 2019, Shanghai Jiaotong University, China
- May 8, 2019, Tianjin University, China
- May 14, 2019, Jilin University, Changchun, China

**HONORS &
AWARDS**

- YITP fellowship, 2017
- KITP graduate fellow, 2013
- Excellent paper award, 2007
(of the President's Undergraduate Research Fellowship)
- POSCO Fellowship, 2007
- President's Undergraduate Research Fellowship 2006
- Wu Si (May 4th) fellowship, 2006

PUBLICATIONS

1. C. Ahn and C. Peng, "Chiral Algebras of Two-Dimensional SYK Models," accepted for publication in JHEP. arXiv:1812.05106 [hep-th].
2. C. Peng, " $\mathcal{N} = (0, 2)$ SYK, Chaos and Higher-Spins," JHEP **1812**, 064 (2018) arXiv:1805.09325 [hep-th].
3. M. R. Gaberdiel, W. Li and C. Peng, "Twin-plane-partitions and $\mathcal{N} = 2$ affine Yangian," JHEP **1811**, 192 (2018) arXiv:1807.11304 [hep-th].
4. M. R. Gaberdiel, W. Li, C. Peng and H. Zhang, "The supersymmetric affine Yangian," JHEP **1805**, 200 (2018) arXiv:1711.07449 [hep-th].
5. C. Peng, M. Spradlin and A. Volovich, "Correlators in the $\mathcal{N} = 2$ Supersymmetric SYK Model," JHEP **1710**, 202 (2017) arXiv:1706.06078 [hep-th].
6. C. Peng, "Vector models and generalized SYK models," JHEP **1705**, 129 (2017) arXiv:1704.04223 [hep-th].
7. M. R. Gaberdiel, R. Gopakumar, W. Li and C. Peng, "Higher Spins and Yangian Symmetries," JHEP **1704**, 152 (2017) arXiv:1702.05100 [hep-th].
8. C. Peng, M. Spradlin and A. Volovich, "A Supersymmetric SYK-like Tensor Model," JHEP **1705**, 062 (2017) arXiv:1612.03851 [hep-th].
9. S. Datta, M. R. Gaberdiel, W. Li and C. Peng, "Twisted sectors from plane partitions," JHEP **1609**, 138 (2016) arXiv:1606.07070 [hep-th].
10. Y. Lei and C. Peng, "Higher spin holography with Galilean symmetry in general dimensions," Class. Quant. Grav. **33**, no. 13, 135008 (2016) arXiv:1507.08293 [hep-th].

11. M. R. Gaberdiel, C. Peng and I. G. Zadeh, “Higgsing the stringy higher spin symmetry,” JHEP **1510**, 101 (2015) arXiv:1506.02045 [hep-th].
12. M. Baggio, M. R. Gaberdiel and C. Peng, “Higher spins in the symmetric orbifold of K3,” Phys. Rev. D **92**, no. 2, 026007 (2015) arXiv:1504.00926 [hep-th].
13. C. Candu, C. Peng and C. Vollenweider, “Extended supersymmetry in AdS₃ higher spin theories,” JHEP **1412**, 113 (2014) arXiv:1408.5144 [hep-th].
14. M. R. Gaberdiel and C. Peng, “The symmetry of large $\mathcal{N} = 4$ holography,” JHEP **1405**, 152 (2014) arXiv:1403.2396 [hep-th].
15. L. A. Pando Zayas and C. Peng, “Toward a Higher-Spin Dual of Interacting Field Theories,” JHEP **1310**, 023 (2013) arXiv:1303.6641 [hep-th].
16. C. Peng, “Dualities from higher-spin supergravity,” JHEP **1303**, 054 (2013) arXiv:1211.6748 [hep-th].
17. Y. t. Huang, D. A. McGady and C. Peng, “One-loop renormalization and the S-matrix,” Phys. Rev. D **87**, no. 8, 085028 (2013) arXiv:1205.5606 [hep-th].
18. K. Hanaki and C. Peng, “Symmetries of Holographic Super-Minimal Models,” JHEP **1308**, 030 (2013) arXiv:1203.5768 [hep-th].
19. H. Elvang, Y. t. Huang and C. Peng, “On-shell superamplitudes in $\mathcal{N} < 4$ SYM,” JHEP **1109**, 031 (2011) arXiv:1102.4843 [hep-th].
20. C. Peng and R. X. Xu, “Pulsar slow glitches in a solid quark star model,” Monthly Notices of the Royal Astronomical Society, 384: 1034-1038. arXiv:0708.2482 [astro-ph].

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