Curriculum Vitae

Cenke Xu

Associate Professor,
Department of physics,
University of California, Santa Barbara
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Date of birth: Nov 8, 1981;
Place of birth: Hunan Province, P. R. China

Academic appointments

Since July 2014, Associate Professor,
Department of physics, University of California, Santa Barbara;

July 2010 - June 2014, Assistant Professor,
Department of physics, University of California, Santa Barbara;

July 2007 - June 2010, Junior Fellow Postdoctoral Researcher,
Society of Fellows, Harvard University.

Education and degrees

May 2007, Ph.D. of Physics, University of California, Berkeley
Advisor: Prof. Joel E. Moore

July 2003, Bachelor of Science, Tsinghua University, Beijing, P. R. China

Awards and Fellowships

1. Packard Fellowship, awarded by the David & Lucile Packard Foundation;

2. National Science Foundation Early Career Award;

3. Hellman Fellowship, awarded by the Hellman Family Foundation;

4. Outstanding Young Researcher Award, awarded by the Overseas Chinese Physics Association;

5. Sloan Research Fellowship, awarded by the Alfred P. Sloan Foundation;

6. Junior Fellowship, 2007-2010, awarded by the Society of Fellows, Harvard University;

7. Pappalardo Fellowship, awarded in 2006 by the department of Physics, Massachusetts Institute of Technology; (declined)

Synergistic Activities

Referee for Science, Nature, Nature Physics, Physical Review Letter, Physical Review X, etc.;

Reviewer for National Science Foundation, and Department of Energy;

Reviewer for the State Natural Science Award of the P. R. China;

Reviewer for the Qiu Shi Outstanding Young Scholar Award;

Reviewer for the Future Science Prize, China;

Organizer of KITP program “Holographic dual and Condensed matter physics";

Organizer of KITP program “Symmetry, Topology, and Quantum Phases of Matter: From Tensor Networks to Physical Realizations”;

Organizer of KITP conference “Topological quantum matters”;

Overseas member of the Institute for Advanced Studies, Tsinghua University;

Organizer of the summer forums (annually) at the Institute for Advanced Studies, Tsinghua University;

Editorial member for Chinese Physics B, since 2013.

Phd students supervised

Kevin Slagle (now postdoc at University of Toronto);
Zhen Bi (now Pappalardo Fellow at MIT)

Postdoc supervised

Eun-Gook Moon (now faculty at KAIST);
Yi-Zhuang You (now postdoc at Harvard, and faculty of UCSD)

Publications

#	Year	Title and Authors	Publisher
1.	2004	"Strong-weak coupling self-duality in the two-dimensional quantum phase transition of p+ip superconducting arrays", Cenke Xu and J. E. Moore	Phys. Rev. Lett. 93, 047003
2.	2005	"Dimensional reduction in superconducting arrays and frustrated magnets " Cenke Xu and J. E. Moore	Nucl. Phys. B 716, 487
3.	2005	"Geometric criticality between plaquette phases in integer-spin kagome XXZ antiferromagnets" Cenke Xu and J. E. Moore	Phys. Rev. B 72, 064455
4.	2005	"Nonequilibrium charge density wave ordering from anomalous velocity in itinerant helical magnets" Cenke Xu and J. E. Moore	Sol. St. Comm. 135, 62
5.	2006	"Stability of the quantum spin Hall effect: effects of interactions, disorder, and Z2 topology" Cenke Xu and J. E. Moore	Phys. Rev. B 73, 064417
6.	2006	"Novel Algebraic Boson Liquid phase with soft Graviton excitations" Cenke Xu	e-print: http://arxiv.org/abs/cond-mat/0602443
7.	2006	"Edge states generated by spin-orbit coupling at domain walls in magnetic semiconductors" Cenke Xu and J.E. Moore	e-print: http://arxiv.org/abs/cond-mat/0603145
8.	2006	"Topological defects and the superfluid transition of the S=1 spinor condensate in two dimensions" Subroto Mukerjee, Cenke Xu and J. E. Moore	Phys. Rev. Lett. 97, 120406
9.	2006	"Gapless Bosonic Excitation without symmetry breaking: Novel Algebraic Spin liquid with soft Gravitons" Cenke Xu	Phys. Rev. B. 74, 224433
10.	2007	"Gauge symmetry and non-abelian topological sectors in a geometrically constrained model on the honeycomb lattice" Paul Fendley, J. E. Moore and Cenke Xu	Phys. Rev. E 75, 051120
11.	2007	"Bond algebraic liquid phase in strongly correlated multiflavor cold atom systems Authors" Cenke Xu and M. P. A. Fisher	Phys. Rev. B 75, 104428
12.	2007	"Global phase diagram of the spin-1 antiferromagnet with uniaxial anisotropy on the kagome lattice " Cenke Xu and J. E. Moore	Phys. Rev. B 76, 104427
13.	2007	"Dynamical models and the phase ordering kinetics of the s=1 spinor condensate" Subroto Mukerjee, Cenke Xu and J. E. Moore	Phys. Rev. B 76, 104519

#	Year	Title and Authors	Publisher
14.	2007	"Phase transitions in coupled two dimensional XY systems with spatial anisotropy" Cenke Xu	e-print: http://arxiv.org/abs/0706.1609
15.	2008	"Square lattice algebraic spin liquid with SO(5) Symmetry" Cenke Xu and S. Sachdev	Phys. Rev. Lett. 100, 137201
16.	2008	"Resonating plaquette phases in SU(4) Heisenberg antiferromagnet" Cenke Xu and C. J. Wu	Phys. Rev. B 77, 134449
17.	2008	"Renormalization Group Studies on Four Fermion Interaction Instabilities on Algebraic Spin Liquids" Cenke Xu	Phys. Rev. B **78**, 054432
18.	2008	"Quantum Phase Transitions beyond the Landau's Paradigm in Sp(4) Spin System" Yang Qi and Cenke Xu	Phys. Rev. B 78, 014410
19.	2008	"Destruction of Neel order in the cuprates by electron-doping " R. K. Kaul, M. A. Metlitski, S. Sachdev and Cenke Xu	Phys. Rev. B 78, 045110
20.	2008	"Ising and Spin orders in the iron-based Superconductors" Cenke Xu, M. Muller and S. Sachdev	Phys. Rev. B 78, 020501R
21.	2008	"Experimental observables near a nematic quantum critical point in the pnictide and cuprate superconductors" Cenke Xu, Yang Qi and S. Sachdev	Phys. Rev. B 78, 134507
22.	2009	"Magnetic impurities on the surface of a topological insulator " Q. Liu , C. X. Liu, Cenke Xu , X.L. Qi, S.C.Zhang	Phys. Rev. Lett. 102, 156603
23.	2009	"Dynamics and transport of the Z2 spin liquid: application to κ-(ET)2Cu2(CN)3 " Yang Qi, Cenke Xu and S. Sachdev	Phys. Rev. Lett. 102, 176401
24.	2009	"Global phase diagram of frustrated quantum antiferromagnets in two dimensions: doubled Chern-Simons theory" Cenke Xu and S. Sachdev	Phys. Rev. B, 79, 064405
25.	2008	"The New Iron Age" Cenke Xu, and S. Sachdev	*Nature Physics* **4**, 898
26.	2009	"Global phase diagram for Magnetism and Lattice Distortion of Fe-pnictide materials" Yang Qi and Cenke Xu	Phys. Rev. B, 80, 094402
27.	2009	"Fluctuating spin density waves in metals" S. Sachdev, M. A. Metlitski, Yang Qi and Cenke Xu	Phys. Rev. B, 80, 155129
28.	2009	"Low energy effective field theories of Sp(4) spin systems" Cenke Xu	Phys. Rev. B, 80, 184407

#	Year	Title and Authors	Publisher
29.	2010	"Tow-orbital SU(N) magnetism with ultracold alkaline earth atoms" A. V. Gorshkov, M. Hermele, V. Gurarie, Cenke Xu, P. S. Julienne, J. Ye, P. Zoller, E. Demler, M. D. Lukin, A. M. Rey	Nature Physics 6, 289
30.	2010	"Liquids in multi-orbital SU(N) magnets with ultracold Alkaline earth atoms" Cenke Xu	Phys. Rev. B, 81, 144431
31.	2010	"Time-reversal symmetry breaking at the edge states of a three-dimensional topological band insulator" Cenke Xu	Phys. Rev. B, 81, 020411
32.	2010	"Quantum critical points of helical Fermi liquids" Cenke Xu	Phys. Rev. B, 81, 054403
33.	2010	"Conventional description of unconventional Coulomb-crystal phase transitions in three-dimensional classical O(N) spin-ice" Cenke Xu	Phys. Rev. B, 81, 144430
34.	2010	"Emergent gravity at a Lifshitz point from a Bose liquid on the lattice" Cenke Xu and P. Horava	Phys. Rev. D, 81, 104033
35.	2010	"Fractionalization in Josephson junction arrays hinged by quantum spin Hall edges" Cenke Xu and Liang Fu	Phys. Rev. B, **81**,134435
36.	2010	"Majorana liquids: the complete fractionalization of the electron" Cenke Xu and S. Sachdev	Phys. Rev. Lett. 105, 057201
37.	2011	"Quantum spin Hall, triplet-superconductor, and topological liquids on the honeycomb lattice" Cenke Xu	Phys. Rev. B, **83**, 024408
38.	2011	"Geometric Phases and competing orders in two dimensions" Liang Fu, S. Sachdev and Cenke Xu	Phys. Rev. B, **83**,165123
39	2011	"Quantum Phase Transitions around the Staggered Valence Bond Solid" Cenke Xu and L. Balents	Phys. Rev. B, **84**,014402
40.	2011	"Entanglement Entropy of Coupled Conformal Field Theories and Fermi Liquids" Cenke Xu	Phys.Rev. B, **84**, 125119
41.	2011	"High pressure sequence of Ba_3NiSb_2O_9 structural phases: new $S = 1$ quantum spin-liquids based on Ni^{2+}" J. G. Cheng, G. Li, L. Balicas, J. S. Zhou, J. B. Goodenough, Cenke Xu, H. D. Zhou	Phys. Rev. Lett. 107, 019720
42.	2012	"Exciton condensations in thin film topological insulator" Eun Gook Moon, Cenke Xu	EuroPhys. Lett. 97, 66008

#	Year	Title and Authors	Publisher
43.	2012	"Topological Quantum Liquids with Quaternion Non-Abelian Statistics" Cenke Xu, Andreas W.W. Ludwig	Phys. Rev. Lett. 108, 047202
44.	2012	"Plaquette order and deconfined quantum critical point in the spin-1 bilinear-biquadratic Heisenberg model on the honeycomb lattice" H. H. Zhao, Cenke Xu, Q. N. Chen, Z. C. Wei, M. P. Qin, G. M. Zhang, T. Xiang	Phys. Rev. B 85, 134416
45.	2012	"Phase Diagram of the Kane-Mele-Hubbard model" Christian Griset, Cenke Xu	Phys. Rev. B 85, 045123
46.	2012	"Spin Liquid Phases for Spin-1 systems on the Triangular lattice" Cenke Xu, Fa Wang, Yang Qi, Leon Balents, Matthew P. A. Fisher	Phys. Rev. Lett. 108, 087204
47.	2012	"Nematic orders in Iron-based superconductors" Jiangping Hu, Cenke Xu	Physica C: Superconductivity, 481, 1
48.	2012	"Unconventional Quantum Critical Points" Cenke Xu	International Journal of Modern Physics B Vol. 26, No. 18, 1230007
49.	2012	"Dyon condensation in topological Mott insulators" Gil Young Cho, Cenke Xu, Joel E. Moore, Yong Baek Kim	New Journal of Physics, 14, 115030
50.	2012	"Pair Superfluid and Supersolid of Correlated Hard-Core Bosons on a Triangular Lattice" Hong-Chen Jiang, Liang Fu, Cenke Xu	Phys. Rev. B 86, 045129
51.	2012	"Exotic continuous quantum phase transition between Z2 topological spin liquid and Neel order" Eun-Gook Moon, Cenke Xu	Phys. Rev. B 86, 214414
52.	2012	"Successive Phase Transitions and Extended Spin-Excitation Continuum in the S=1/2 Triangular-Lattice Antiferromagnet Ba3CoSb2O9" H. D. Zhou, Cenke Xu, A. M. Hallas, H. J. Silverstein, C. R. Wiebe, I. Umegaki, J. Q. Yan, T. P. Murphy, J.-H. Park, Y. Qiu, J. R. D. Copley, J. S. Gardner, and Y. Takano	Phys. Rev. Lett. 109, 267206
53.	2013	"Nonperturbative effects of Topological Theta-term on Principal Chiral Nonlinear Sigma Models in 2+1 Dimensions" Cenke Xu, Andreas W. W. Ludwig	Phys. Rev. Lett. 110, 200405
54.	2013	"Three dimensional Symmetry Protected Topological Phase close to Antiferromagnetic Neel order" Cenke Xu	Phys. Rev. B 87, 144421
55.	2013	"Wave Functions of Bosonic Symmetry Protected Topological Phases" Cenke Xu, T. Senthil	Phys. Rev. B 88, 014425
56.	2013	"Two dimensional Symmetry Protected Topological Phases with PSU(N) and time reversal symmetry" Jeremy Oon, Gil Young Cho, Cenke Xu	Phys. Rev. Lett. 111, 157203

#	Year	Title and Authors	Publisher
57.	2013	“Theory of a Competitive Spin Liquid State for Weak Mott Insulators on the Triangular Lattice,” Ryan V. Mishmash, James R. Garrison, Samuel Bieri, Cenke Xu	Phys. Rev. Lett. 93, 047003
58	2013	“Non-Fermi liquid and topological states with strong spin-orbit coupling” Eun-Gook Moon, Cenke Xu, Yong Baek Kim, Leon Balents	Phys. Rev. Lett. 111, 206401
59	2013	“Three Dimensional Z_2 Topological Phases enriched by Time-Reversal Symmetry” Cenke Xu	Phys. Rev. B 88, 205137
60	2014	“Quantum Phase Transition between Z2 spin liquid and columnar Valence Bond Crystals on a Triangular lattice” Kevin Slagle, Cenke Xu	Phys. Rev. B. 89, 104418
61	2014	“Line defects in Three dimensional Symmetry Protected Topological Phases” Zhen Bi, Alex Rasmussen, Cenke Xu	Phys. Rev. B 89, 184424
62	2014	“Wave Function and Strange Correlator of Short Range Entangled states” Yi-Zhuang You, Zhen Bi, Alex Rasmussen, Kevin Slagle, Cenke Xu	Phys. Rev. Lett. 112, 247202
63	2014	“Topological number and Fermion Green's function of Strongly Interacting Topological Superconductors” Yi-Zhuang You, Zhong Wang, Jeremy Oon, Cenke Xu	Phys. Rev. B 90, 060502(R)
64	2014	“Anyon and Loop Braiding Statistics in Field Theories with a Topological Θ-term” Zhen Bi, Yi-Zhuang You, Cenke Xu	Phys. Rev. B 90, 081110
65	2014	“Symmetry Protected Topological States of Interacting Fermions and Bosons” Yi-Zhuang You, Cenke Xu	Phys. Rev. B 90, 245120
66	2015	“Exotic Quantum Phase Transitions of (2+1)d Dirac fermions” Kevin Slagle, Yi-Zhuang You, Cenke Xu	Phys. Rev. B 91, 115121
67	2015	“Classification and Description of Bosonic Symmetry Protected Topological Phases with semiclassical Nonlinear Sigma models” Zhen Bi, Alex Rasmussen, Kevin Slagle, Cenke Xu	Phys. Rev. B 91, 134404 (Editor’s suggestion)
68	2015	“Bosonic Short Range Entangled states Beyond Group Cohomology classification” Cenke Xu, Yi-Zhuang You	Phys. Rev. B 91, 054406
69	2015	“Interacting Topological Insulator and Emergent Grand Unified Theory” Yi-Zhuang You, Cenke Xu	Phys. Rev. B 91, 125147
70	2015	“Construction and Field Theory of Bosonic Symmetry Protected Topological states beyond Group Cohomology” Zhen Bi, Cenke Xu	Phys. Rev. B 91, 184404

#	Year	Title and Authors	Publisher
71	2015	“Bridging Fermionic and Bosonic Short Range Entangled States” Zhen Bi, Alex Rasmussen, Yi-Zhuang You, Meng Cheng, Cenke Xu	New J. Phys. 17, 075010 (2015)
72	2015	“Topological Orders with Global Gauge Anomalies” Yi-Zhuang, Cenke Xu	Phys. Rev. B 92, 054410 (2015)
73	2015	“Quantum Monte Carlo study of strange correlator in interacting topological insulators” Han-Qing Wu, Yuan-Yao He, Yi-Zhuang You, Cenke Xu, Zi Yang Meng, and Zhong-Yi Lu	Phys. Rev. B 92, 165123 (2015)
74	2015	“Self-dual quantum electrodynamics as boundary state of the three-dimensional bosonic topological insulator” Cenke Xu and Yi-Zhuang You	Phys. Rev. B 92, 220416(R) (2015)
75	2016	“Topological nematic phase in Dirac semimetals” Rui-Xing Zhang, Jimmy A. Hutasoit, Yan Sun, Binghai Yan, Cenke Xu, and Chao-Xing Liu	Phys. Rev. B 93, 041108(R) (2016)
76	2016	“Quantum phase transitions between bosonic symmetry-protected topological states without sign problem: Nonlinear sigma model with a topological term” Yi-Zhuang You, Zhen Bi, Dan Mao, and Cenke Xu	Phys. Rev. B 93, 125101 (2016)
77	2016	“Bona fide interaction-driven topological phase transition in correlated symmetry-protected topological states” Yuan-Yao He, Han-Qing Wu, Yi-Zhuang You, Cenke Xu, Zi Yang Meng, and Zhong-Yi Lu	Phys. Rev. B 93, 115150 (2016)
78	2016	“Entanglement holographic mapping of many-body localized system by spectrum bifurcation renormalization group” Yi-Zhuang You, Xiao-Liang Qi, and Cenke Xu	Phys. Rev. B 93, 104205 (2016)
79	2016	“Disordered XYZ spin chain simulations using the spectrum bifurcation renormalization group” Kevin Slagle, Yi-Zhuang You, and Cenke Xu	Phys. Rev. B 94, 014205 (2016)
80	2016	“Exotic quantum critical point on the surface of three-dimensional topological insulator” Zhen Bi, Yi-Zhuang You, and Cenke Xu	Phys. Rev. B 94, 024433 (2016)
81	2016	“Visualizing a bosonic symmetry protected topological phase in an interacting fermion model” Han-Qing Wu, Yuan-Yao He, Yi-Zhuang You, Tsuneya Yoshida, Norio Kawakami, Cenke Xu, Zi Yang Meng, and Zhong-Yi Lu	Phys. Rev. B 94, 165121 (2016)
82	2016	“Interacting topological phases in thin films of topological mirror Kondo insulators” Rui-Xing Zhang, Cenke Xu, and Chao-Xing Liu	Phys. Rev. B 94, 235128 (2016)

#	Year	Title and Authors	Publisher
83	2016	“Series of (2+1)-dimensional stable self-dual interacting conformal field theories” Meng Cheng and Cenke Xu	Phys. Rev. B 94, 214415 (2016)
84	2016	“Quantum critical point of Dirac fermion mass generation without spontaneous symmetry breaking” Yuan-Yao He, Han-Qing Wu, Yi-Zhuang You, Cenke Xu, Zi Yang Meng, and Zhong-Yi Lu	Phys. Rev. B 94, 241111(R) (2016)
85	2017	“Bilayer Graphene as a Platform for Bosonic Symmetry-Protected Topological States” Zhen Bi, Ruixing Zhang, Yi-Zhuang You, Andrea Young, Leon Balents, Chao-Xing Liu, and Cenke Xu	Phys. Rev. Lett. 118, 126801 (2017)
86	2017	“Sachdev-Ye-Kitaev model and thermalization on the boundary of many-body localized fermionic symmetry-protected topological states” Yi-Zhuang You, Andreas W. W. Ludwig, and Cenke Xu	Phys. Rev. B 95, 115150 (2017) Editors' Suggestion
87	2017	“Out-of-time-order correlation in marginal many-body localized systems” Kevin Slagle, Zhen Bi, Yi-Zhuang You, and Cenke Xu	Phys. Rev. B 95, 165136 (2017)
88	2017	“Symmetry-protected topological Hopf insulator and its generalizations” Chunxiao Liu, Farzan Vafa, and Cenke Xu	Phys. Rev. B 95, 161116(R) (2017) Editors' Suggestion
89	2017	“Instability of the non-Fermi-liquid state of the Sachdev-Ye-Kitaev model” Zhen Bi, Chao-Ming Jian, Yi-Zhuang You, Kelly Ann Pawlak, and Cenke Xu	Phys. Rev. B 95, 205105 (2017)
90	2017	Duality and bosonization of (2+1)d Majorana fermions Max A. Metlitski, Ashvin Vishwanath, Cenke Xu	Phys. Rev. B 95, 205137 (2017)

Work Accepted and in Press:

#	Year	Title and Authors	Publisher
1	2017	Deconfined quantum critical points: symmetries and dualities Chong Wang, Adam Nahum, Max A. Metlitski, Cenke Xu, T. Senthil	Physical Review X https://arxiv.org/abs/1703.02426

Work Submitted:

#	Year	Title and Authors	Publisher
1	2017	A model for continuous thermal Metal to Insulator Transition Chao-Ming Jian, Zhen Bi, Cenke Xu	Physical Review B https://arxiv.org/abs/1703.07793
2	2017	Lieb-Schultz-Mattis Theorem and its generalizations from the Perspective of the Symmetry Protected Topological phase Chao-Ming Jian, Zhen Bi, Cenke Xu	Physical Review X https://arxiv.org/abs/1705.00012

3	2017	Symmetric Fermion Mass Generation and Deconfined Quantum Criticality Yi-Zhuang You, Yin-Chen He, Cenke Xu, and Ashvin Vishwanath	Physical Review X https://arxiv.org/abs/1705.09313
4	2017	Duality between the deconfined quantum-critical point and the bosonic topological transition Yan Qi Qin, Yuan-Yao He, Yi-Zhuang You, Zhong-Yi Lu, Arnab Sen, Anders W. Sandvik, Cenke Xu, and Zi Yang Meng	Physical Review X https://arxiv.org/abs/1705.10670

Work In Progress:

Title and Authors			Potential Publisher
1	2017	(invited review article) Duality between 2+1d quantum critical points T. Senthil, D. T. Son, Chong Wang, Cenke Xu	Physics Reports

Recent Invited talks

Date	Title	Meeting/Place
Nov 2015	Bosonic Symmetry Protected Topological States and their Quantum Phase Transitions without Sign problem.	seminar, physics department, Stanford University
Nov 2015	Bosonic Symmetry Protected Topological States and their Quantum Phase Transitions without Sign problem.	seminar, physics department, UC Berkeley
Dec 2015	Exotic Quantum Phase Transition of Strongly Interacting topological insulators	seminar, Institute for Advanced Studies, Tsinghua University
Dec 2015	Bosonic Symmetry Protected Topological States and their Quantum Phase Transitions	workshop on “quantum entanglement”, Fudan University
Dec 2015	Interacting Topological Insulator and the Grand Unified Theory	Seminar, department of physics, Sichuan University
Dec 2015	Bosonic Symmetry Protected Topological States and their Quantum Phase Transitions	workshop on “Topology and Strong Correlations in Quantum Many-body Systems”, National Taiwan University
March 2016	Experimental Platform for Bosonic Symmetry Protected Topological States	Seminar, physics department, Ohio State University
May 2016	Bosonic Symmetry Protected Topological States: field theory, numerics, and experimental platform	workshop on “From Quantum Field Theories to Numerical Methods”, Nordic Institute for Theoretical Physics
June 2016	Stable 2+1d CFT at the Boundary of a Class of 3+1d Symmetry Protected Topological States	workshop on “Emergent properties of space-time”, CERN
June 2016	Stable 2+1d CFT at the Boundary of a Class of 3+1d Symmetry Protected Topological States	program “Conformal Field Theories and Renormalization Group Flows in Dimensions d>2”, Galileo Galilei Institute for Theoretical Physics

Date	Title	Meeting/Place
July 2016	Introduction to topological insulators and symmetry protected topological states	Two invited review talks in Simons Summer Workshop in Mathematics and Physics, Simons Center for Geometry and Physics at Stony Brook
Aug 2016	Bosonic Symmetry Protected Topological States: theory, numerics, and experimental platform	symposium on “Emergent Phenomena in Quantum Systems”
Oct 2016	Bosonic Symmetry Protected Topological States: theory, numerics, and experimental platform	colloquium in California State University, long beach.
Oct 2016	A series of stable interacting self-dual 2+1d conformal field theories	Seminar, physics department, UC Berkeley.
Nov 2016	A series of stable interacting self-dual 2+1d conformal field theories, theory can possible experiments	KITP program “Symmetry, Topology, and Quantum Phases of Matter: From Tensor Networks to Physical Realizations”.
Dec 2016	Bosonic Symmetry Protected Topological States: theory, numerics, and experimental platform	Trans-Pacific Conference on “Topological Quantum Materials”, French Polynesia
Dec 2016	A series of stable interacting self-dual 2+1d conformal field theories	conference “Many-body entanglement and topological quantum phenomena” Sanya, China
Dec 2016	Bosonic Symmetry Protected Topological States: theory, numerics, and experimental platform	2016 International Workshop on Computational Materials, Guangzhou, China
Dec 2016	Bosonic Symmetry Protected Topological States: theory, numerics, and experimental platform	Invited talk in Southern University of Science and Technology, Shenzhen, China
Dec 2016	Topological States and “Almost” Topological States	Colloquium at Sun Yat-sen University, Guangzhou, China
March 2017	Bosonic Topological Insulator and Self-dual QCP: Theory, numerics, and Experimental Platform	Workshop on "The Quantum Hall Effect: Past, Present, and Future," Princeton University
March 2017	Bosonic Topological Insulator and Self-dual QCP: Theory, numerics, and Experimental Platform	Forum on “New Horizons in Condensed Matter Physics”, The Kavli Institute of Theoretical Sciences (KITS) at the University of Chinese Academy of Sciences, Beijing
March 2017	Duality between 2+1d conformal field theories: Theory and Numerics	Invited talk at the Institute for Theoretical Physics, Chinese Academy of Sciences, Beijing
March 2017	Bosonic Topological Insulator and Self-dual QCP: Theory, numerics, and Experimental Platform	Invited talk at the Computational Science Research Center, Beijing
April 2017	Duality between 2+1d conformal field theories: Theory and Numerics	Invited talk at the Kadanoff center in University of Chicago
May 2017	Bosonic topological insulator and duality between 2+1d quantum critical points	Simons Center's Program: Mathematics of topological phases of matter, Stony Brook
May 2017	Higher dimensional Lieb-Schultz-Mattis Theorem from the Perspective of the Symmetry Protected Topological phases	Invited talk at physics department, Caltech
June 2017	Duality between 2+1d conformal field theories: Theory and Numerics	Gordon Research Conference, Hong Kong

Date	Title	Meeting/Place
June 2017	Higher dimensional Lieb-Schultz-Mattis Theorem from the Perspective of the Symmetry Protected Topological phases	Program and summer school "Category Theory and Topological Matter", Fudan University, Shanghai, China
July 2017	Duality between 2+1d conformal field theories: Theory and Numerics	Conference on Quantum Matter, Information, and Gravity, organized by Tsinghua University and Fudan University
July 2017	Three Lectures on “Quantum Field Theories in Condensed Matter physics”	Summer School on “Theoretical Physics Frontier” in Sun Yat-sen University, Guangzhou, China
July 2017	Duality between 2+1d conformal field theories: Theory and Numerics	Program on “Topological States and Phase Transitions in Strongly Correlated Systems”, Kavli Institute for Theoretical Science, Chinese Academy of Science
Sept 2017	Topological phases and topological phase transitions	annual Packard Fellows Meeting